This is the official journal of the Postgraduate Medical Education Society of Hospital Ipoh (Pertubuhan Pendidikan Perubatan Lepas (izah Hospital Ipoh) and the Clinical Research Centre Perak (CRC Perak), Hospital Raja Permaisuri Bainun. The recent change in name reflects the wider coverage and representation of the journal for the region.

Perak Medical Journal is a registered journal with an International Standard Serial Number (ISSN) issued by the National Library of Malaysia. All articles published, including editorials and letters, represent the views of the authors and not necessarily those of the Editorial Board or of the Ministry of Health.

"Research is to see what everybody else has seen, and to think what nobody else has thought."

Albert Szent-Gyorgyi (1893–1986)

Hungarian Physiologist

Won the Nobel Prize for Medicine 1937

Credited with discovering vitamin C

Editorial

1

Interventional Research

4

Observational Research

14

Diagnostic Studies

69

Systematic and Literature Reviews

72

Case Reports and Case Series

75

Other Research

86

Investigator Initiated Research

104

Industry Sponsored Research

139
Office bearers for 2012/2013

President
Dato' Dr Krishnan Chandran

Secretary
Dato' Dr Amar-Singh HSS

The Postgraduate Medical Education Society of Hospital Ipoh was first conceived in 1991. It received official status with its registration in 1993. Over the years Postgraduate Medical Education Society of Hospital Ipoh has been active in promoting postgraduate medical education and the development of facilities for such activities. This journal, the Perak Medical Journal, is one such activity.

Clinical Research Centre (CRC) Perak
Raja Permaisuri Bainun Hospital

Ng Rosalia

Clinical Research Centre Perak (CRC Perak), Raja Permaisuri Bainun Hospital officially began functioning in March 2001. CRC Perak is housed at Ambulatory Care Centre since 2006.

The Clinical Research Centre Perak (CRC Perak), Hospital Raja Permaisuri Bainun. The official journal of the Postgraduate Medical Education Society of Hospital Ipoh (PGMES) was first conceived in 1991. It received official status with its registration in 1993. Over the years Postgraduate Medical Education Society of Hospital Ipoh has been active in promoting postgraduate medical education and the development of facilities for such activities. This journal, the Perak Medical Journal, is one such activity.

Editors
Dato' Dr Amar-Singh HSS

2013 Editorial Committee

Editor
Dato' Dr Amar-Singh HSS

Dato' Dr Haji Nordin Y Hassan

Clinical Research Centre Perak, 4th Floor, Ambulatory Care Center, Raja Permaisuri Bainun Hospital 30990 Ipoh, Perak.

Tel: +605-208-5138, Fax: +605-242-5477

Email: lina@crc.gov.my, weiyinlim@crc.gov.my

2. We are grateful to the Director-General, Ministry of Health Malaysia for permission to publish the articles in this issue of Perak Medical Journal. Raja Permaisuri Bainun Hospital is proud of its postgraduate activities. It was the first Malaysian government hospital to start a medical journal as well as set up a computer centre for postgraduate purposes.

REFERENCES

1. "Substantial contributions to conception & design, or acquisition of data, or analysis and interpretation of data"

2. Drafting the article or revising it critically for important intellectual content

3. Final approval of the version to be published

4. All 3 conditions should be met for assigning authorship.

Individuals who do not qualify for authorship but have contributed to parts of study shall be included in the Acknowledgements section.

INSTRUCTIONS TO AUTHORS

Papers should be sent to:

The Editor

Perak Medical Journal

(formerly known as Medical Practice Hospital Ipoh)

Clinical Research Centre Perak

4th Floor, Ambulatory Care Centre,

Hospital Raja Permaisuri Bainun Ipoh, 30990 Ipoh.

Tel: 605-2085138, Fax: 605-2425477

Email: lina@crc.gov.my, weiyinlim@crc.gov.my

They should be prepared according to the Uniform Requirements for Manuscripts Submitted to Biomedical Journals.

GENERAL POINTS

The journal is interdisciplinary and inter-professional. It is intended to provide an avenue for all categories of medical staff in the region of Perak and wider afield, to publish research work carried out. It also serves as a forum to discuss clinical and epidemiological issue of interest and relevance. Research article, reviews, clinical practice and opinions (including dissenting views) are all welcome.

• All material submitted for publication is assumed to be submitted exclusively to the journal unless otherwise stated.

• All authors must give their written consent to publication.

• All manuscripts must be submitted in electronic form, produced on Microsoft Word, emailed to the Editorial Board (lina@crc.gov.my, weiyinlim@crc.gov.my).

• Number the pages, top right.

• Define all abbreviations.

• The journal encourages the use of 95% confidence intervals where appropriate statistical analysis permits.

• Give the name, address, telephone, fax number and e-mail address of the author to whom correspondence should be sent.

• Authors may be requested to produce the raw data on which the manuscript is based.

• Manuscripts received will be acknowledged. Those not accepted for publication will not be returned.

AUTHORSHIP CREDIT

Authorship credit shall be granted only if one is involved in ALL of the following:

1. Substantial contributions to conception & design, or acquisition of data, or analysis and interpretation of data

2. Drafting the article or revising it critically for important intellectual content

3. Final approval of the version to be published

All 3 conditions should be met for assigning authorship.

REFERENCES


EDITORIAL BOARD 2013
| Volume 12 Number 1 • 2013 |

**EDITORIAL**

1. Addressing the Emotional Side When Things Go Wrong  
   Amar-Singh HSS

**ABSTRACTS OF INTERVENTIONAL RESEARCH**

**DERMATOLOGY**

4. Reducing The Complication Rate Post Cryotherapy In A Dermatology Clinic Of A Regional Referral Hospital  
   Tick-Sheng Ang, Esther-Anuradha Supramanian, Mohd Yuszely, Norhayati l

**NEPHROLOGY**

5. Improving Haemodialysis Patients’ and Their Caregivers’ Knowledge on Prescribed Medications  
   Noorsyamsidar Ahmad Sidi, Siew-Choo Pan, Ngah-Ling Eng, Engchi Cheow, Nor-Ashiqlin Aiman Roslan, Cheiw-Yoke Tee

**PHARMACY**

6. Improving Prescription Practices in Ministry of Health Primary Care Clinics: A Randomised Community Trial  
   Wei-Yin Lim, Li-Meng Ng, Selva-Rani John Jasudass, Siti-Nur Umri Aminah Zainal Bohri, Amar-Singh HSS,  
   Paranthaman-Vengadasalam, Lina-Hashim, Ranjit-Kaur Prem Singh, Asmah-Zainal Abidin, Afida-Nor Abu Hussain

7. To Reduce Medication Administration Error Through Enteral Feeding Tube in ICU Ward of a Specialist Hospital  
   Chew-Beng Ng, Sing-Chian Tan, Ummi-Khadijah Bani, Suhaida Mustafa, Junaidah Ariffin

**PAEDIATRICS**

8. Improving Knowledge on Antiepileptic Drug Among Children with Epilepsy and Their Parents in a Regional Referral Hospital  
   Norafizah-Mohd Latiff, Noor-Aznita Ahmad, Kamalia-Tarkip, Salena-Md Isa, Nor-Azura Razali, Amar-Singh HSS, Wei-Yin Lim, Siti-Aishah S, Sok-Yee Lee, Norshaziah-Julia Mohd Shafie

9. Improving Knowledge, Practice, Acceptance and Satisfaction of Kangaroo Mother Care Among Parents and Health Care Professionals  

10. Improving The Management of Prolonged Neonatal Jaundice in an Administrative Region, Malaysia  

11. Safety and Immunogenicity of a Tetravalent Dengue Vaccine in Healthy Children Aged 2–11 Years in Malaysia: A Randomized, Placebo Controlled, Phase III Study  
    Amar-Singh HSS, Mia-Tuang Koh, Kah-Kee Tan, Lee-Gaik Chan, Lynn-Zhou, Alain-Bouckenooghe, Denis-Crevat, Yaneey-Hutagalung

**PUBLIC HEALTH**

12. Improving Adherence to Anti-Diabetic Medication Therapy and Glycaemic Control among Diabetic Patients in a Government Health Clinic  
    Subashini Ambigapathy, Zainul-Ikhwan Khussairi, Norwni Razali, Mohamad-Shahrizal Razali, Maznah Idris, Zhen-Khim Ang, Zin-Yi Teh, Sumathi Moorthi, Nordhahes Mohd. Zain, Peremah Copusamay

**PSYCHIATRY**

13. The Impact of Home Medication Review (HMR) Programme for Patients Diagnosed with Schizophrenia: A Psychiatric Hospital’s Experience  
    Yee-Mun Tan, Chee-Ping Chong, Yee-Chuang Cheah

**OBSERVATIONAL RESEARCH**

**ANAESTHESIA & CRITICAL CARE**

14. Awareness and Barriers Towards Standard Precaution Policies among Healthcare Workers in a District Specialist Hospital  
    Hartini Abdul Rahman

15. Outcome of Acupuncture Treatment in a Malaysian Pain Clinic  
    Kavita M. Bhojwani, Lee-Choo Yeoh

A Publication of the PGMES & CRC Perak • ISSN 1394-8474
EMERGENCY AND TRAUMA CARE

16 Patient Satisfaction on Emergency Medical Services In a Malaysian Regional Referral Hospital
Wai-Mun Chung, Ramuzaman Ismail, Azma-Haryaty Ahmad, Rashidi Ahmad, Qing-Xi Ooi, Wei-Yin Lim, Adi Osman, Rishya Manikam, Nor-Aizura Zulkifli

CLINICAL RESEARCH PERSPECTIVE

17 Attitudes, Barriers and Facilitators to The Conduct of Research: A Cross-Sectional Study Among Specialists in Government Hospitals in Perak
Lei-Choo Teh, Mun-Pung Choy, Prema Muninathan, G. R. Letchuman Ramanathan

18 Public Awareness and Attitude towards Participation in Clinical Trials
Sharon-Linus Lojikip, Amar-Singh HSS, Teck-Hock Toh, Ling Yap

GERIATRIC

19 Innovation Pilot Study: Acute Geriatric Unit – Provision of Acute Elderly Care in Hospital with Limited Geriatrician Input
Kee-Huat Chuah, Hang-Cheng Ong, Mun-Pung Choy, Chong-Hong Lim, Wee-Kooi Cheah

MEDICINE

20 Ability of Newly Qualified Medical Officers to Use Self-Inflating Resuscitation Bag

21 Factors Associated with Advanced Breast and Cervical Cancer in Larut, Matang and Selama District, Perak, 2010-2011: A Retrospective Review
Subashini Ambigapathy, Amutha Balu, Kollavani Pachayappan, Sumathi Morti

22 Readmission Rate of Unstable Angina (UA) and Non-ST Elevation Myocardial Infarction (NSTEMI) in a District Specialist Hospital, Malaysia
Nur-Hazlizat Hashim, Nur-Husniyah Sulaiman, Yean-Foong Yee, Zye-Wei Chiam, Nik-Afzan-Iftitah Mohd Nor, Siew-Hong Ling

23 The Use of Self-Monitoring Blood Glucose (SMBG) and Its Relationship with Glycaemic Control in Insulin-Treated Type 2 Diabetic Patient
Wern-Jing Ding, Min-Choo Wong, Li-Yun Chong, Pui-Chin Kong, Aridza Amran, Sorya Rezuan

OPHTHALMOLOGY

24 Macular Hole Surgery in Perak, Malaysia: A Retrospective Review
Hong-Kee Ng, Lieh-Bin Ong

OTORHINOLARYNGOLOGY

25 A Review of Daycare Tonsillectomies at a Regional Referral Hospital in Malaysia
Zabrina-Marnel Samarakkody, Philip Rajan, Gurdeep-Singh Mahinder Singh

26 Clinical and Polysomnographic Data of Positional Sleep Apnea and Its Predictors
Busarakum Teerapraipruk, Naricha Chirakalwasan, Rosalind Simon, Prakobkriat Hirunwiwatkul, Nattapong Jaimcharyiyamat, Tayard Desudchit, Natamon Charakorn6, Chaisiri Wanlapakorn, Supaporn Krittanupong, Nirun Intarut

27 Comparison of Polysomnographic and Clinical Presentations and Predictors for Cardiovascular-Related Diseases Between Non-Obese and Obese Obstructive Sleep Apnea Among Asians
Naricha Chirakalwasan, Busarakum Teerapraipruk, Rosalind Simon, Prakobkriot Hirunwiwatkul, Nattapong Jaimcharyiyamat, Tayard Desudchit, Natamon Charakorn, Chaisiri Wanlapakorn

28 Severity of Obstructive Sleep Apnea in Patients with and without Cardiovascular-Related Diseases
Rosalind Simon, Naricha Chirakalwasan, Busarakum Teerapraipruk, Prakobkriat Hirunwiwatkul, Nattapong Jaimcharyiyamat, Tayard Desudchit, Natamon Charakorn, Chaisiri Wanlapakorn, Supaporn Krittanupong, Nirun Intarut

NEPHROLOGY

29 Comparison of Methods for Estimating Glomerular Filtration Rate in Intensive Care Patients with Unstable Kidney Function
Yen-Ping Ng, Chee-Ping Chong, As-Niza Abdul Shukor, Indralingam Vaithalingam, G. R. Letchuman Ramanathan

30 Epidemiology and Outcome Among Continous Ambulatory Peritoneal Dialysis Patients Requiring Hospital Admissions in a Regional Referral Hospital, Malaysia
Sridhar Ramanaidu, Meena Nithianandan, Yee-Yan Lee, Chek-Loong Loh

31 Infective Outcome of Haemodialysis Patients with Cuffed Dialysis Catheters (CDC) Insertion
Yee-Yan Lee, Sridhar Ramanaidu, Chek-Loong Loh
### Nursing

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>Compliance to Infection Prevention Guidelines with Appropriate Use of Personal Protective Equipment by Nurses at the Maternity Ward of a District Hospital</td>
<td>Puvaneswari Tharumalingam</td>
</tr>
<tr>
<td>33</td>
<td>Critical Care Nurses’ Pain Assessment and Management Practices in a Regional Referral Hospital</td>
<td>Devanandhini Krishan, Kit-Weng Foong, Sze-Shir Foo, Nitthyra Sukumar</td>
</tr>
<tr>
<td>34</td>
<td>Evaluation of Satisfaction for Nurses on Implementation of Unit Dose in a Regional Referral Hospital, Malaysia</td>
<td>Lai-Yee Chan, Sze-Min Yeap, William Surenvran</td>
</tr>
<tr>
<td>35</td>
<td>Knowledge and Attitude of Paediatric Nurses on the Appropriate Management of Fever in Young Children in the Ward Setting</td>
<td>Hafizah Mohd Radzuan, Norfazila Jalil, Nor-Shafura Ahmad, Tasnim Ahmad Dali, Intan-Diana Mat Akob, Norazizo Abd Rahman, Lina Hashim, Sivanesan Seevagan, Jeyaseelan P. Naciappan, Amar-Singh HSS, Norshazila-Julia Mohd Shafie</td>
</tr>
<tr>
<td>36</td>
<td>Knowledge of Insulin and Injection Technique among Nurses in a District Specialist Hospital</td>
<td>Xin-Yi Beh, Ee-Siew Lai, Hui-Sheng Yeoh, Zi-Yi Ch’ng, Norulaffia Ahmad</td>
</tr>
<tr>
<td>37</td>
<td>Nurses’ Knowledge and Practice in Preventing Perioperative Hypothermia</td>
<td>Mei-Hong Ong</td>
</tr>
<tr>
<td>38</td>
<td>Nurses’ Knowledge Regarding Complementary and Alternative Medicine Therapy</td>
<td>Norazian Adnan</td>
</tr>
<tr>
<td>39</td>
<td>Nurses’ understanding, Perception and Acceptance of Organ Donation from a Brain Dead Patient at a Regional Referral Hospital</td>
<td>Nagalethchumi Arumugam</td>
</tr>
<tr>
<td>40</td>
<td>Paediatric Nurses’ Perceptions of Medication Errors in a Regional Referral Hospital</td>
<td>Hooi-Beng Lee</td>
</tr>
</tbody>
</table>

### Pharmacy

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>41</td>
<td>Antibiotic Prescribing Pattern and Adherence to Malaysia National Antibiotic Guideline in a District Hospital</td>
<td>Low-Yong Chia, Chit-Yee Chee, Yi-Lyn Yean, Huey-Ling Ng</td>
</tr>
<tr>
<td>42</td>
<td>Appropriateness of Adult Parenteral Nutrition Usage in Specialist Hospital</td>
<td>Wan-Ning Ng, Wai-Han Wong, Nur-Sri Mohd Azmi, Nirmala-Devi Supramaniam, Li-Yin Ch’ng</td>
</tr>
<tr>
<td>43</td>
<td>Comparing Medication Documentation Discrepancies by Prescribers in a Regional Referral Hospital, Malaysia</td>
<td>Sze-Ni Khoo, Lan-Sim Chew, Wei-Yin Lim, Sue-Anne Chia, Ee-Lin Chew</td>
</tr>
<tr>
<td>44</td>
<td>Describing the use of Medicine and Identification of Potentially Inappropriate Medicine among Elderly Patients Admitted to a Specialist Hospital</td>
<td>Mun-Pung Choy, Ee-Siew Lai, Norulaffia Ahmad, Kee-Huat Chuah, Hang-Cheng Ong, Soon-Chai Low, Wee-Kooi Cheah</td>
</tr>
<tr>
<td>45</td>
<td>Evaluation of Vancomycin Dosage Guideline in Neonates in a Specialist Hospital</td>
<td>Sing-Chian Tan, Chew-Beng Ng, Aida-Noordina Ahmad Rahim, Nur-Afera Abdul Ghani, Sudharma Sherg-Yhau No, Saiful-Rijal Muhammad</td>
</tr>
<tr>
<td>46</td>
<td>Evaluation of Knowledge on Colclean Solution And Bowel Preparation At a Specialist Hospital</td>
<td>Shea-Jiun Choo, Kah-Keet Foo, Seraphina Jun-Ling Tan, Jie-Yun Lee, Bee-Chee Lee, Rasanmay Umasanger</td>
</tr>
<tr>
<td>47</td>
<td>Knowledge, Attitude and Practice of Vitamin Supplementation among Adult Patients in a District Specialist Hospital</td>
<td>Kamariah-Shamsinar Kamal Bahari, Yee-Han Ng, Pei-Yun Loo, Suraya Rahman</td>
</tr>
<tr>
<td>48</td>
<td>Multi-Source Feedback Programme for Evaluation of Provisionally Registered Pharmacists: A Multi-Centre Study in Malaysia</td>
<td>Doris-George Visuvasam, Nurfadilla-Ferdhoo, Mun-Pung Choy</td>
</tr>
<tr>
<td>49</td>
<td>Patient Satisfaction Survey on Extemporaneous Syrup Preparation for Paediatric Patients in the Outpatient Pharmacy of a Regional Referral Hospital in Perak</td>
<td>Siti-Nur-Sharida Abdul Kadir, Siti-Aisyah Mohamed Nasir, Sharon-Min—Yang Hui, Nabilah Zainuddin, Naemah Mat Idris</td>
</tr>
<tr>
<td>50</td>
<td>Perceptions towards Generic Medicines among Medical Specialists and Consultants at a District Specialist Hospital in Malaysia: A Qualitative Insight</td>
<td>Zhi-Yen Wong, Mohamed-Azmi Hassali, Abdul-Haniff Mohamad Yahaya, Fahad Saleem</td>
</tr>
<tr>
<td>51</td>
<td>Polymyxin Prescribing Pattern in a Regional Referral Hospital in Malaysia</td>
<td>Ros-Sakinah Kamaludin, Kah-Shuen Thong, Chiew-Ang Khor, Hong-Bee Ker</td>
</tr>
<tr>
<td>52</td>
<td>Prevalence of Prescribing Error with Manual Prescribing System at a Regional Referral Hospital in Malaysia</td>
<td>Chee-Tao Chang, Nalini Krishnasamy, Harveen-Kaur Olikh, Nurizzati Kamaruddin</td>
</tr>
<tr>
<td>53</td>
<td>Safety and Effectiveness of Tenofovir Disoproxil Fumarate (TDF) in HIV-Infected Patients in a Regional Referral Hospital, Malaysia</td>
<td>Wei-Yee Ng, Ming-Hui Liew, Atiqah-Akmal Azil, Chiew-Ang Khor, Kean-Yau Woo, Hong-Bee Ker</td>
</tr>
</tbody>
</table>
Therapeutic Drug Monitoring of Vancomycin in Patients with End Stage Renal Failure (ESRF)
Doris-George, Arvinder-Jeet-Kaur, Chung-Wei Chai, Wai-Yin Yong

Ability of Healthcare Professionals to Perform Heel Prick in Neonates
Wei-Yin Lim, Amar-Singh HSS, Pue-Siah Chin, Lionel Chia, Fatimah-Jusoh, Norhaslin-Mad Yusoff, Normazia Dolah, Sithra-Dev Subramaniam, Haymalatha Rajagam

Ability of Paediatric Hospital Staff to Perform an Intravenous Inseston at a Regional Referral Hospital
Khairul Wardah Abd Razak, Nazimah Ahmad, Noradibah Shamsul Bahri, Ruhayati Tukas Abdullah, Siti Fatimah Sahid, Kogilovani Arumugam

Do Paediatric Healthcare Professionals Handle Chemotherapeutic Drugs Appropriately?
Jeyarani Palani, Nagalatchumi Marathaiveran, Nurkhairiah Mohd Nor, Jenuthanirani Shanmuganathan, Siti-Niza Othman, Halimah Md Isa, Nor-Aizura Zulkifli, Arvinder-Singh Harbaksh Singh, Amar-Singh HSS, Norshaliza-Julia Mohd Shafie

Healthcare Professionals Responsiveness to NICU Monitor Alarms in a Regional Referral Hospital
Jagdish Kaur, Roossalindia Zuhari, Nurul-Nadiya Shahidan, Wan Aziani Wan Ahmad, Nor-Aizura Zulkifli, Amar-Singh HSS, Arvinder-Singh HS, Noor-Khatijah Nurani, Haymalatha Rajagam

Routine Management of Neonatal Jaundice in Term Neonates in Malaysian Special Care Nurseries
Qing-Xi Ooi, Siti-Afijah Mohd Sarib, Normi Mohd Sharif, Siti-Zuridah Yahaya, Fadilah Arsad, Amar-Singh HSS, Haymalatha Rajagam

Do Calorie Intake and Physical Activity Affect the Body Mass Index in Primary School-Going Children?
Qing-Xi Ooi, Lionel-Dick-Hua Chia, Nafizah Omar, Azlinawati Aziz, Nur-Liyana Roslan, Siti-Sakinah Lokman, Noor-Aini Mat Ghani, Amar-Singh HSS, Bee-Sim Chua, Norshazila Julia

Global Childhood Unintentional Injury Study: Multi-Site Surveillance Data
Siran-He, Jeffrey-C Lunnen, Prasanthi-Puwanachandra, Amar-Singh HSS, Nukhba-Zia, Adnan-A Hyde

How Do Parents Manage Fever in Their Young Children?

Initiation of Breastfeeding and Its Practices among Multipara Mothers in Maternal and Child Health Clinics
Siti-Hadiroh Ali

Knowledge, Attitudes and Practice of Effective Family Planning Methods among High Risk Mothers Attending Health Clinics for Antenatal Check-Ups
Sivakamasundari Ratnam

Why Are Parents Reluctant to Immunise Their Child?
Norhabibah Rahmat, Nurul-Aisyah Mustafa, Fatimah-Sham Mohd Yusof, Rohana Abd Rahman, Suriram Itam, Chinhwa Chan, Wei-Yin Lim, Netia Jeganathan, Amar-Singh HSS, Norshazila-Julia Mohd Shafie

Admission Trends of Patients with Mental Illnesses at a Psychiatric Regional Referral Hospital (2008 - 2010)
Fatimah Sain

Chronic Pain with Anxiety and Depression: A Comparison Between Patients Attending Multidisciplinary Pain and Rheumatology Clinic
Wahinuddin Sulaiman, Norhasniza Mohamed Zanyuin, Kin-Kheong Mah, Kavita M. Bhojwani

Patient Satisfaction with Follow-Up Monitoring Care at The Rheumatology Outpatient Clinic
Ping-Seung Ong, Wahinuddin Sulaiman, Salwa Hanim

Comparing Point of Care Devices for International Normalised Ratio Testing with Standard Laboratory Methods at a Hospital Based Anticoagulation Clinic
Doris-George Visuvasam, Wai-Keng Foong, Choy-Yuen Choo, Huzaini P

Evaluating 8-Item Morisky Medication Adherence Scale and Pill Count as Measures of Medication Adherence and Investigating the Feasibility of Routine Medication Return by Patients
Siew-Hong Ling, Wei-Yin Lim, Yi-Jie Hu, Li-Yuan Lee, Hui-Li Lin, Noor-Azrina Sanik, Nurul-Zuharis Mohamed, Yeann Foong Yee

Validation of Malay Version of Montreal Cognitive Assessment in Patients with Cognitive Impairment
Wool-Kooi Cheah, Hoon-Lang Teh, Diana-Huang, Mun-Pung Choy, Alan Ch'ng, Ewe-Eow Teh, Irene Looi
# SYSTEMATIC AND LITERATURE REVIEWS

## OTORHINOLARYNGOLOGY

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>72</td>
<td>Body Stuffing and The Otalaryngologist?</td>
<td>Philip Rajan, Aidayanti Daud</td>
</tr>
<tr>
<td>73</td>
<td>Changing Trends in Oesophageal Endoscopy: A Systematic Review of Transnasal Oesophagoscopy</td>
<td>Junainah-Sabirin, Maharita-Abd Rahman, Philip Rajan</td>
</tr>
</tbody>
</table>

## CASE REPORTS AND CASE SERIES

### DERMATOLOGY

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>75</td>
<td>Hydroa vacciniforme Like Cutaneous T Cell Lymphoma: A Rare Variant</td>
<td>Tick-Sheng Ang, Jyh-Jong Tang, Norain Karim</td>
</tr>
<tr>
<td>76</td>
<td>Trigeminal Trophic Syndrome: A Case Report and Literature Review</td>
<td>Jyh-Jong Tang, Norain Karim, Esther-Anuradha Supramanian</td>
</tr>
</tbody>
</table>

### EMERGENCY & TRAUMA

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>77</td>
<td>High Pressure Injection Injuries: A Case Series</td>
<td>Azma-Haryaty Ahmad, Adi Osman, Abdul-Kursi Abdul Latif, Wai-Mun Chung</td>
</tr>
<tr>
<td>78</td>
<td>Therapeutic Hypothermia Post Cardiac Arrest</td>
<td>Adi Osman, Abdul-Kursi Abdul Latif, Ramzuzaman Ismail, Azma-Haryaty Ahmad, Asri-Rangga Abdullah, Kit-Weng Foong</td>
</tr>
</tbody>
</table>

### NEPHROLOGY

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>79</td>
<td>Bilateral Visual Loss Due to Lupus Retinitis in a Patient with Systemic Lupus Erythematosus and Antiphospholipid Syndrome</td>
<td>Yee-Yan Lee, Sridhar Ramanaidu, Chek-Loong Loh, Hong-Kee Ng</td>
</tr>
<tr>
<td>80</td>
<td>Severe Symptomatic Hypocalcaemia and Hypokalaemia Caused by Oral Sodium Phosphate Solution (Fleet®) in a Haemodialysis Patient with Tertiary Hyperparathyroidism</td>
<td>Sridhar Ramanaidu, Yee-Yan Lee, Chek-Loong Loh</td>
</tr>
</tbody>
</table>

### OTORHINOLARYNGOLOGY

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>81</td>
<td>An Arrow Foreign Body Involving Parotid Gland, Maxillary Sinus And Tip Off Nose</td>
<td>Suhana, Thevagi M, Lina LC, Avatar Singh</td>
</tr>
<tr>
<td>82</td>
<td>The Child with Suspected Hearing Loss: A Case Report</td>
<td>Philip Rajan</td>
</tr>
<tr>
<td>83</td>
<td>Transient Vocal Cord Palsy due to Infection Mimicking Malignancy</td>
<td>Kai-Jun Tey</td>
</tr>
<tr>
<td>84</td>
<td>Unusual Foreign Bodies of the Head and Neck: A Retrospective Case Series</td>
<td>Aidayanti Daud, Philip Rajan, Harvinder-Singh Dalip Singh, Gurdeep-Singh Mahinder Singh</td>
</tr>
<tr>
<td>85</td>
<td>Unusual of Parotid Gland Presenting as Sialolithiasis: Case Report and Literature Review</td>
<td>Sridhar Sivapathia-Sundaram Sreetharan, Philip Rajan</td>
</tr>
</tbody>
</table>

### OTHER RESEARCH

### INVESTIGATOR INITIATED RESEARCH

### INDUSTRY SPONSORED RESEARCH
ADDRESSING THE EMOTIONAL SIDE WHEN THINGS GO WRONG
(HEALTHCARE PROVIDER VIEW)

Amar-Singh HSS
Senior Consultant Paediatrician (Community) & Head Paediatric Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.
Head Clinical Research Centre (CRC) Perak, Perak.
Editorial Note: This paper was presented at the Malaysian Society for Quality in Health (MSQH) Conference 3–4 September 2013, Putrajaya, Malaysia.

INTRODUCTION

Medical errors are a painful but real and common part of any health practice or environment. Patients and the family are devastated when it happens, especially when the errors are serious. The response of health administrators is often negative and punitive. The possibility (and a growing culture) of litigation only makes things worse. As such many healthcare professions attempt to avoid or run away from errors by ‘covering up’ (hiding them) or displacing responsibility to junior staff.

There is only one mature and responsible approach to medical errors and that is to take joint responsibility as a team of healthcare professional for the medical error, disclose it to the patient and family, support the patient as best we can, assist the professional who made the error and work to prevent it from happening again.

DISCLOSING MEDICAL ERROR AND SUPPORTING THE PATIENT & FAMILY

Disclosure of a medical error to patient or family is extremely difficult. It should not be left to the junior most staff but be done by the senior most person available. It should be done promptly and honestly. Healthcare professionals must take responsibility and apologise, when appropriate. There is no easy way to do it but training and experience help considerably. It is unethical not to disclose an error.

One common ‘failure’ is a reluctance to engage other members of the family. In the local cultural context, where grandparents and siblings are important decision makers in a person’s or child’s life, it is important to be open to meeting a group of relatives when communicating a medical error. This can be daunting but, in my experience, is usually rewarding. However our primary responsibility must be to the adult patient or both parents of a child, and they must always be informed first. In our ‘feudal society’ men often do not give sufficient respect to their wife’s views or needs in this situation. For children, neither the father nor mother can take precedence in disclosure of a medical error.

Disclosure is not a ‘one-off’ activity. It requires repeated explanations and clarifications as patients and family come to terms with the incident. It requires us dealing with the emotional crisis that families go through. Initially the patient and family are focused on the damage – how much has the error affected the patient. They want information on what we are going to do medically to repair the damage. As the shock and confusion wears off then more intense emotions of anger and a need for restitution come into force. Some will likely experience these at a later date when they have left the hospital, or if instigated by relatives and friends.

Throughout the process it is important the medical professionals not look to protecting themselves as much as supporting the patient and family. Attentive listening is a vital task that allows the patient and family to express their fears, confusion and frustration. There is no need to push for an immediate reconciliation or try to placate the person(s). It is important to avoid some phrases/words and sentiments like “I understand what you are going through”, “this is God’s will (takdir Tuhan) and you have to accept it” or “don’t worry, everything will be alright”. These opinions are unrealistic, not true and paternalistic. They harm more than they help. A real attitude of empathy, a willingness to support with honesty about what has happened is the best healing approach. Constantly assess their needs with a view to offering professional support, if necessary. There may be a need to offer a clear idea of the process of inquiry into the incident. Even to the extent of involving the patient or family in the investigation of the incident.

An important area to recognise in supporting patients and families is that they may feel vulnerable as, in most situations, the patient will need continued care with the same healthcare professionals and system that ‘harmed’ them. Rebuilding trust is an integral issue in continued support.

IMPROVING DISCLOSURE – A VEHICLE FOR HEALING

That disclosure can be a healing activity is poorly recognised by healthcare professionals. Well conducted disclosure is a powerful vehicle for healing for the patient, family and professional. It strengthens the therapeutic bond between the family and the healthcare professional. In the forefront of such work has been the Medically Induced Trauma Support Services (MITSS, see their website). In their mission statement they state "To Support Healing and Restore Hope to patients, families, and clinicians following adverse medical events".

A cope component of disclosure is effective communicating. Investigations of medical errors often reveal a breakdown in communication among hospital staff. The lack of information and adequate communication after such an event further compounds it and leads to demands for compensation or legal proceedings.

A review of the literature prior to 2005 by Mazor et al showed that there were very few research publications on disclosure
of medical errors to patients and families. Few studies have considered the disclosure process, the consequences of disclosure, or the relationship between the two.

A large survey of clinicians by Gallagher et al (2006) showed that there was wide variation regarding what information physicians would disclose in the situation of a medical error. 56% would choose statements that mentioned the adverse event but not the error, while 42% would explicitly state that an error occurred. Some physicians disclosed little information.

Work by Gallagher and his research team shows that clinicians can be supported to disclose errors to patients/families. The work is summarised below:

(http://www.greenwall.org/scholar-profile.php?id=8)

1. HOW DO PATIENTS WANT DOCTORS TO RESPOND TO MEDICAL ERRORS? PATIENTS WANT CLINICIANS TO:
   • Disclose the error
   • Take responsibility for the error and apologize
   • Tell them what caused the error and what will be done to prevent similar errors in the future

2. HOW DO DOCTORS ACTUALLY RESPOND TO MEDICAL ERRORS?
   • When an error occurs doctors often do not say explicitly that an error had occurred or why or how similar errors would be prevented in the future
   • Hence clinicians support disclosure of errors in theory but in practice typically provide much less disclosure than patients would like

3. WHAT ARE THE BARRIERS TO PHYSICIAN DISCLOSURE OF ERRORS?
   • Lack of confidence in their ability to carry out these difficult conversations
   • Lack of institutional support
   • Shame or embarrassment
   • Note that what was not a major factor is fear of malpractice or lack of moral courage

4. HOW CAN DISCLOSURE OF MEDICAL ERRORS BE INCREASED?
   • Strengthening institutional support for physician disclosure of errors
   • Developing partnerships among health care institutions and state officials to encourage physicians to disclose errors, while addressing physician concerns about disclosure

CASE STUDIES – A GOOD AND BAD EXAMPLES

These were presented at the conference. Case studies were not included in the written document to protect the identity of patients and medical staff.

THE “SECOND VICTIM” – HEALTH PROFESSIONALS NEED HELP TOO

Often, in dealing with medical errors, the needs of the medical professionals are overlooked. Doctors, pharmacists and nurses struggle considerably after being involved in a medical error, especially if it is preventable. Often there is the element of guilt and failure, a loss of confidence in abilities and decision making, and persistent memories with flashbacks. Some feel like abandoning their careers and a few have been known to take their own lives. Hence the term "second victim" has been used to describe this.

A large survey by Waterman et al of more than 3,000 clinicians showed that the majority had been involved in a medical error, with 57% of them being severe errors. Only 18% of the physicians had received education or training on disclosing errors to patients. 90% expressed that hospitals and health care organizations did not adequately support them in coping with stress associated with medical errors. 61% reported increased anxiety about future errors, 44% loss of confidence, 42% sleeping difficulties, 42% reduced job satisfaction, and 13% harm to their reputation.

The problem is often exacerbated or compounded by a poor response of managers and the lack of support from peers and the system. Managers often tend to quickly apportion blame or adopt a one-sided view of an error making it difficult for healthcare professionals. A high profile error with media coverage often ends up as a trial by media rather than a good hard look at the real facts. Doctors, nurses and other health professionals in Malaysia work daily in suboptimal environments with suboptimal resources. When an error occurs, the medical system and the public/media tend to blame the individual rather than the system. Both the media and the health system need to differentiate and respond differently to errors that are unavoidable, system related, unintentional, due to a lack of training or knowledge, and medical negligence. The comments above are not meant to detract from errors committed by uncaring professionals (true medical negligence). Or those are as a result of a failed medical school training that produces incompetent individuals. Both are not uncommon occurrences. However the reality is that many errors are committed in difficult situations, with staff under pressure, working in limited environments.

Doctors, pharmacists and nurses require routine support after a medical error occurs. This includes support on:
   • how to conduct a meaningful disclosure conversation
   • on-going support after the event and during the investigation
   • legal support if necessary
EDITORIAL

• allowing for ‘story telling’ or a debrief after an error with a compassionate senior colleague is vital

There should be a clear policy in all health organisations on how to support healthcare professionals after a medical error (see ‘Medically Induced Trauma Support Services’ for ideas).

“Only when health care institutions commit resources to patients, physicians, and other involved hospital staff can all those negatively affected by medical errors receive the support they need”. Waterman et al 2007

ACKNOWLEDGEMENT

I want to thank Dr Jeyaseelan Nachiappan and Dr Khoo Kim Kea, Consultant Paediatricians and colleagues, who read this document and offered valuable suggestions for improvement.

SOME USEFUL REFERENCES/SITES:


6. Healing the Healer Film


Note about the Author:
Dato’ Dr Amar-Singh HSS, Cert Theology (Aust, Hons), MBBS (Mal), MRCP (UK), FRCP (Glasg), MSc Community Paediatrics (Ldn, dist.), is a Senior Consultant Paediatrician (Community) and the Head of the Paediatric Department at HRP Ipoh Hospital, Malaysia. He is also the Head of the Clinical Research Centre at Perak. He has a long standing interest in children with disability, family self-help groups, NGOs, child abuse, adolescent counselling, disadvantaged/marginalised children & the development of services for children. He has an active practise supporting and working with parents, children, NGOs as well as supporting governmental agencies. He is very active in research and postgraduate paediatric training. With his wife, he is also offers spiritual direction and counselling. He is the current president of the Nation Early Childhood Intervention Council.
INTERVENTIONAL RESEARCH

REDUCING THE COMPLICATION RATE POST CRYOTHERAPY IN A DERMATOLOGY CLINIC OF A REGIONAL REFERRAL HOSPITAL

Tick-Sheng Ang, Esther-Anuradha Supramanian, Mohd Yuszely, Norhayati I
Dermatology Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

OUTLINE OF PROBLEM

Cryotherapy is a common procedure in the dermatology clinic to treat a variety of skin lesions. A high complication rate is expected post-cryotherapy (e.g. blisters and infection) which results in poor wound healing, increased morbidity, and increased healthcare costs. Multiple risk factors can increase the risk of developing complications post-cryotherapy.

KEY MEASURES FOR IMPROVEMENT

Our monthly census data towards the end of 2012 indicated that on average, the risk of complications post-cryotherapy was 18%. The aim of our study was to reduce this complication rate to less than 5%.

PROCESS OF GATHERING INFORMATION

We conducted a cross-sectional study from February to March 2013 to determine the post-cryotherapy complication rate and to identify contributing causes. This was followed by implementation of remedial measures from April to May 2013. Re-assessment of the complication rate was conducted from June to July 2013. Complication of the wound was evaluated by a panel of medical officers and dermatologist using photographs of the wound site taken on day 5 post-cryotherapy. Wound outcome was classified into 3 categories: (a) healed without complication, (b) blister formation without infection, and (c) blister with wound infection. Complication rate was determined based on categories (b) and (c).

ANALYSIS AND INTERPRETATION

30 patients diagnosed with viral warts who undergone cryotherapy in the form of cryospray in our clinic were conveniently sampled. Excluded were patients aged 12 years old and below, with ulcerated pre-operative skin surface, and lesions on the face and genitals. Of the 30 patients examined, 25 (83.3%) patients’ wounds healed without complication, 3 (10.0%) had blister formation without infection, and 2 (6.7%) had infected blisters. The post-cryotherapy complication rate at baseline was 16.7%, which was more than 3 times higher than the standard of less than 5%. The ABNA was 11.7%. Factors contributing to the high complication rate were lack of pre- and post-cryotherapy counselling (62.5%), higher complication rates among employed patients (40.0%), involvement of feet lesions (33.0%), large lesions of 10-20 mm (30.0%), use of the broad size B nozzle during cryotherapy (28.0%), and large margin size of 4 mm used for cryotherapy (25.0%).

STRATEGY FOR CHANGE

Several remedial actions were implemented to reduce the baseline complication rate. We conducted a seminar to train medical officers on the proper technique of performing cryotherapy. We also formulated a cryotherapy protocol which included pre-cryotherapy counselling, preparations before and during the procedure, and post-cryotherapy counselling to patients. All medical officers were required to use the size C nozzle for lesions less than 20 mm and size B nozzle for lesions more than 20 mm. In addition, chloramphenicol ointment was introduced as a topical application for post-cryotherapy wounds to reduce the risk of inflammation, blister formation, infection, and to provide an anaesthetic effect. We also developed a structured post-cryotherapy care counselling programme to provide advice to patients. They were taught on wound cleaning twice daily using soap and water, followed by the application of chloramphenicol ointment. Employed patients were advised to be compliant to post-cryotherapy care. Patients with feet lesions were asked to maintain personal hygiene to avoid infection. Pamphlets on performing home dressing were given to patients after the counselling session.

EFFECTS OF CHANGE

Following implementation of the remedial actions, the post-cryotherapy complication rate was re-evaluated. Post-intervention complication rate was 6.7%, where only 2 out of 30 patients had blisters with and without infection. The ABNA was reduced to 1.7%.

THE NEXT STEPS

Although the standard of less than 5% was not achieved, the interventions introduced reduced the post-cryotherapy complication rate from 16.7% to 6.7%. It is essential to continuously monitor this complication rate and to sustain the remedial measures to provide high quality care for patients undergoing cryotherapy.

KEYWORDS

cryotherapy, viral warts, complication

NMRR ID: Not Available
IMPROVING HAEMODIALYSIS PATIENTS’ AND THEIR CAREGIVERS’ KNOWLEDGE ON PRESCRIBED MEDICATIONS

Noorsyamsidar Ahmad Sidi, Siew-Choo Pan, Ngah-Ling Eng, Engchi Cheow, Nor-Ashiqin Alman Roslan, Cheiw-Yoke Tee
Pharmacy Department, Kampar Hospital, Perak.

OUTLINE OF PROBLEM

Patients with chronic kidney disease (CKD) who are on regular haemodialysis are usually prescribed with a complex set of drug regimen. They often receive an average of 6-10 types of medications daily, many of which require multiple doses per day. Several studies have indicated that haemodialysis patients have inadequate knowledge and understanding about their medications. We conducted a quality assurance study from July 2011 to January 2012, with the objective of improving the knowledge of haemodialysis patients’ and their caregivers’ on their prescribed medications.

KEY MEASURES FOR IMPROVEMENT

The quality indicators for improvement in this study are the percentages of patients who can correctly identify the drug name, indication, dose, frequency, administration, and side effects. The standard of all indicators was set at 100%. Knowledge on prescribed medications were evaluated before and after the implementation of remedial measures.

PROCESS OF GATHERING INFORMATION

A self-administered bilingual questionnaire set (Malay, English) was developed by the researchers. Administration of this questionnaire was done prior to and after implementation of remedial measures. It was self-administered by participating patients and their caregivers to evaluate knowledge level on commonly prescribed medications for haemodialysis patients. Prior to implementation of remedial measures, the baseline knowledge was determined using the questionnaire. Using this baseline data, a strategy for improvement was formulated and implemented.

ANALYSIS AND INTERPRETATION

12 haemodialysis patients and 8 caregivers participated in the study. The baseline data analysis found that all 20 patients were unable to name the commonly prescribed drugs for haemodialysis patients correctly. 15% of the participants knew the indication of the commonly prescribed drugs, 40% and 35% knew the drug dosages and frequency respectively, and 20% knew the administration method. The reasons identified for this poor medication knowledge were lack of counselling during drug dispensing, language barrier between patients and healthcare providers, patient factors such as old age and poor memory.

STRATEGY FOR CHANGE

A meeting was held between pharmacists, medical assistants and nurses of the haemodialysis unit to establish a new process of care for drug delivery to haemodialysis patients. Counselling sessions with the patients were provided by the haemodialysis pharmacists during dialysis sessions. Multilingual handouts containing information of prescribed medications in simple laymen language were also given to the patients. To overcome the language barrier, the pharmacists conducted individual and group counselling services in languages understood by patients.

EFFECTS OF CHANGE

Improvement in all quality indicators following implementation of the remedial measures was observed in the post intervention data analysis. Of the 20 patients, 45% could correctly provide the names of the prescribed drugs. All knew the indications, dose, frequency, and methods of administration of the drugs. Half (50%) understood the side effects of the drugs.

THE NEXT STEPS

A dedicated pharmacist was assigned to be in charge of the haemodialysis unit. With regular counselling, haemodialysis patients and their caregivers’ knowledge on prescribed medications can be maintained and improved.

KEYWORDS

haemodialysis patients, knowledge, prescribed medication, quality assurance

NMRR ID: Not Available

Learning note from the editors:

The questionnaire in this study could have been better designed. Individuals were asked to choose between “Yes” or “No” to each question asked. Only the name of medication was required to be written. Details on indication, dose, frequency, administration, and side effects were not asked to be written, or chosen from multiple choice questions.
IMPROVING PRESCRIPTION PRACTICES IN MINISTRY OF HEALTH PRIMARY CARE CLINICS: A RANDOMISED COMMUNITY TRIAL

Wei-Yin Lim1, Li-Meng Ng2, Selva-Rani John Jasudass3, Siti-Nur Umi Aminah Zainal Bahri4, Amar-Singh HS5,5, Paranthaman-Vengadasalam6, Lina-Hashim1, Ranjit-Kaur Praim Singh7, Asmah-Zainal Abidin2, Afida-Nor Abu Hussain8

1 Clinical Research Centre (CRC) Perak, Perak.
2 Simee Health Clinic, Ipoh, Perak.
3 Parit Health Clinic, Seri Iskandar, Perak.
4 Changkat Lada Health Clinic, Seri Iskandar, Perak.
5 Paediatric Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.
6 Jelapang Health Clinic, Ipoh, Perak.
7 Perak State Health Department, Perak.
8 Perak Tengah Health Department, Perak.

INTRODUCTION AND OBJECTIVES

Poor prescribing practices may lead to medication errors. Studies have shown that active intervention to improve prescribing skills is required to change prescribing behaviour. This study evaluated the effectiveness of medication prescription review and prescribing error feedback system in Ministry of Health (MOH) primary care clinics in the administrative region of Perak.

METHODOLOGY

This is a 3 group cluster, randomised controlled community trial conducted in 2 phases. It involved implementation of continuous medication prescription review for errors, and incorporation of different errors feedback system as the active intervention. 51 primary care clinics in Perak were randomly allocated either into a control cluster or 2 different intervention clusters. Clinics with electronic prescribing system were excluded from the trial. All clusters received continuous medication prescription review for errors. Control cluster did not receive any active intervention. Intervention cluster 1 received monthly error league tables as the active intervention while intervention clusters 2, received monthly error league tables and authorised feedback letter. In phase 1, 20 handwritten prescriptions were collected from each prescriber [including family medicine specialists (FMS), medical officers (MO), and medical assistants (MA)] and retained by the clinic pharmacists on a random date every month for duration of 4 months. These prescriptions were reviewed for administrative errors (missing prescriber name and/or signature, missing and/or incorrect patient details, missing diagnosis and date); information errors (duration/quantity, dose, frequency, dosage form, strength not specified, illegibility, use of non-standard abbreviations); and drug errors (inappropriate dose, frequency, duration, dosage form, polypharmacy, medication duplication, contraindication). Identified errors were recorded into a data collection form. The errors were audited and summarised by the research team to generate personalised performance feedback reports for all individual prescriber on a monthly basis. The intervention with the least percentage of prescribing error rates was determined at the end of phase 1, and was implemented in all 3 clusters in phase II.

Data collection and performance feedback were repeated monthly for another 4-month period. P-chart was used to compare the primary outcome of the 3 clusters at the end of the trial.

RESULTS

32,200 prescriptions were reviewed over the 8-month study period. The overall baseline error rate at the start of the trial was 48.0% (95% CI: 45.8-50.2). The monthly error league tables and authorised feedback letter intervention implemented in cluster 2, resulted in a gradual and sustained reduction in error rates. Monthly error league tables alone did not sustain the initial improvement of error rate seen in cluster 1. No improvement in error rates was seen in the control cluster. The intervention received by intervention cluster 2 resulted in the lowest error rate of 35.7% and was implemented in all clinics in phase II. Following that, the overall baseline error rate at the end of the trial was reduced significantly to 35.0% (95% CI: 33.4-36.5, p<0.001).

CONCLUSION

A high rate of prescription errors in primary care clinics in Perak may reflect the situation nationally. A routine, on-going feedback mechanism comprising league tables and feedback letters can reduce error rates significantly over time.

KEYWORDS

prescription practice, performance feedback, primary care, p-chart

NMRR-12-108-11289
TO REDUCE MEDICATION ADMINISTRATION ERROR THROUGH ENTERAL FEEDING TUBE IN ICU WARD OF A SPECIALIST HOSPITAL

Chew-Beng Ng¹, Sing-Chian Tan¹, Ummi-Khadijah Bani², Suhaida Mustafa², Junaidah Ariffin³
¹ Pharmacy Department, Taiping Hospital, Perak.
² Anaesthesia and Intensive Care Department, Taiping Hospital, Perak.
³ Dietetic and Food Service Department, Taiping Hospital, Perak.

OUTLINE OF PROBLEM

Critical care nurses shoulder the responsibility of administering oral medication via enteral feeding tube to patients admitted in the intensive care unit (ICU). Correct method of preparation and administering medication through feeding tube are crucial as improper practice may lead to tube obstruction, increased drug toxicity or reduced drug efficacy. This is an interventional study aimed to improve the nurses’ knowledge on enteral medication and to reduce enteral medication error in Taiping Hospital.

KEY MEASURES FOR IMPROVEMENT

In this study, percentage of enteral medication error was used as the indicator for improvement and the standard was set to be <5%. Nurses’ knowledge on enteral medication were also evaluated before and after implementation of the intervention.

PROCESS OF GATHERING INFORMATION

To assess the magnitude of the stated problem, a pre-intervention study was conducted from November to December 2011. A self-administered questionnaire, developed by the researchers, was used to evaluate the nurses’ current knowledge on enteral medication. The questionnaire consisted of 19 questions, sectioned into 4: (a) demographics, (b) correct practice of enteral medication, (c) specific drug-nutrient interaction, and (d) factors affecting enteral medication. Through this, a baseline scoring for knowledge was obtained. The nurses were also observed by the researchers, for assessment of their actual practice on enteral medication by using an observation checklist. After the implementation of intervention, the self-administered questionnaire and observations were repeated to evaluate the effectiveness of the intervention.

ANALYSIS AND INTERPRETATION

The pre-intervention indicator for enteral medication error for this study was 29.5%, with the nurses median score knowledge of 16 points (IQR 14 – 18). Factors leading to the high enteral medication error found in this study were; improper instructions for administration, lack of resources to aid enteral medication, and inadequate knowledge and awareness for the proper administration technique among nurses. Knowledge score was found to be low.

STRATEGY FOR CHANGE

The followings were implemented as interventions to reduce enteral medication error: i) establishment of a standard workflow for enteral medication, ii) establishment of feeding protocol for patients with medications that had drug-nutrient interaction, iii) reference for list of common oral medications which interact with enteral feed with special considerations in enteral administration for proton pump inhibitor, iv) reminders from pharmacist in the prescription for medications with drug-nutrient interaction and v) continuing education on enteral medication administration conducted among nurses.

EFFECTS OF CHANGE

There is a marked reduction in the enteral medication error following the implementation of the interventions. The indicator percentage was reduced to 1.04%. The nurses’ median knowledge score was also found to be increased to 29 points (IQR: 26 – 30) after the interventions.

THE NEXT STEPS

The interventions effectively reduced enteral medication errors and improved critical care nurses’ knowledge on enteral feeding. Regular reviews will be conducted to ensure continuity and maintenance of this achievement.

KEYWORDS

administration error, enteral feeding, intensive care, nurses

NMRR-11-1006-9957
IMPROVING KNOWLEDGE ON ANTIEPILEPTIC DRUG AMONG CHILDREN WITH EPILEPSY AND THEIR PARENTS IN A REGIONAL REFERRAL HOSPITAL

Norafizah-Mohd Latiff1, Noor-Aznita Ahmad1, Kamalia-Tarkip1, Salena-Md Isa1, Nor-Azura Razali1, Amar-Singh HSS2,3, Wei-Yin Lim3, Siti-Aishah S2, Sok-Yee Lee1, Norshazila-Julia Mohd Shafie1

1 Allied Health Science College Sultan Azlan Shah Ulu Kinta, Perak. 
2 Paediatric Department, Raja Permaisuri Bainun Ipoh, Perak. 
3 Clinical Research Centre (CRC) Perak, Perak.

INTRODUCTION AND OBJECTIVES

Epilepsy is a common neurologic disease in children and adolescents. It requires long-term management with antiepileptic drugs (AED). Young patients with epilepsy have been reported to be less well informed about their condition and treatment. Full parental support is needed to achieve an optimal compliance and treatment. This study aims to improve knowledge on AED among children with epilepsy and their parents through focused education intervention.

METHODOLOGY

This is a quasi-experimental study conducted in November 2012 at Raja Permaisuri Bainun Hospital. All children with epilepsy that were admitted into paediatric ward and whose clinic visits fall within the study period were included in the study. Parents were also included as participants. Children with mental retardation, cerebral palsy, status epilepticus and newly diagnosed epilepsy were excluded. A self-developed, pre-tested questionnaire on AED was administered to all participants before and after the implementation of the study intervention. The intervention comprised of counselling sessions supplemented with pamphlets, focusing on education on epilepsy and AED. The aim of this intervention was to address the misconception and lack of knowledge on epilepsy and AED. The target sample size was 50.

RESULTS

37 participants were recruited, of which 12 (23.4%) were children and 27 (72.9%) were parents/carers. Of the 12 children, 2 (25%) were Malay, 4 (33%) were Chinese, 4 (33%) were Indians. Their mean age was 12 years old (SD ±3.9 years). Majority of the children were males (75%). Of the total parents/carers, 7 (28%) were fathers, 14 (56%) were mothers, and 4 (16%) were carers. The highest education level of the parent/carer was secondary school education (80%), followed by college/university education (20%). There is a significant increase in number of children and parents being well informed with the correct knowledge on epilepsy and AED usage after the intervention was implemented. The significant increase was observed in all aspects of knowledge assessed on AED i.e. name of AED (p=0.002), function of AED (p<0.001), side effects of AED (p<0.001), and when to bring child to hospital when the child has fits (p<0.001), dose and frequency of AED (p=0.001), timing of AED administration (p=0.019), missed dose (p=0.036), and correct storage of AED (p=0.008). The mean score for overall knowledge in children increased significantly by 3.16 points after the intervention was implemented (p<0.001). Similar significant increment was also observed for parents. They scored 2.82 points higher after the implementation of intervention (p<0.001).

CONCLUSION

This study has shown that a simple focused education initiative towards parents/carers and children with epilepsy can effectively improve knowledge on epilepsy and AED. Research to evaluate relationship between increment in knowledge and improvement in compliance should be considered in the future.

KEYWORDS

knowledge, antiepileptic drug, epilepsy, children

NMRR-12-905-13226
IMPROVING KNOWLEDGE, PRACTICE, ACCEPTANCE AND SATISFACTION OF KANGAROO MOTHER CARE AMONG PARENTS AND HEALTH CARE PROFESSIONALS

Zanatulain Jamaluddin1, Siti-Aniyam Suder1, Bahariza-Lina Barozah1, Idayu-Azlina Mohd Zaidi1, Kim-Kea Khoo3, Lina Hashim2, Amar-Singh HSS2,3, Arvinder-Singh Harbaksh Singh2, Lionel Chia2, Haymalatha Rajagam1
1 Allied Health Science College Sultan Azlan Shah, Ulu Kinta, Perak.
2 Clinical Research Centre (CRC) Perak, Perak.
3 Paediatrics Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION AND OBJECTIVES

Kangaroo care is a method of holding a baby that involves skin-to-skin contact and is increasingly gaining popularity around the world. This method is being used in preterm babies that are admitted in the neonate intensive care unit with parental involvement. Application of this method increases the survival and growth for preterm babies. Implementation of Kangaroo Mother Care (KMC) in NICU & SCN of Paediatrics Department, Raja Permaisuri Bainun Hospital (HRPB), Perak, had been done in April 2013. We aimed to evaluate the satisfaction and feasibility of KMC implementation among parents and healthcare professionals in HRPB.

METHODOLOGY

An awareness campaign for KMC among HRPB healthcare staffs was conducted through biweekly Continuous Nursing Education (CNE) and KMC bedside training sessions for 4 weeks during the study conduct. The campaign was based on guidelines and training module from the World Health Organisation (WHO) on Kangaroo Mother Care (KMC) in NICU & SCN of Paediatrics Department, Raja Permaisuri Bainun Hospital (HRPB), Perak, and had been done in April 2013. We aimed to evaluate the satisfaction and feasibility of KMC implementation among parents and healthcare professionals in HRPB.

RESULTS

16 parents agreed to practice and were given intensive bedside training on KMC, but only 10 (62.5%) mothers adopted the practice successfully and completed the evaluation for the final analysis. All mothers reported gained confidence in KMC and eagerness to continue the practice. All mothers also agreed that KMC had increased their bond with their child. 90% of the mothers felt happy with KMC practice and 60% reported that it helped them understand their baby better. 60% of mothers felt that KMC can be better practiced if more privacy was offered. The KMC feasibility questionnaires were distributed to Paediatric Department staff after the awareness campaign, and 62 staffs participated. The respondents were 39 (63%) nurses, 14 (23%) house officers, 7 (11%) medical officers and 2 (3%) paediatricians. Half (52%) of the respondents were quite confident explaining the benefits of KMC to parents. With regards to planning a time with parents for KMC, 36 (58%) staffs responded that it is easy, while 6 (10%) of the staff found it difficult.

CONCLUSION

The awareness campaign on KMC resulted in the majority of NICU and SCN staff being motivated to practise the method. The majority of mothers who tried KMC adopted the practise and found it beneficial. Bedside training can be an effective tool to implement the KMC among mothers with babies admitted into.

KEYWORDS

kangaroo mother care (KMC), skin to skin care, premature, mother, staff

NMRR-13- 246-15158
IMPROVING THE MANAGEMENT OF PROLONGED NEONATAL JAUNDICE IN AN ADMINISTRATIVE REGION, MALAYSIA

Inthira-Sankari¹, Hui-Siu Tan², Amar-Singh HSS³,⁴, May-Luu Yeong¹, Pui-San Tan⁴, Ai-Yuin Leow⁴, Ranjit-Kaur Praim-Singh⁵, Marina Kamaruddin⁵, Asmah Zainal Abidin⁵, Fatimahtuz Zahrah¹, Hasmawati Harun¹, Muzafaliazara Muaazan¹, Ruhaiza Rani¹

¹ Paediatrics Department, Slim River Hospital, Slim River, Perak.
² Paediatrics Department, Teluk Intan Hospital, Teluk Intan, Perak.
³ Paediatrics Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.
⁴ Clinical Research Centre (CRC) Perak, Perak.
⁵ Perak State Health Department, Perak.

INTRODUCTION AND OBJECTIVES

Prolonged neonatal jaundice (PNNJ) is common, with the most common cause being breast milk jaundice. It could also be an early presentation for serious condition such as biliary atresia, urinary tract infection and congenital hypothyroidism. There is a tendency to over-investigate well prolonged jaundice babies and to late-diagnose biliary atresia. We were unable to identify any research or audit done on PNNJ in Malaysia before. This interventional study aimed to evaluate and improve the current management of PNNJ in the administrative region of Perak Malaysia.

METHODOLOGY

This is an interventional study conducted in three main phases. Phase Ia consisted of an opinion survey of health professionals in all government hospitals and 20 health clinics selected by convenience sampling. Phase Ib was a retrospective review of 20 conveniently sampled case notes, of neonates with prolonged neonatal jaundice, from each of the 13 government hospitals who responded to the opinion survey in phase Ia. This was followed by a consensus meeting (attended by paediatricians, hospital directors, clinic managers and laboratory personnel in Perak), discussing the results of Phase I and literature review. A new protocol on PNNJ was developed during the meeting, which consisted of a standardised, risk-stratified algorithm and clerking sheets for PNNJ management. Phase II involved implementation of this new protocol. Phase III was post-interventional audit at 6 months to review 20 conveniently sampled case notes from each of the 13 hospitals. Simultaneously, a self-reporting surveillance system was in place to receive reports of severe causes of PNNJ, including biliary atresias, urinary tract infection and congenital hypothyroidism.

RESULTS

The study was conducted from April 2012 to June 2013. 13 (92.8%) out of the 14 hospitals and all 20 (100.0%) health clinics selected had responded to the opinion survey. Of the targeted 260 case notes, only 199 (76.5%) and 155 (59.6%) case notes were retrospectively reviewed in phase Ib and phase III, respectively. The new protocol developed had been implemented at all levels of government health institutions in Perak since 18th September 2012 and a PNNJ registry was established by Perak state health department since January 2013. Data collected from January to April 2013 showed that PNNJ incidence was 158 babies per 1000 live births with 123 (77.8%) cases detected in the health clinics and with the large majority (142, 89.9%) categorised as low risk. Comparing both pre (phase Ib) and post (phase III) intervention, there were statistically significant improvement in history taking (mean score 3.26 vs 4.44, p < 0.001), family-history taking (mean score 0.53 vs 2.14, p < 0.001), physical examination (mean score 3.78 vs 4.49, p < 0.001) and reduction in total investigations done per patient (mean investigations 9.0 vs 5.8, p < 0.001). There was also a reducing trend in the mean number of visits per patient (2.46 to 2.20 p = 0.04). Until the time of report writing, there has been no reported case of missed biliary atresia or urinary tract infection with the new system.

CONCLUSION

The incidence of PNNJ is high and prior management in Perak was not standardised with incomplete clinical assessment and many unhelpful tests done. A new protocol had been in place for the past 10 months with the use of a standardised, risk-stratified algorithm and clerking sheets for PNNJ management which had significantly improved the quality of care for PNNJ cases.

KEYWORDS

management, prolonged neonatal jaundice, PNNJ

NMRR-12-105-11288
SAFETY AND IMMUNOGENICITY OF A TETRAVALENT DENGUE VACCINE IN HEALTHY CHILDREN AGED 2–11 YEARS IN MALAYSIA: A RANDOMIZED, PLACEBO CONTROLLED, PHASE III STUDY

Amar-Singh HSS1,2, Mia-Tuang Koh3, Kah Kee Tan4, Lee-Gaik Chan5, Lynn Zhou6, Alain Bouckenooghe7, Denis-Crevat8, Yanee Hutagalung7

1 Clinical Research Centre Perak, Perak.
2 Paediatrics Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.
3 Paediatrics Department, University Malaya Medical Centre, Kuala Lumpur.
4 Paediatrics Department, Tuanku Jaafar Seremban Hospital, Negeri Sembilan.
5 Paediatrics Department, Sarawak General Hospital, Kuching, Sarawak.
6 Biometry China, Beijing, Republic of China.
7 Clinical R&D, Sanofi Pasteur, Singapore.
8 Clinical R&D, Sanofi Pasteur, France.

INTRODUCTION AND OBJECTIVES

Dengue disease is a major public health problem across the Asia-Pacific region for which there is no licensed vaccine or treatment. We evaluated the safety and immunogenicity of Phase III lots of a candidate vaccine (CYD-TDV) in children in Malaysia.

METHODOLOGY

In this observer-blind, placebo-controlled, Phase III study, children aged 2–11 years were randomized (4:1) to receive CYD-TDV or placebo at 0, 6 and 12 months. Primary endpoints included assessment of reactogenicity following each dose, adverse events (AEs) and serious AEs (SAEs) reported throughout the study, and immunogenicity expressed as geometric mean titres (GMTs) and distribution of dengue virus (DENV) neutralizing antibody titres.

RESULTS

250 participants enrolled in the study (CYD-TDV: n = 199; placebo: n = 51). There was a trend for reactogenicity to be higher with CYD-TDV than with placebo post-dose 1 (75.4% versus 68.6%) and post-dose 2 (71.6% versus 62.0%) and slightly lower post-dose 3 (57.9% versus 64.0%). Unsolicited AEs declined in frequency with each subsequent dose and were similar overall between groups (CYD-TDV: 53.8%; placebo: 49.0%). Most AEs were of Grade 1 intensity and were transient. SAEs were reported by 5.5% and 11.8% of participants in the CYD-TDV and placebo groups, respectively. No deaths were reported. Baseline seropositivity against each of the four DENV serotypes was similar between groups, ranging from 24.0% (DENV-4) to 36.7% (DENV-3). In the CYD-TDV group, GMTs increased post-dose 2 for all serotypes compared with baseline, ranging from 4.8 (DENV-1) to 8.1-fold (DENV-3). GMTs further increased post-dose 3 for DENV-1 and DENV-2. Compared with baseline, individual titre increase ranged from 6.1-fold (DENV-1) to 7.96-fold (DENV-3).

CONCLUSION

This study demonstrated a satisfactory safety profile and a balanced humoral immune response against all four DENV serotypes for CYD-TDV administered via a three-dose regimen to children in Malaysia.

KEYWORDS

suggestions dengue, paediatric population, vaccine, malaysia, safety, immunogenicity

© 2013 The Authors. Published by Elsevier Ltd. All rights reserved.
IMPROVING ADHERENCE TO ANTI-DIABETIC MEDICATION THERAPY AND GLYCAEMIC CONTROL AMONG DIABETIC PATIENTS IN A GOVERNMENT HEALTH CLINIC

Subashini Ambigapathy, Zainul-Ikhwan Khusairi, Norwani Razali, Mohamad-Shahrizal Razali, Maznah Idris, Zhen-Khim Ang, Zin-Yi Teh, Sumathi Moorthi, Nordiales Mohd. Zain, Peremah Copusamay

Taiping Health Clinic, Larut, Matang & Selama, Perak.

INTRODUCTION AND OBJECTIVES

Adherence to prescribed medication regimens is vital in diabetic care to achieve good glycaemic control. Poorly controlled diabetes is associated with microvascular and macrovascular complications. This study evaluated the effectiveness of the pharmacist-led Diabetic Medication Therapy Adherence Clinic (DMTAC) on medication adherence and glycaemic control among diabetic patients in a government health clinic in Perak.

METHODOLOGY

This is a prospective randomised controlled trial conducted among adult diabetic patients in Taiping Health Clinic. All patients followed up in Taiping Health Clinic, aged 18 years and above with a HbA1c levels above 6.5%, were invited to participate in the study. Patients with acute psychosis, dementia, mental retardation, and stroke with aphasia were excluded from the trial. Eligible patients who consented to participate were randomly assigned into either a control group who received routine care, or an intervention group who received structured counselling sessions by pharmacists for 3 months. The structured counselling sessions consisted of education to participants by pharmacists on therapeutic goals, medication use and adverse effects, self-monitoring of blood glucose, sign and symptoms of hypoglycaemia and hyperglycaemia, and addressing existing concerns of their conditions. Demography data, medication adherence scores using the Modified Morisky Scale (MMS) and HbA1c levels of all the participants, were reviewed and collected at baseline and at the third month of the trial. HbA1c levels and medication adherence scores were then analysed and compared between the two groups.

RESULTS

262 eligible patients who consented to participate were randomly assigned into the control and intervention groups in 1:1 ratio. 15 participants from the control group and 18 participants from the intervention group did not complete the trial, resulting in a final trial sample of 229 participants. The baseline demographic and disease characteristics were similar in both groups, however the baseline mean HbA1c levels were significantly higher among control subjects. There is a significant improvement in medication adherence among participants in the intervention group, as indicated by the increase in median MMS scores from 3 (Q1-Q3: 2-4) to 5 (Q1-Q3: 4-6) at the end of the trial. Significant improvement in the mean HbA1c levels was also observed among participants in the intervention group; baseline mean HbA1c 9.4% (SD ± 2.1%) vs. 3rd month mean HbA1c 8.9% (SD ± 1.9%) p<0.05. No such improvement was observed in the control group; baseline mean HbA1c 10.1% (SD ± 1.7%) vs. 3rd month mean HbA1c 10.0% (SD ± 1.8%) p = 0.38. Participants who received the intervention also had a significantly lower HbA1c levels at the end of the trial than those in the control group; 8.9% (SD ± 1.9%) vs. 10.0% (SD ± 1.8%) p<0.001.

CONCLUSION

Structured counselling by pharmacists significantly improved mean HbA1c levels and medication adherence among diabetic patients.

KEYWORDS

adherence, diabetes, glycaemic control, DMTAC

NMRR-12-486-12056

Learning note from the editors:
1. The researcher should compare the percentage of patients who achieved target HbA1c (<6.5%), rather than the change in HbA1c levels between groups.
2. In addition, a repeated measures analysis should be performed to compare HbA1c levels between and within-groups.
3. The design of the study should be improved to:
   a) Avoid contamination of participants in the control and intervention groups (do in different clinics).
   b) Clearly measure the volume of intervention and routine care.
   c) Evaluate medication adherence in both groups.
THE IMPACT OF HOME MEDICATION REVIEW (HMR) PROGRAMME FOR PATIENTS DIAGNOSED WITH SCHIZOPHRENIA: A PSYCHIATRIC HOSPITAL’S EXPERIENCE

Yee-Mun Tan¹, Chee-Ping Chong², Yee-Chuang Cheah¹
¹ Bahagia Hospital, Ulu Kinta, Perak.
² School of Pharmaceutical Sciences, Universiti Sains Malaysia, Penang.

INTRODUCTION AND OBJECTIVES

Home medication review (HMR) programme has been part of the Malaysian healthcare system since 2004 to provide continuity of good patient’s care from various healthcare institutions to patients’ home. However, little is known about the actual impact of the HMR programme in Malaysia. In this study, we aimed to evaluate the impact of HMR programme on patients diagnosed with schizophrenia in a regional referral psychiatric hospital, Malaysia.

METHODOLOGY

This is an interventional study conducted over a period of 1 year (September 2012 to September 2013) involving schizophrenic patients under the care of Bahagia Hospital. Only stable patients were invited to participate in the study. After the attainment of the written informed consent, patients were enrolled in the HMR programme. HMR programme consisted of 2-monthly or 3-monthly home visit by the home care team comprising predominantly of pharmacists to perform a comprehensive medication review and to provide individualised, structured medication counselling to patients. A standardised data collection form was developed and used by the researchers to collect data during the first visit (baseline), second visit (after one month), third visit (after three months) and fourth visit (after six month). The form collected data on 3 major aspects including patient’s medication adherence, knowledge of antipsychotic medications and quality of life. Patient’s medication adherence was evaluated by using the validated medication adherence rating scale (MARS) and the pill count method. Patient’s knowledge of antipsychotic medications was assessed by face-to-face interview using a standardised questionnaire formulated by the researcher. Quality of life was measured by the Sheehan Disability Scale (SDS) to evaluate global functional impairment of patients in 3 inter-related domains: work/school, social and family domain. SDS score ranges from 0 to 30. It indicates the severity of global functional impairment, the higher the score the more severe is the global functional impairment.

RESULTS

100 eligible patients agreed to participate in the study. The mean age of the patients was 41.8 (SD 9.0) years, with approximately equal ratio of males to females (56.0% vs 44.0%). Ethnicity distribution was as follows: Chinese (57.0%), Malay (32.0%) and Indian (11.0%). Adherence to medications was significantly improved after the fourth visit [1st visit: median MARS = 8 (IQR 7-10) vs 4th visit: median MARS = 10 (IQR 9-10), p<0.001]. Pill count method had revealed that the median percentage of prescribed medications taken had shown a highly significant improvement with HMR programme [1st visit: median = 77.3% (IQR 21.9%-100.0%) vs 4th visit: median = 100.00% (IQR 90.2-100.0%), p<0.001]. Knowledge score had also improved considerably with the introduction of HMR programme [1st visit: median = 5 (IQR 4-6) vs 4th visit: median = 8 (IQR 7-8), p<0.001]. Besides, major improvement was seen in the quality of life of patients with the introduction of HMR programme [1st visit: median SDS = 11 (IQR 11-16) vs 4th visit: median SDS = 11 (IQR 11-11), p<0.001].

CONCLUSION

The HMR programme significantly increases patient’s medication adherence, knowledge and the quality of life on ‘social’ and ‘family’ component from baseline to six months.

KEYWORDS

home medication review, schizophrenia, medication adherence, knowledge of antipsychotic medications, quality of life

NMRR-12-691-13067
OBSERVATIONAL RESEARCH

AWARENESS AND BARRIERS TOWARDS STANDARD PRECAUTION POLICIES AMONG HEALTHCARE WORKERS IN A DISTRICT SPECIALIST HOSPITAL

Hartini Abdul Rahman
Intensive Care Unit, Seri Manjung Hospital, Perak.

INTRODUCTION AND OBJECTIVES

Healthcare workers (HCWs) are at risk of contracting infectious disease as they are exposed to patient’s blood, body fluids, and biological specimens. At the same time, patients are also at risk of getting nosocomial infections during hospitalisation or clinic visits. Standard precautions in accordance with the Ministry of Health (MOH) guidelines are implemented to control the spread of infection. This study aimed to assess the awareness and existing barriers towards Standard Precaution Policy among HCWs of Seri Manjung Hospital.

METHODOLOGY

A cross-sectional study was conducted among 50 conveniently sampled HCWs working in Seri Manjung Hospital using a self-administered questionnaire. The self-administered questionnaire was developed by the researchers through focus group discussions with Medical Physicians and Infection Control Nurses. It consisted of 6 sections including: (a) socio-demography, (b) awareness of Standard Precaution Policy, (c) awareness of the implementation of this policy, (d) barriers towards implementation, (e) staff opinions on policy, and (f) staff confidence on practicing this policy. Questionnaires were distributed to head of departments and head nurses, to be placed at the clinic counter of each department. HCWs that consented to participate were given 1 week to complete the questionnaires. Completed questionnaires were envelop-sealed and dropped into a box provided at a specified area in the Intensive Care Unit (ICU), Seri Manjung Hospital. Data was collected over a period of 2 months from November to December 2011. All nurses from the infection control unit and student nurses were excluded from this study. Participants’ confidentiality was maintained.

RESULTS

47 out of 50 distributed questionnaires were returned, resulting in a 94.0% response rate. Most (55.3%) respondents were between 25 to 35 years old, nurses (89.4%), working in wards (80.9%), with 11-20 years of working experience (42.6%). All were aware of the policy and had attended previous trainings on standard precautions. Majority (89.4%) applied this policy in their clinical practice and some neglected the policy due to excessive work load (6.4%) and inadequate facilities (4.3%). Posters were commonly used as communication tool to update the Standard Precaution Policy to hospital staff and all of the respondents were aware of these posters. However the majority (74.5%) did not know the frequency of the posters updates. Inadequate communication (68.8%), overcrowded wards (58.3%), being overworked (54.2%) and understaffed (43.8%) were the barriers towards application of the policy as reported by the respondents. 17% of the participants felt that they lacked knowledge and skills to apply the policy, while the majority (83%) were confident applying the standard precautions in their daily work. All agreed that training courses to update knowledge and skills on standard precautions are essential to be attended by junior staff, senior staff and by those who did not apply the policy.

CONCLUSION

This study demonstrates adequate awareness among HCWs towards Standard Precautions Policy. However, barriers against adherence and application to the policy do exist and should be the target of improvement in healthcare settings.

KEYWORDS

healthcare workers, standard precautions, awareness, barriers

Research ID: 16214
OUTCOME OF ACUPUNCTURE TREATMENT IN A MALAYSIAN PAIN CLINIC

Kavita M. Bhojwani¹, Lee-Choo Yeoh²
1 Anaesthesia & Intensive Care Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak
2 Anaesthesia & Intensive Care Department, Sultanah Bahiyah Hospital, Alor Setar, Kedah

INTRODUCTION AND OBJECTIVES

Patients worldwide are turning to complementary and alternative medicine for chronic pain relief. In Malaysia, acupuncture is well-established in traditional and complementary medicine practice, and is well accepted by our population for a variety of ailments, including pain. Since 2006, acupuncture has been incorporated as one of the modalities of treatment in multidisciplinary pain management clinics in Ministry of Health (MOH) hospitals in Malaysia. The aim of this study was to determine the outcome of acupuncture treatment in patients attending the Pain Clinic of a regional referral hospital in Malaysia.

METHODOLOGY

All patients with chronic non-cancer pain treated with acupuncture at the Pain Clinic of Raja Permaisuri Bainun Hospital, Ipoh from April to October 2011 were asked to answer a questionnaire. Information obtained from the questionnaire included details of the chronic pain problem being treated [pain duration, site(s), and intensity]. Patients were also asked to grade the degree of improvement (none, minimal, moderate, and significant) for pain relief, sleep improvement, and overall sense of wellbeing. The amount of analgesics used before and after treatment was also noted.

RESULTS

25 patients answered the questionnaire in the preliminary phase of this study. Most were female and between 36-65 years old (64%). Pain sites included the back (32%), shoulders & neck (20%), back, shoulders & neck (16%), head & face (12%), and knees and ankles (20%). 60% of the patients received acupuncture 2-4 times a week, while the rest had treatments once a week or less. More than half of them (56%) received acupuncture for more than a year while 20% received between 6 months to a year. Outcome of the treatment was positive for all the measured domains (degree of pain relief, improvement in sleep, sense of wellbeing, reduction of analgesics) in the majority of patients. 36% of patients reported significant improvement in their pain, 44% reported moderate improvement, and 16% had mild improvement, while 4% did not show improvement. Sleep improved significantly in 28% and moderately in 56% of patients. The vast majority (96%) reported improvement in their overall sense of well-being and 80% of patients showed reduced use of analgesics at the end of the acupuncture treatment.

CONCLUSION

Acupuncture offers moderate to significant pain relief to patients when used as a complementary treatment along with other modalities of treatment in a multidisciplinary pain clinic. In addition to pain relief, patients reported other benefits like sleep improvement and improvement in overall sense of well-being as well as reduction in analgesic use. Further studies are needed in a larger patient population to determine other benefits and if they are sustained over a period of time.

KEYWORDS

acupuncture, pain, outcome

NMRR ID: Not Available

Editorial Note:

It is important to recognise that this study.
INTRODUCTION AND OBJECTIVES

Trauma and emergency medicine department (ED) faces frequent challenges in improving the patients' experience and satisfaction. This is due to high patient's load and urgency of care for selected patients. The study aimed to evaluate patient satisfaction on emergency medical services provided by the ED of Raja Permaisuri Bainun Hospital (HRPB), a regional referral hospital in Malaysia.

METHODOLOGY

This was a cross-sectional, single-centre study conducted over a period of 2 weeks (6th January 2014 to 19th January 2014) at HRPB. A questionnaire was developed by the researchers based on a validated questionnaire by Benjamin C Sun et al. to evaluate patient satisfaction with emergency care. The questionnaire was available in 3 languages common to the Malaysian population: Malay language, English and Chinese language. The questionnaire contained 25 questions and was divided into 4 sections: (a) socio-demographic characteristics, (b) waiting time, (c) management of ED, and (d) provision of care by healthcare personnel. Conscious, literate patients more than 18 years of age with planned discharge from ED were conveniently sampled to answer the self-administered questionnaire. The satisfaction level and agreement to pre-specified statements were measured on a 5-point Likert scale. The score ranged from 1 to 5, with increase in satisfaction and agreement to statement associated with higher score. The score was further categorised into two categories: score of 1-3 (unsatisfied/did not agree) and score of 4-5 (satisfied/agree). Univariate followed by multivariate logistic regression analysis were used to explore the factors affecting patient satisfaction at ED.

RESULTS

A total of 1143 patients were approached, however only 431 (37.7%) patients responded. There was almost equal proportion of male (53.8%) and female (46.2%). The majority of the respondents were of Malay ethnicity (59.8%), followed by Chinese ethnicity (19.3%) and Indian ethnicity (14.4%). The respondents of the study were young with the large majority aged below 40 (70.6%). With respect to education level, almost all respondents had at least primary school education (98.4%). Breathing difficulty (21.8%), fever (20.0%) and abdominal pain (19.3%) were the most common complaint presented to the ED. Overall satisfaction rating was favourable with the respondents predominantly satisfied with the care received at the ED (96.1%). While the majority of the respondents were not satisfied with the waiting time at the ED (59.1%), many were satisfied with the management of ED (75.9%) and the clinical experience of medical personnel / at ED (83.1%). 378 (87.7%) respondents were triaged as non-critical and only 53 (12.3%) respondents were triaged as semi-critical. There were no respondents triaged as critical. However, the respondents had different perception with 5.6% and 39.4% felt that they were semi-critical and critical, respectively. Significant predictors of patient satisfaction with emergency care included: (a) information on estimated waiting time (OR=2.308, 95%CI: 1.281-4.157, p=0.005), (b) information on circumstances that warrants seeking urgent medical attention at ED, (c) explanation on possible causes of clinical complaint (OR=0.865, 95%CI: 4.416–11.927, p<0.001), (d) explanation on laboratory test results (OR=2.904, 95%CI: 1.563–5.396, p=0.001), (e) achievement of the targeted waiting time according to key performance index (OR=2.064, 95%CI: 1.101-3.868, p=0.0274).

CONCLUSION

Patients at ED are generally satisfied with the emergency care services at HRPB. Further improvement can be achieved by shortening the waiting time and by reinforcing provision of adequate explanation and information to patients seeking emergency care at ED.

KEYWORDS

patient satisfaction, emergency medical services, regional referral hospital
ATTITUDES, BARRIERS AND FACILITATORS TO THE CONDUCT OF RESEARCH IN GOVERNMENT HOSPITALS: A CROSS-SECTIONAL STUDY AMONG SPECIALISTS IN GOVERNMENT HOSPITALS, NORTHERN STATES OF MALAYSIA

Lei-Choo Teh, Mun-Pung Choy, Prema Muninathan, G. R. Letchuman Ramanathan
Clinical Research Centre (CRC) Taiping, Perak.

INTRODUCTION AND OBJECTIVES
Specialists constitute a major ‘driving force’ and catalyst for growth of research in their departments and institutions. To successfully cultivate research culture in government hospitals, it is important to obtain a clear understanding of what motivates and encourages participation in research, as well as the barriers and challenges faced. This study aimed to study the attitudes, barriers, and facilitators to the conduct of research in government hospitals as well as to identify strategies to promote and sustain research activities.

METHODOLOGY
A cross-sectional survey using self-administered questionnaires was conducted from September to November 2013 among specialists working in all 13 government specialist hospitals in the northern states of Malaysia (Perlis, Kedah, Penang, and Perak). The questionnaire was developed by identifying and compiling findings from literature review of relevant studies as well as feedback from specialists during informal discussions. The developed questionnaire was pre-tested among 10 specialists from Taiping Hospital, some of whom were not involved in research, to determine its content validity.

RESULTS
Out of 733 questionnaires distributed, 467 were returned, giving a response rate of 63.7%. Respondents included 92 (19.7%) Heads of Department, 137 (29.3%) consultant specialists, 195 (41.8%) junior specialists, 42 (9.0%) specialist under gazettement, and 1 (0.2%) without designation specified. A high percentage of respondents (99%) believed that research benefits patients and society, while the vast majority (93.3%) think that research will enhance their professional development. However, 55.4% were currently not involved in research. In addition, 34.8% were unlikely to participate in research in the near future under their present working conditions. Some (34.2%) also felt that research may affect the doctor-patient relationship. The major barriers faced were lack of funds for research (81%), lack of access to expertise, software or statistical analysis (78.4%), interference with daily work schedule (75.1%), and inconsistent number of doctors in their departments (74.2%). Most (70.3%) felt that there is no co-ordinated approach to research in their departments. Comparing specialists working in hospitals with a clinical research centre (CRC) to those in hospitals without a CRC, lack of research funds (79% vs. 90.9%, p = 0.01), lack of mentors (64.7% vs. 75.3%, p = 0.05) were significantly less apparent. Potential to benefit patients/institution and potential for professional development/peer recognition are the top 2 main facilitators for the conduct of research. These are followed closely by recognition of research achievement for promotion, Ministry of Health’s support to present research projects at international conferences/scientific meetings, and consideration for research scholarships.

CONCLUSION
The vast majority of respondents believed that research benefits patients and society, and helps in their professional development. More than half of the respondents are not involved in research, and one third of them are unlikely to participate in research in the near future due to their present working conditions. The Ministry of Health should take note of the barriers faced by specialists in conducting research and the facilitators which motivate them.

KEYWORDS
attitudes, barriers, facilitators, research, specialists

Learning note from the editors:
This study is important and requires the attention of managers at all level including senior MOH directors.
OBSERVATIONAL RESEARCH

PUBLIC AWARENESS AND ATTITUDE TOWARDS PARTICIPATION IN CLINICAL TRIALS

Sharon Linus Lojikip1, Amar-Singh HSS2,3, Teck Hock-Toh4,5, Ling Yap4
1 Clinical Research Centre (CRC) Queen Elizabeth I, Kota Kinabalu, Sabah.
2 Clinical Research Centre (CRC) Perak, Perak.
3 Paediatrics Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.
4 Clinical Research Centre (CRC) Sibu, Sarawak.
5 Paediatrics Department, Sibu Hospital, Sarawak.

INTRODUCTION AND OBJECTIVES

Clinical trials are scientific investigations that examine and evaluate the safety and efficacy of new drugs or therapeutic procedures to improve care for people with diseases or disabilities. The results generated from clinical trials are considered to be the most valuable data in the era of evidence-based medicine. Its conduct however, depends on the participation by human volunteers; patients and healthy people alike. This is the first preliminary survey that described general awareness, understanding, perception and attitude towards participation in clinical trials among Malaysian public.

METHODOLOGY

The survey took place in the National Early Childhood Intervention Conference, Sibu, Sarawak in June 2012. The delegates comprised of parents, non-governmental organisation workers of early childhood intervention, teachers and health care providers from all over Malaysia. There were 724 delegates with 93 being parents. Survey forms were distributed during the conference and all of the delegates were invited to participate in the survey. The questionnaire was self-administered after informed consent was given by each respondent. Participation was voluntary. The survey examined the awareness level, knowledge, perception and attitude towards participation in clinical trials in three different languages (Malay, English, Chinese). It was developed by the authors and pre–tested in a focus group discussion for improvements. An information leaflet about clinical trials and their benefits was included in the survey forms.

RESULTS

291 (40.2%) conference delegates participated in the survey. 216 (74.2%) were from East Malaysia and 75 (25.8%) from West Malaysia. Most participants were of Chinese ethnicity (57%) and were not medical personnel (41.9%). 201 (69%) of the participants reported to have background knowledge about clinical trials. Of these, only 23 (11%) had participated in clinical trials as adult previously and only 5 (5%) had allowed their children to participate in clinical trials as trials subjects. Most participants reported to have average level of understanding about clinical trials (47.8%). On average, 70% of the participants reported to have positive perceptions towards clinical trials. Contribution to advancement of medical health care was agreed by most participants as one of the benefits for participating in clinical trials (97.9%). However 53.6% of them also felt that participation in clinical trials is troublesome. 51.6% of the participants felt that it is very important to participate in chronic disease clinical trials, and 42.6% reported that they were very willing to enrol into these trials as adult subjects. As for paediatric clinical trials, 49.8% of the participants felt that it is very important for their children to participate, and 40% reported that they were very willing to enrol their children into these trials. Fear of using new drugs or therapies was the top reason for not considering participating in clinical trials (49.4%).

CONCLUSION

The results of this preliminary survey are useful for clinical researchers to understand the awareness and attitude of the Malaysian public towards participation in clinical trials. Another similar study involving west Malaysian with a larger sample size is necessary to give results that are more representative of the Malaysian population. Mechanisms to improve participation in clinical trials should be introduced.

KEYWORDS

clinical trials, public awareness, attitude towards participation

NMRR-12-722-12604
INNOVATION PILOT STUDY: ACUTE GERIATRIC UNIT – PROVISION OF ACUTE ELDERLY CARE IN HOSPITAL WITH LIMITED GERIATRICIAN INPUT

Kee-Huat Chuah1, Hang-Cheng Ong1, Mun-Pung Choy2, Chong-Hong Lim1, Wee-Kooi Cheah1
1 Medical Department, Taiping Hospital, Perak.
2 Clinical Research Centre (CRC) Taiping, Perak.

INTRODUCTION AND OBJECTIVES

Elderly patients above 60 years old constitute 45% of the total admissions in the Medical Ward of Taiping Hospital. Care for patients in this age group poses unique challenges to healthcare providers, and very few specialists are trained for elderly care in the country. The Acute Geriatric Unit (AGU) was set up in the Medical Department of Taiping Hospital to improve quality of care for these patients. Previously, general medical wards received patients regardless of age. With AGU, elderly patients are admitted to designated wards. The emphasis of AGU is on nursing care and procedures, with input from a Geriatrician twice a week. This study compared the length of stay (LOS), readmission rate, and mortality of elderly patients before and after the implementation of AGU.

METHODOLOGY

This is a retrospective study evaluating the effects of AGU implementation in the Medical Department of Taiping Hospital. All elderly patients above 60 years of age admitted into the Male and Female Medical Wards between August 2011 to January 2012 (before AGU implementation), and February 2012 to July 2012 (after AGU implementation) were identified and their medical records and admission data reviewed. To ensure similar disease profiles between elderly patients who received AGU care and whom did not, those admitted due to cerebrovascular disease, nephrology, respiratory or endocrinology related illnesses were excluded from the review.

RESULTS

A total of 774 eligible pre-AGU admissions were compared with 1432 eligible post-AGU admissions. Demographic and disease characteristics of were similar between the 2 groups. After implementation of AGU, the mean LOS reduced significantly from 4.38 (SD=5.0) to 3.26 days (SD = 3.6) days (p < 0.001). There was also a decrease in 3 months readmissions rate (from 26.6% to 23.0%, p= 0.062) and mortality (from 11.4% to 9.8%, p = 0.241).

CONCLUSION

The implementation of AGU significantly reduced patients’ length of stay. Readmission and mortality rates were also improved albeit not significantly. This system may be implemented to improve acute medical care for the elderly in hospitals where input from a geriatrician is limited.

KEYWORDS

acute care, elderly, geriatric, hospitalisation, length of stay

NMRR-12-722-12604

Learning note from the editors:
In studies that involve comparisons of data between two time periods, it is important to consider that the other changes in care may affect outcomes.
OBSERVATIONAL RESEARCH

ABILITY OF NEWLY QUALIFIED MEDICAL OFFICERS TO USE SELF-INFLATING RESUSCITATION BAG

Rahizal-Othman1, Nurakma-Arippin1, Julaina-Jamal1, Norainaa-Arifin1, Khairunnisak-Azman1, Sok-Yee Lee1, Norshazila-Julia1, Kalpana-Devi B2, Eng-Lai Chew3, Amar-Singh HSS2,3
1 Allied Health Science College Sultan Azlan Shah Ulu Kinta, Perak.
2 Clinical Research Centre (CRC) Perak, Perak.
3 Paediatrics Department, Hospital Raja Permaisuri Bainun Ipoh, Perak.

INTRODUCTION AND OBJECTIVES

The skill in using bag-valve-mask (BVM) ventilation is important in providing effective ventilation in a critically ill patient. Manual lung ventilation using bag-valve-mask resuscitation bag is frequently performed by healthcare professionals working in intensive care setting. This study was carried out to evaluate the ability of newly qualified medical officers, using BVM resuscitation bag and to recommend ways of maintaining and improving basic resuscitation skills.

METHODOLOGY

This is a cross-sectional study that was conducted in 7 government district hospitals in Perak, Malaysia. Newly qualified medical officers in Perak district hospitals were invited to participate in the study voluntarily. The study comprised of a 10 minute performance assessment, on effective ventilation using BVM resuscitation bag on mannequin using the Observed Structured Clinical Examination (OSCE) platform. The OSCE was based on the current BLS, NRP, APLS, ATLS, ACLS and PALS guidelines. It assessed 11 core knowledge and skills of using the BVM in adult and pediatric. It was developed and pre-tested jointly by a certified instructor and the researchers. Through observation, based on the core skills list, the researchers classified the OSCE conducts into (i) correctly performed, (ii) incorrectly performed and (ii) not performed. The participating medical officers were also assessed of the correct bag size for adult and pediatric knowledge, as well as the bagging rate for both groups. The study was carried out from November until December 2012. Confidentiality of the participating medical officers was maintained.

RESULTS

35 medical officers were recruited into this study. Most participants had more than 6 months working experience after the completion of internship (65.7%). All had attended at least one certified resuscitation course previously, and all had at least one real experience in acute resuscitation in children and adults prior to the OSCE. No participants assessed were able to perform all the steps of BVM ventilation correctly. Ensuring high oxygen flow at 10-15 L/minute was the commonest incorrectly performed step conducted by the participants (60.0%), followed by incorrect head tilt chin lift technique (51.4%). To check if the bag is functioning, was the commonest step not performed by the participants (40.0%). This is followed by failure to switch the high oxygen flow at 10-15 L/minute on (28.6%). Only 2 (5.7%) participants gave the correct answer for adult bag size, and 8 (22.9%) participants gave the correct answer for pediatric bag size. Half of the participants failed to give the correct bagging rate for pediatric and adults.

CONCLUSION

This study gave a preliminary competency review of newly qualified medical officers in performing effective BVM ventilation. It is recommended that all medical officers upon completion of house officer training, be routinely and formally evaluated on their ability to correctly use a self-inflating resuscitation bag. A more focused refresher resuscitation course with emphasis on areas of weaknesses identified in this study i.e. how to choose the appropriate bag and mask sizes, basic airway opening maneuver (head-tilt-chin-lift) and appropriate oxygen flow are proposed.

KEYWORDS

newly qualified medical officers, self-inflating resuscitation bag

NMRR-12-862-13225
INTRODUCTION AND OBJECTIVES

Based on the Global Cancer Statistics 2002 estimates, breast cancer is the 2nd most common cancer while cervix uteri is the 7th most common cancer worldwide. According to the Malaysian Cancer Statistics in the year 2007, the age-standardised rate (ASR) of breast cancer and cervix uteri cancer was 29.1% and 7.8% respectively. In Perak, the ASR of these 2 cancers was 30.3% and 5.3% respectively. The objective of this study was to review cases of advanced breast and cervical cancers (stages III and IV) in Larut, Matang and Selama Health District, Perak, from the year 2010 to 2011.

METHODOLOGY

Cases of advanced breast cancer and advanced cervical cancer from January 2010 to December 2011 were reviewed retrospectively. Medical records from the Surgical and Obstetrics and Gynaecology Departments of Taiping Hospital as well as the Perak Cancer Registry were screened to identify eligible patients. Data on socio-demography, co-morbidities, duration of symptoms prior to diagnosis, family history, facilities visited for symptoms, place of diagnosis, previous screening, and risk factors were extracted into a demographic data sheet and cancer audit questionnaire.

RESULTS

62 cases of advanced breast cancer and 6 cases of advanced cervical cancer were identified. Of the 62 females with advanced breast cancer the majority were diagnosed as infiltrating ductal carcinoma (91.9%). Most were Malays (62.9%), married (83.9%), housewives (67.7%), and between 50-59 years old (32.3%). Most had no co-morbidities (38.7%). Majority do not have family history of breast cancer (85.5%) or other cancers (83.9%). Most were neither on oral contraceptives (77.4%) nor on hormone replacement therapy (69.4%). Approximately one third of them (35.5%) had early menarche and only 5 (8.1%) had late menopause. Nearly half were multiparous (48.4%) and most (64.5%) had not done a mammogram before. Breast lump was the main presenting complaint (79%). Most visited government health clinics for their symptoms (33.9%), and were diagnosed at the specialist hospital (75.8%). However, only a minority (8.1%) sought treatment in less than 2 week after their symptoms appeared. Of the 6 females with advanced cervical cancer, the majority were diagnosed as squamous carcinoma (83.3%), all were housewives. Most were Malays (66.7%), separated or divorced (66.7%), and between 50-59 years old (66.7%). None had a family history of cervical cancer or other cancers and, were neither on oral contraceptives nor hormone replacement therapy. 2 (33.3%) had early menarche and 1 (16.7%) had late menopause. Majority were multiparous (83.3%) but none had a Pap smear test done before. The main presenting complaint was post-menopausal bleeding (66.7%). All presented at the specialist hospital for their symptoms, and were subsequently diagnosed with cancer. However, none sought treatment in less than 1 month after symptoms appeared.

CONCLUSION

The majority of patients presenting with advanced breast and cervical cancer do not seek early treatment for their initial symptoms. In addition, none had undergone screening for early detection of these cancers. Interventions to increase public awareness regarding the importance of breast and cervical cancer screening programmes are required.

KEYWORDS

breast cancer, cervical cancer, advanced, associated factors

Research ID: 11709
OBSERVATIONAL RESEARCH

READMISSION RATE OF UNSTABLE ANGINA (UA) AND NON-ST ELEVATION MYOCARDIAL INFARCTION (NSTEMI) IN A DISTRICT SPECIALIST HOSPITAL, MALAYSIA

Nur-Hazlizat Hashim, Nur-Husniyah Sulaiman, Yean-Foong Yee, Zye-Wei Chiam, Nik-Afzan-Iftitah Mohd Nor, Siew-Hong Ling
Pharmacy Department, Seri Manjung Hospital, Perak.

INTRODUCTION AND OBJECTIVES

Cardiovascular diseases are the most common cause of mortality and morbidity in Malaysia. According to Malaysian clinical practice guideline 2002, the rate of recurrent angina resulting in hospital readmission is 40-50%; re-infarction rate is 9.8% in six months and mortality rate is 11.1% in one year. The objectives of this study were to determine the readmission rate of patients with unstable angina (UA) and non-ST elevation myocardial infarction (NSTEMI) within 6 months of discharge and to identify associated factors for readmission.

METHODOLOGY

This is a retrospective study involving patients with UA and NSTEMI admitted to the male medical ward of a district specialist hospital in Malaysia from January 2011 to June 2011. Patients who passed away during hospital admission or transferred to other hospitals were excluded. Eligible patients were followed up for a period of 6 months to capture all hospital readmissions due to recurrent UA or NSTEMI. The medical records of these patients were retrieved from the records department. The data collection form was developed by the researchers to collect data as follows: socio-demographic data, co-morbidities, clinical parameters, medication regimen, discharge factors and psychosocial status. Logistic regression was used to determine significant predictors of UA and NSTEMI readmission.

RESULTS

During the study period, a total of 74 patients were admitted for UA or NSTEMI. The majority of patients recruited were of Malay ethnicity (50%), followed by Indian ethnicity (28%) and Chinese ethnicity (22%). The mean age was 59 (SD 14) years old. A total of 16 (22%) patients were readmitted during 6 months follow up. The readmission rate for UA and NSTEMI identified in our study is lower than that quoted in existing Malaysian literature. Among all factors explored, only asthma status is significant predictor of UA and NSTEMI readmission. Of the 5 patients who were asthmatic, 3 (60.0%) had hospital readmission. It was subsequently found that patients with asthma was 8.4 (95% CI 1.2-56.8, p=0.030) times more likely to be readmitted than those without asthma. Other factors including ethnicity, smoking status, alcohol consumption, atrial fibrillation, shock, hypoglycaemia, chronic kidney disease, cardiac arrhythmia, diabetes mellitus, heart failure, hypertension and dyslipidaemia were not significant predictors of hospital readmission (p>0.05).

CONCLUSION

The readmission rate of male patients in a specialist hospital setting due to UA and NSTEMI was low compared to the reported national data. Only asthma status is shown to be an important predictor of hospital readmission.

KEYWORDS

readmission, unstable angina, non-ST elevation myocardial infarction, NSTEMI
OBSERVATIONAL RESEARCH

THE USE OF SELF-MONITORING BLOOD GLUCOSE (SMBG) AND ITS RELATIONSHIP WITH GLYCAEMIC CONTROL IN INSULIN-TREATED TYPE 2 DIABETIC PATIENTS

Wern-Jing Ding, Min-Choo Wong, Li-Yun Chong, Pui-Chin Kong, Aridza Amran, Soraya Rezuan
Pharmacy Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak

INTRODUCTION AND OBJECTIVES

Self-monitoring blood glucose (SMBG) is recommended by local and international guidelines for type-2 diabetic patients on insulin treatment as it may be useful in achieving optimal glycaemic controls. This study aimed to explore the relationship between SMBG and glycaemic control in insulin-treated type 2 diabetic patients, the frequency of SMBG performed and the reason(s) why diabetic patients do not own a glucometer.

METHODOLOGY

A cross-sectional study using an interview-based questionnaire was conducted from August to October 2013 in the general medical and endocrine clinics of Raja Permaisuri Bainun Hospital, a regional referral hospital in Malaysia. All patients with type 2 diabetic disease, who were started on insulin therapy, aged between 18 to 75 years old, with existing HbA1c result within 1 year from the time of the study, were invited to participate in the study. Diabetics who were diagnosed less than 1 year before the study was initiated were excluded. The estimated sample size was 100 patients and potential participants were conveniently sampled into the study. Prior written consents were obtained. All data were obtained through interview-based questionnaires, patient’s medical and laboratory records.

RESULTS

A total of 98 patients participated in the study. The majority (49.0%) of the participants were Indians and female patients (60.2%). The overall mean age was 57.12 years (SD + 10.25); mean BMI 25.7 kg/m2 (SD + 5.9) and 68.3% of them had secondary or tertiary education. The overall mean duration of diabetes was 15.05 years (SD + 8.19 years) and the mean duration of insulin usage was 4.32 years (SD + 4.05 years). 49 (50.0%) of the participants performed SMBG. No significant differences were found between the two groups with respect to age, gender, ethnicity, mean BMI, mean years of diabetes, mean years of insulin usage and education level (p < 0.05). There was a trend towards better glycaemic control in the group of participants who performed SMBG but this was not statistically significant (p > 0.05). Majority of the participants who performed SMBG tested their glucose level more than once per week (55.1%). Only 6 participants performed SMBG at least once a day (12.2%). Cost was the main reason for not owning a glucometer in 45.8% of the participants who did not perform SMBG.

CONCLUSION

There is a trend towards better glycaemic control in patients who perform SMBG.

KEYWORDS

self-monitoring blood glucose, SMBG, diabetes, HbA1c, glycaemic control, insulin

NMRR-12-160-11324
OBSERVATIONAL RESEARCH

MACULAR HOLE SURGERY IN PERAK, MALAYSIA: A RETROSPECTIVE REVIEW

Hong-Kee Ng, Lieh-Bin Ong
Ophthalmology Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION AND OBJECTIVES

Full thickness macular hole is a common maculopathy, which causes debilitating central vision loss and impaired quality of life. It is usually idiopathic, but may be associated with high myopia, trauma or solar retinopathy. Management of idiopathic macular holes depends on the stage of the holes. In late stages, vitrectomy with or without internal limiting membrane peeling is indicated. Nonetheless, the outcome of surgical management is dependent on many factors. This retrospective review looked into the profile of the macular holes and the surgical outcome of macular hole surgery in the administrative region of Perak, Malaysia for the year 2012.

METHODOLOGY

This study is a retrospective review of all idiopathic macular holes surgery performed in Raja Permaisuri Bainun Hospital, a regional referral hospital in Malaysia, from January to December 2012. All patients with idiopathic macular hole that underwent vitreoretinal surgery in 2012 were included in the review. All patients with macular holes due to secondary causes were excluded. Medical records were traced from the record office and from the Ophthalmology department. Information regarding the socio-demographic data, macular holes profile, intra-operative surgery and surgical outcome of the macular hole surgery were recorded and analysed.

RESULTS

15 eligible patients were included in the review. The mean age was 69.13 (SD 7.54) years old, with almost equal male to female ratio (46.7% vs 53.3%). 3 (20.0%) subjects had diabetes mellitus and 11 (73.3%) subjects had hypertension. Duration of symptoms ranges from 1 month to 120 months with median of 24 months. 3 (20.0%) patients presented with best corrected vision acuity (BCVA) worse than 1/60, 5 (33.3%) patients had BCVA between 1/60 and 3/60 while 7 (46.7%) patients had BCVA between 4/60 and 6/60 (Snellen visual acuity chart). None of the patients had BCVA better than 6/60. Mean macular hole size on presentation was 607.67 (SD 149.78) μm. All patients had 23G pars plana vitrectomy (PPV) with internal limiting membrane peeling and gas endotamponade. Sulfahexafluoride (SF6) was used in 5 (33.3%) patients and perfluoropropane (C3F8) was used in 10 (66.7%) patients. Combined phacoemulsification with intraocular lens implant was carried out in 12 (80.0%) patients. Mean post-operative follow-up time was 6.80 (SD 2.81) months. Primary macular hole closure was achieved in 12 (80.0%) patients and 10 patients (66.7%) have improvement of their visual acuity. 8 (53.3%) patients have BCVA better than 6/60, 5 (33.3%) patients have BCVA between 4/60 and 6/60 and 2 (13.3%) patients have BCVA between 1/60 and 3/60. Of the 3 unclosed holes, 1 patient underwent a repeat surgery with subsequent closure of the macular hole.

CONCLUSION

Most cases presented late with large macular holes and very poor baseline visual acuity, possibly affecting the prognosis and visual outcome. Nonetheless, hole closure rate was achieved in 80% of cases and 67% of patients had some improvement of BCVA.

KEYWORDS

macular hole, maculopathy, vitreo-retinal surgery

Research ID: 16884
A REVIEW OF DAYCARE TONSILLECTOMIES AT A REGIONAL REFERRAL HOSPITAL IN MALAYSIA

Zabrina Marnel Samarakkody, Philip Rajan, Gurdeep Singh Mahinder Singh
Otorhinolaryngology Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION AND OBJECTIVES

Although common in other countries, daycare tonsillectomy is relatively new in the Malaysian healthcare setting. Raja Permaisuri Bainun Hospital (HRPB), a regional referral hospital in Malaysia, is one of the pioneers in providing daycare tonsillectomy in Malaysia. This study aimed to evaluate the morbidity and mortality associated with daycare tonsillectomies since its commencement in 2006.

METHODOLOGY

The study is a retrospective review of all patients who had daycare tonsillectomies performed by the otorhinolaryngology department of HRPB over a duration of 5 years (2006-2011). Patients were identified from the daycare operative list kept by the otorhinolaryngology (ENT) department. All eligible patients’ case notes were retrieved. Eligibility criteria used at the department for daycare tonsillectomies include American Society of Anaesthesiologists (ASA) physical status classification of 1, live within a 20km radius from the hospital and availability of caretakers (for paediatric patients only). Data were systematically collected using a standardised data collection form developed by the researchers. Data collected included socio-demographic characteristics; indication and complications of tonsillectomies; length of hospital admission.

RESULTS

A total of 431 patients were identified and included in the study. There were 192 (44.5%) paediatric patients (< 12 years old), 74 (17.2%) adolescent patients (12-18 years old), and 165 (38.3%) adult patients (> 18 years old). Male to female ratio was almost equal (50.8% vs 29.2%) and ethnicity distribution of the 431 patients were as follows: Malay ethnicity (77.0%), Indian ethnicity (16.0%) and Chinese ethnicity (7.0%). Indications for the 431 daycare tonsillectomies were predominantly recurrent tonsillitis (88.4%), followed by tonsillar hypertrophy (6.7%), obstructive sleep apnea (2.3%), malignancy (1.4%) and quinsy (1.2%). The large majority, 427 (99.1%) daycare tonsillectomies, were without any complications. A total of 5 (1.2%) complications involving secondary haemorrhage were identified. 4 (0.9%) cases of haemorrhage involved bleeding a week after tonsillectomy while another 1 (0.2%) case was bleeding secondary to bronchospasm. Such complication rate is similar to that reported in existing literature. There was also no mortality identified in our review.

CONCLUSION

Daycare tonsillectomy, which is known to offer reduced hospital stay and cost saving, has good safety profile, with no mortality and a very low complication rate.

KEYWORDS

daycare, tonsillectomy, morbidity, mortality

NMRR-12-13000-14396
CLINICAL AND POLYSOMNOGRAPHIC DATA OF POSITIONAL SLEEP APNEA AND ITS PREDICTORS

Busarakum Teerapraipruk2, 1, 6, Naricha Chirakalwasan5, 1, Rosalind Simon3, 1, 6, Prakobkiat Hirunwiwatkul6, 1, Nattapong Jaimchariyatam5, 1, Tayard Desudchit4, 1, Natamon Charakorn6, Chaisiri Wanlapakorn8, Supaporn Krittanupong5, Nirun Intarut7

1 Excellence Center for Sleep Disorders, King Chulalongkorn Memorial Hospital/Thai Red Cross Society, Bangkok, Thailand.
2 Otolaryngology and Opthalmology Department, Naresuan University, Phitsanulok, Thailand.
3 Otorhinolaryngology Department, Hospital Raja Permaisuri Bainun, Ipoh, Perak, Malaysia.
4 Paediatrics Department, Division of Pediatric Neurology, Chulalongkorn University, Bangkok, Thailand.
5 Medicine Department, Division of Pulmonary and Critical Care Medicine, Chulalongkorn University, Bangkok, Thailand.
6 Otolaryngology Department, Chulalongkorn University, Bangkok, Thailand.
7 Chulalongkorn Research Center, Chulalongkorn University, Bangkok, Thailand.
8 Medicine Department, Chulalongkorn University, Bangkok, Thailand.

INTRODUCTION AND OBJECTIVES

In Asian population, facial structure may contribute to the primary pathophysiology of obstructive sleep apnea (OSA). We hypothesized that sleep position may have more effect on OSA in Asians compared to the Western population. If this hypothesis is accurate, positional therapy will have a major impact on treatment of OSA among Asians.

METHODOLOGY

We reviewed 263 polysomnographic studies from our laboratory from January 1, 2010 to June 30, 2010. Criteria for positional and non-positional OSA were supine respiratory disturbance index (RDI)/non-supine RDI ≥2 with total RDI ≥5 and supine RDI/non-supine RDI <2 with total RDI ≥5, respectively. We aimed to determine the difference in baseline characteristics, polysomnographic findings, and predictors for positional OSA.

RESULTS

We found 144 patients diagnosed with OSA (RDI ≥5), and 96 patients met the criteria for positional OSA (67%), in which almost half of these patients (47%), RDI was normalized (RDI < 5) in non-supine position. Snoring frequency were significantly lower among positional OSA and was less severe indicated by lower RDI and arousal index, higher mean and nadir oxygen saturation, and higher %NREM3. We also found that low snoring frequency (less than 20% of total sleep time) was a significant predictor for positional OSA (odd ratio of 3.27; p = 0.011), contrarily to low mean oxygen saturation (<95%) which was found to be a negative predictor (odd ratio of 0.31; p = 0.009). Among OSA patients, low RDI (<15) was a significant predictor for normalization of RDI in non-supine position (odd ratio of 8.77; p = < 0.001), contrarily to low mean oxygen saturation (<95%) which was also found to be a negative predictor (odd ratio of 0.13; p = 0.001).

CONCLUSION

Positional OSA is very prevalent and noted in almost 70% of our patients. Low snoring frequency was noted to be a positive predictor for positional OSA, contrarily to low mean oxygen saturation which was found to be a negative predictor. These findings are encouraging that positional therapy can be very beneficial as the treatment modality for OSA among Asians.

KEYWORDS

c polysomnographic, obstructive sleep apnea, positional

COMPARISON OF POLYSOMNOGRAPHIC AND CLINICAL PRESENTATIONS AND PREDICTORS FOR CARDIOVASCULAR-RELATED DISEASES BETWEEN NON-OBESE AND OBESE OBSTRUCTIVE SLEEP APNEA AMONG ASIANS

Naricha Chirakalwasan1,2, Busarakum Teerapraipruk1,3,4, Rosalind Simon1,4,5, Prakobkiat Hirunwiwatkul1,4, Nattapong Jaimchriyaratam1,2, Tayard Desudchit1,6, Natamon Charakorn4, Chaisiri Wanlapakorn7

1 Excellence Center for Sleep Disorders, King Chulalongkorn Memorial Hospital/Thai Red Cross Society, Bangkok, Thailand
2 Division of Pulmonary and Critical Care Medicine, Department of Medicine, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand
3 Otolaryngology and Ophthalmology Department, Naresuan University, Phitsanulok, Thailand
4 Otolaryngology Department, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand
5 Otorhinolaryngology Department, Hospital Raja Permaisuri Bainun, Ipoh, Perak, Malaysia
6 Paediatrics Department, Division of Pediatric Neurology, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand
7 Medicine Department, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

INTRODUCTION AND OBJECTIVES

Unlike Caucasians, many Asians with obstructive sleep apnea (OSA) are non-obese but are affected by the disease due to predisposing craniofacial structure. Therefore, non-obese and obese OSA may represent different disease entities. The associated risk factors for developing cardiovascular-related diseases, consequently, may be considered separately for the two types of OSA.

METHODOLOGY

We reviewed polysomnographic studies performed in adults (aged ≥ 18 years) diagnosed with OSA (respiratory disturbance index [RDI] ≥ 5). We divided the patients into obese (body mass index [BMI] ≥ 25) and non-obese (BMI < 25) groups. We aimed to determine the differences between these two groups in terms of clinical presentations, polysomnographic findings, and association with cardiovascular-related diseases including hypertension, diabetes mellitus, coronary artery disease, and cerebrovascular disease.

RESULTS

Among 194 patients with OSA (RDI ≥ 5), 63.4% were non-obese and 36.6% were obese. Compared with obese OSA patients, non-obese OSA patients were noted to have smaller neck size, less prevalence of hypertension, and less history of frequent nocturia (> 3-4/week), with equal prevalence of excessive daytime sleepiness. Overall, non-obese OSA patients were noted to have milder disease indicated by lower total, supine, and non-supine, NREM RDI and higher mean and nadir oxygen saturations. In the non-obese group, only total obstructive apnea index (OAI) was noted to be a predictor for developing any of the cardiovascular-related diseases after controlling for age, sex, and RDI (odds ratio = 9.7). However, in the obese OSA group, frequent snoring (> 50% of total sleep time), low sleep efficiency (≤ 90%), and low mean oxygen saturation (< 95%) were noted to be significant predictors of cardiovascular-related diseases (odds ratios = 12.3, 4.2, and 5.2, respectively).

CONCLUSION

Among Asians, most OSA patients were not obese. Compared to obese OSA patients, non-obese OSA patients were noted to have less prevalence of hypertension and less history of nocturia. They were also noted to have overall milder OSA. Only OAI was noted to be a significant predictor for cardiovascular-related disease in the non-obese OSA group.

KEYWORDS

obstructive sleep apnea, obesity

Copyright Journal of Clinical Sleep Medicine, Official Publication of the American Academy of Sleep Medicine

NMRR ID: Not Available
SEVERITY OF OBSTRUCTIVE SLEEP APNEA IN PATIENTS WITH AND WITHOUT CARDIOVASCULAR-RELATED DISEASES

Rosalind Simon¹²₅, Naricha Chirakalwesan¹⁴, Busarakom Teerapraipruk¹³₅, Prakobkiat Hirunwiwatkul¹₃, Nattapon Jaimchariyatam¹⁴, Tayard Desudchit¹₆, Natamon Charakorn⁵, Chaisiri Wanlapakorn⁸, Supaporn Krittanupong⁴, Nirun Intarut⁷

1 Excellence Center for Sleep Disorders, King Chulalongkorn Memorial Hospital/Thai Red Cross Society, Bangkok, Thailand.
2 Otorhinolaryngology Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak, Malaysia.
3 Otolaryngology and Ophthalmology Department, Naresuan University, Phitsanulok, Thailand.
4 Medicine Department, Division of Pulmonary and Critical Care Medicine, Chulalongkorn University, Bangkok, Thailand.
5 Otolaryngology Department, Chulalongkorn University, Bangkok, Thailand.
6 Paediatrics Department, Division of Pediatric Neurology, Chulalongkorn University, Bangkok, Thailand.
7 Chulalongkorn Clinical Research Center, Chulalongkorn University, Bangkok, Thailand.
8 Medicine Department, Chulalongkorn University, Bangkok, Thailand.

INTRODUCTION AND OBJECTIVES

Previous studies have often investigated the association of obstructive sleep apnea (OSA) with cardiovascular morbidity and mortality, but the possibility of reverse causation has not been clearly defined. Our aim is to examine if the presence of any of the cardiovascular-related diseases, including hypertension, diabetes mellitus, coronary artery disease, and/or cerebrovascular disease, correlates with more severe OSA.

METHODOLOGY

This was a retrospective study where all patients age ≥ 18 years referred to our sleep laboratory for suspected OSA were included. The data from the full-night baseline and split-night polysomnographic reports were reviewed. Data were then evaluated by logistic regression analysis to compare between 2 groups, the severity of OSA (respiratory disturbance index [RDI] < 15 vs RDI ≥ 15, and RDI < 5 vs RDI ≥ 5), other polysomnographic variables and daytime sleepiness score (Epworth Sleepiness Scale [ESS] score < 10 and ≥ 10).

RESULTS

190 patients were analyzed. The patients with any of the cardiovascular-related diseases were noted to have more severe sleep apnea (RDI ≥ 15), with an adjusted odds ratio of 3.24. Sleep efficiency ≥ 90% and mean oxygen saturation ≥ 95% were observed less commonly in the patients with any of the cardiovascular-related diseases (adjusted odds ratios of 0.45 and 0.36, respectively). There was no statistically significant difference in ESS score.

CONCLUSIONS

Patients with any of the cardiovascular-related diseases are at a higher risk of having moderate to severe OSA without significant increase in daytime sleepiness. Therefore, we suggest that patients with any of the cardiovascular-related diseases should be screened for OSA, even if they are asymptomatic.

KEYWORDS

obstructive sleep apnea, cardiovascular, Epworth Sleepiness Scale, polysomnographic

NMRR ID: Not Available


Copyright © 2012 by Daedalus Enterprises Inc.
COMPARISON OF METHODS FOR ESTIMATING GLOMERULAR FILTRATION RATE IN INTENSIVE CARE PATIENTS WITH UNSTABLE KIDNEY FUNCTION

Yen-Ping Ng¹, Chee-Ping Chong¹, As-Niza Abdul Shukor², Indralingam Vaithalingam³, G. R. Letchuman Ramanathan⁴

INTRODUCTION AND OBJECTIVES

The incidence of acute kidney injury (AKI) is markedly higher in critically ill patients. The decrease in glomerular filtration rate (GFR) results in a decline in renal function, which contributes to the accumulation of renally excreted drugs that might lead to drug toxicity. Accurate estimation of creatinine clearance (ClCr) is essential in critically ill patients with unstable renal function who require individualisation of drug dosage. At present, Cockcroft & Gault equation is the most widely used and acceptable method for drug dosage adjustment according to the Food and Drug Administration (FDA). This study aimed to compare estimated ClCr using Cockroft-Gault method with Jellife, Chiou, and Brater methods among critically ill patients with unstable renal function at a specialist hospital.

METHODOLOGY

We analysed retrospective data from a single centre observational study of AKI in 120 patients admitted to the intensive care unit (ICU) of Taiping Hospital from year 2010 to 2012. Males and females aged 18 years old and above with documented AKI associated with unpredictable serum creatinine or unstable renal function were included in the study. Cases with incomplete data, documented kidney transplantation, pregnancy, previous dialysis, serum creatinine above 400 μmol/L, AKI from urinary tract obstruction, oliguria or anuria, seizure disorders, hypovolemic responsive to fluid, and psoriasis were excluded. Socio-demographics, reasons for ICU admission, medical history, serum creatinine levels, and urine outputs from day 1 to 7 of admission were collected. Median values of ClCr estimated by Cockroft-Gault, Jellife, Brater, and Chiou equations at days 1 (baseline), 3 (point of AKI), 5, and 7 were compared using Friedman-ANOVA test. We also determined the correlation of urinary ClCr with the values obtained from Cockroft-Gault, Jellife, Brater, and Chiou equations using Spearman’s Rank Correlation test. The number of incidence of suspected drug toxicities secondary to unadjusted drug dosing were also collected.

RESULTS

The median ClCr for Cockroft-Gault, Jellife, Brater, and Chiou on day 1 (baseline) was 49.1 ml/min (IQR 44.35), 47.05 ml/min (IQR 40.48), 54.10 ml/min (IQR 49.95), and 40.65 ml/min (IQR 43.13) respectively. On day 3 (point of AKI), median ClCr was 28.40 ml/min (IQR 22.70) with Cockroft-Gault, 19.9 ml/min (IQR 21.40) with Jellife, 27.30 ml/min (IQR 24.40) with Brater, and 22.85 ml/min (IQR 25.03) with Chiou. On day 5 (when renal function further deteriorated), median ClCr calculated by Cockroft-Gault equation was 27.00 ml/min (IQR 32.10), Jellife 17.70 ml/min (IQR 25.00), Brater 24.60 ml/min (IQR 27.80), and Chiou 19.60 ml/min (IQR 21.70). At this point, ClCr calculated using on Jellife, Brater, and Chiou equations was 34.44% lower; 8.89% lower; and 27.40% lower respectively compared to Cockroft-Gault. On day 7 (by which majority of patients show an initial recovery of renal function), median ClCr calculated by Cockroft-Gault was 42.50 ml/min (IQR 48.75), Jellife 32.50 ml/min (IQR 49.15), Brater 39.40 ml/min (IQR 49.65) and Chiou 32.40 ml/min (IQR 44.95). Median ClCr estimated using the 4 methods were significantly different on all 4 days of admission (\(p < 0.001\)). At point of AKI, ClCr estimated by Cockroft-Gault, Jellife, and Brater equations had a low positive correlation with urinary ClCr. On the other hand, ClCr estimated using Chiou equation was moderately correlated with urinary ClCr (\(r = 0.516, p < 0.01\)). There were 2 incidences of suspected drug toxicities due to adjusted drug dosing, of which ClCr estimated by Cockroft-Gault indicated normal renal function.

CONCLUSION

Serum creatinine is a quick but relatively inaccurate method for estimating renal function. Careful interpretation of serum creatinine is essential for drug dosing adjustment in critically ill patients with unstable renal function. Estimation of creatinine clearance using Cockroft-Gault may over estimate value when compared to Jellife, Brater, and Chiou equations.

KEYWORDS

acute kidney injury, creatinine clearance methods, Cockroft-Gault, Jellife, Brater, Chiou

NMRR-12-1299-14330
EPIDEMIOLOGY AND OUTCOME AMONG CONTINUOUS Ambulatory Peritoneal Dialysis Patients requiring Hospital Admissions in a Regional Referral Hospital, Malaysia

Sridhar Ramanaidu, Meena Nithianandan, Yee-Yan Lee, Chek-Loong Loh
Nephrology Unit, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION AND OBJECTIVES

Higher hospital usage rates among end stage renal disease (ESRD) patients impose substantial burden on the Malaysian healthcare system. A thorough understanding of the factors that affect hospital usage among ESRD patients may lead to early appropriate interventions to attenuate the complications and to optimise future resource utilisation. Raja Permaisuri Bainun Hospital, a regional referral hospital in Malaysia, receives an increasing number of patients referred for peritoneal dialysis each year and provides care to about 100 Continuous Ambulatory Peritoneal Dialysis (CAPD) patients. The study aimed to evaluate the epidemiology and outcome of CAPD patients requiring hospital admission in this setting.

METHODOLOGY

This is a retrospective observational study involving all CAPD patients that were followed up in Raja Permaisuri Bainun Hospital, Ipoh Perak. All patients with CAPD were identified through the hospital patient electronic database and CAPD unit log book. Their medical records were retrieved and information pertaining to hospital admissions from 1st January to 31st December 2012 were reviewed and analysed. Information collected in this study included the demographic data, primary cause of ESRD, comorbidities, mode of CAPD, duration of dialysis, reason for choosing CAPD, length of hospital stay in 2012, the primary cause for hospitalisation in 2012 and the clinical outcome of each admission in 2012. Laboratory values nearest to the admission were also collected.

RESULTS

102 CAPD patients were identified from the database and log book search. The socio-demographic characteristics of the 102 CAPD patients were as follows: 36 (35.2%) females; mean age 50.4 (SD 18.5) with 28 (27.6%) aged 65 years and above; 49 (48.3%) had diabetes mellitus as primary cause of ESRD; 66 (64.7%) were on CAPD for more than 6 months at the time of admission. 59 (57.2%) chose CAPD as first preference for renal replacement therapy. Out of 102 CAPD patients, 58 CAPD patients were admitted in year 2012 involving a total of 128 admissions. The reasons for the hospital admissions were sepsis (42.0%), fluid overload (30.0%), elective admissions (5.4%) and cardiovascular disease (2.0%). The commonest cause of sepsis was CAPD peritonitis (56.4%); followed by exit site infection (14.5%) and pneumonia (14.5%); 38.7% of peritonitis cases were culture negative and the commonest organism were Gram negative microorganisms (41.9%). 28.0% patients with peritonitis needed tenchoff removal and temporary hemodialysis. The median hospital length of stay was 5 days (IQR 3-10). Sepsis was the strongest predictor of hospital length of stay (p = 0.01). Patients who first choice was not CAPD had higher risk of infection related admissions (p = 0.003). The mortality rate for CAPD patient in 2012 was 4.7% and 66.0% of deaths were due to septicaemia.

CONCLUSIONS

The preliminary findings in our study population showed a higher rate of sepsis related hospitalisation than expected. Our observations support that sepsis is associated with longer hospital stay among CAPD patients and a possible higher morbidity and resource utilisation.

KEYWORDS

continuous ambulatory peritoneal dialysis, admissions, length hospital stay, mortality

Research ID: 15920
INFECTIVE OUTCOME OF HAEMODIALYSIS PATIENTS WITH CUFFED DIALYSIS CATHETERS (CDC) INSERTION

Yee-Yan Lee, Sridhar Ramanaidu, Chek-Loong Loh
Nephrology Unit, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION AND OBJECTIVES

Infective complications of dialysis catheters are a major cause of morbidity and mortality in hemodialysis patients. Strict adherence to infection control measures when handling cuffed dialysis catheters (CDC) has been shown to reduce the incidence of catheter related blood stream infections (CRBSI). This study explored the infective outcome of haemodialysis patients with CDC insertion. Secondarily, the incidence and time to first CRBSI were compared between the Malaysian Ministry of Health (MOH) centres and non-MOH centres, and between internal jugular catheters and femoral catheters.

METHODOLOGY

The study is a retrospective review of haemodialysis patients with CDC insertion at Raja Permaisuri Bainun Hospital (HRPB), a regional referral hospital in Malaysia, between June 2011 and December 2012. Patients were identified through a CDC-procedure registry compiled by the nephrology unit. Further details related to the type of catheters, CRBSI, patients’ survival and dialysis outcomes were obtained from the HRPB’s medical records. Health personnel at other health institutions were interviewed by telephone if the patients involved were receiving haemodialysis at other health institutions or haemodialysis centres. At this stage, all patients with missing information were excluded from the study. The primary outcome of interest is the time to first CRBSI, defined as the time lapsed of first CRBSI from the date of catheter insertion. All patients were followed up till March 2013.

RESULTS

A total of 78 catheters were inserted in 62 eligible patients. Of the 78 catheters, 32 (41.0%) were femoral catheters while the remaining 46 (59.0%) were internal jugular catheters. The majority (52, 66.7%) of patients were from the 19 non-MOH centers and remaining 26 (33.3%) from the 6 MOH centres in the state. The incidence of CRBSI in patients using femoral catheters (6.1/1000 catheter days) was higher than the patients using the internal jugular catheter (4.0/1000 catheter days). Hence, as expected, the patients using femoral catheters had shorter median time to first infection (117.0, 95%CI: 13.4-220.6 days) compared to patients using internal jugular catheter (196.0, 95%CI: 42.7-349.3 days). There were also a higher incidence of CRBSI in non-MOH centres (6.8/1000 catheter days) than in the MOH centres (2.3/1000 catheter days). The mean time to first CRBSI for MOH centres was 300.4 (95%CI 217- 383.9) days. However, as CRBSI was more frequent in non-MOH centres, the time to first CRBSI was shorter with a median of 70.0 (95%CI 13.6 - 126.4) days. Overall, at 6th, 9th and 12th month, the cumulative percentage of patients without any CRBSI was 77.4%, 66.7% and 58.1%, respectively.

CONCLUSION

Femoral catheters are associated with higher incidence of CRBSI compared to the internal jugular catheters. MOH haemodialysis centres are found to have a lower incidence of CRBSI compared to the non-MOH centres. This indicates the need for more stringent infection control in the non-MOH centres.

KEYWORDS

catheter-related bloodstream infection, outcome, cuffed catheters, non-MOH centres

NMRR ID: Not Available
OBSERVATIONAL RESEARCH

COMPLIANCE TO INFECTION PREVENTION GUIDELINES WITH APPROPRIATE USE OF PERSONAL PROTECTIVE EQUIPMENT BY NURSES AT THE MATERNITY WARD OF A DISTRICT HOSPITAL

Puvaneswari Tharumalingam
Tapah Hospital, Perak

INTRODUCTION AND OBJECTIVES

Compliance to infection control guidelines is important in preventing exposure of health care workers to nosocomial infections. Standard precautions and the use of personal protective equipment (PPE) are widely adopted to prevent the transmission of blood borne pathogens. The objective of this study was to evaluate the knowledge, perception, and compliance towards standard precautions and the use of PPE in accordance with Ministry of Health (MOH) protocols among nurses of a maternity ward in a district hospital.

METHODOLOGY

This is a cross-sectional study conducted among nurses working in the maternity ward of Hospital Tapah. A pre-tested, self-administered questionnaire was distributed to nurses who consented to participate in the study. The questionnaire collected socio-demographic data and evaluated awareness towards standard precautions, practices and perceptions of standard precautions, and the use of PPE. Responses to awareness and practice questions were rated as “Yes” or “No”, while perceptions were rated on a 5-point Likert scale (1 = strongly agree, 2 = agree, 3 = not sure, 4 = disagree, 5 = strongly disagree).

RESULTS

Of the 15 questionnaires distributed, only 14 were returned. Of the participating nurses (50%) were 41 years and above, and most (64.3%) had 11-15 years of working experience. All were aware of the MOH standard precautions policy, but only 28.6% have read the guidelines and 14.3% learnt about the policy during continuous medical education (CME), while the remaining (57.1%) did not respond to this question. All had attended training on standard precautions policy. All 14 nurses claimed that they knew how to manage spillage of blood and body fluids, but only 6 provided detailed answers. All nurses knew the mode of transmission of HIV, but only 5 were aware that the transmission of Hepatitis B & C was haematological. All except one nurse was trained on the proper use of PPE by the Prevention and Control Infection Nurse in the hospital. Most nurses (71.4%) did not give much importance to the use of face shield during deliveries. 12 out of 14 nurses provided the correct sequence for the gowning and removal of PPE. Most (71.4%) cited business, forgetfulness, uncertainty, unfavourable equipment, and inadequate facilities as reasons for not using appropriate PPE. 13 of 14 nurses strongly agreed that gloves should be worn when there is a risk of contact with blood and body fluids. Most (78.6%) agreed that hand washing removes germs picked up at work, but 7.1% disagreed and 14.3% were unsure. All 14 nurses claimed to know the 5 moments of hand hygiene, but 1 still had doubts on when to perform hand washing. All knew where to dispose sharps and non-sharps. Although all knew who to report to for a needle-stick injury, one declined to report if such an incident occurred.

CONCLUSION

Generally, nurses’ knowledge and compliance to standard precautions is inadequate. Although all received prior training on standard precautions and the use of PPE, few practice it fully. Audits should be conducted to evaluate the actual compliance and practice of nurses towards standard precautions.

KEYWORDS

nurses, personal protective equipment, compliance, standard precautions

NMRR-12- 855-13227
CRITICAL CARE NURSES’ PAIN ASSESSMENT AND MANAGEMENT PRACTICES IN A REGIONAL REFERRAL HOSPITAL

Devanandhini Krisnan1, Kit-Weng Foong2, Sze-Shir Foo2, Nitthya Sukumar2
1 Anaesthesia & Intensive Care Department, Pain Management Clinic, Raja Permaisuri Bainun Hospital, Ipoh, Perak. 2 Anaesthesia & Intensive Care Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION AND OBJECTIVES

In the intensive care unit (ICU), accurate assessment and treatment of pain can be challenging especially in patients who cannot communicate verbally. Untreated pain can lead to a longer duration of mechanical ventilation and ICU stay. This study evaluated the pain assessment and management practices of ICU nurses in a regional referral hospital.

METHODOLOGY

A cross-sectional study was conducted among ICU nurses via self-administered questionnaires distributed with the help of the ward sister. Convenient sampling was done. Nurses on maternity, medical, or study leave (post basic or degree course) were excluded. The questionnaire was designed by researchers based on literature review of related studies. It evaluated nurses’ (a) practice patterns for pain assessment among patients who are able and unable to communicate verbally, (b) use of pain assessment tools and pain indicators, (c) barriers to pain assessment and management, and (d) pain education. The questionnaire also collected working experience of nurses.

RESULTS

125 questionnaires were distributed and 116 were returned, yielding a response rate of 92.8%. Of respondents 36.2% worked for more than 10 years as a registered nurse, and 32.8% less than 2 years as a critical care nurse. Only 12 (10.3%) held a degree in nursing while the remaining held diplomas. The vast majority worked rotating shifts (94.8%). The respondents were significantly less likely (p<0.001) to use pain assessment tools for patients who were unable to communicate (45.7%) than for patients who were able to self-report pain (95.7%). Fewer respondents would routinely use pain assessment tools for patients who were unable to self-report pain (34.5%) compared to patients able to do so (47.4%). Significantly fewer respondents (p<0.001) felt that it was extremely important to use a pain assessment tool for patients who were unable to communicate (2.6%) than for patients able to do so (67.2%). The 3 most common behaviours routinely considered as indicators of pain were fighting of ventilator or activation of alarms (37.1%), grimacing (34.5%), and brow lowering or frowning (33.6%). Post-operative (70.7%), burn (69.8%), and trauma (66.4%) were the top 3 conditions considered extremely important for pain assessment. The top 3 barriers to pain assessment and management reported were heavy workload (30.2%), sedation of the patient (25.0%), and inability of patient to communicate (24.1%). Approximately a quarter of the respondents (26.7%) have not attended an Acute Pain Service course. 19.0% of them have not been educated on pain management practice, recommendations and guidelines.

CONCLUSION

Half of the nurses did not use pain assessment tools for patients unable to communicate and many felt that it was not important to do so. In addition, a substantial portion of nurses were unaware of pain management guidelines. These findings suggest inadequate adoption of practice recommendations for pain assessment and management of critically ill patients, particularly for patients unable to communicate pain. Continuing education and training are needed to improve pain assessment and management practices among critical care nurses.

KEYWORDS

critical care, nurses, pain assessment, pain management

Research ID: 17609
EVALUATION OF SATISFACTION FOR NURSES ON IMPLEMENTATION OF UNIT DOSE IN A REGIONAL REFERRAL HOSPITAL, MALAYSIA

Lai-Yee Chan, Sze-Min Yeap, Villiam Surenvran
Pharmacy Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION AND OBJECTIVES

Unit dose system involved preparing, packaging and dispensing medications in individual doses by the pharmacy. The individually labelled packets, which are usually in a ready-to-administer form, will be delivered to the hospital ward and be administered by nurses according to an ordered schedule. This new drug dispensing system was initiated in 3 Orthopaedic wards and 1 surgical ward at Raja Permaisuri Bainun Hospital (HRPB), a regional referral hospital in Malaysia, since 2010. The study aimed to evaluate satisfaction for nurses regarding the implementation of the unit dose system and secondarily, to explore the nurses’ perception towards possible reduction in workload, medication error and wastage with the implementation of the new system.

METHODOLOGY

This is a cross-sectional study using a standardised, self-administered questionnaire to evaluate the satisfaction level of all nurses towards the newly introduced unit dose system over a period of 2 weeks (11th June 2012 to 29th June 2012). All nurses in the relevant 3 Orthopaedic wards and 1 surgical ward at HRPB were included. The questionnaire was developed by the researchers exploring 4 main aspects: (a) overall satisfaction; and the agreement level with statements pertaining (b) reduced workload, (c) medication error and (d) medicines wastage with the new system. Satisfaction and agreement level was evaluated on a 5-point Likert scale. Scores of 1 to 3 were categorised as satisfied or agree while scores of 4 and 5 were categorised as unsatisfied or disagree. Data entering, cleaning and analysis were done by using Microsoft Excel.

RESULTS

A total of 62 eligible staff nurses were included in the study. All the 62 (100.0%) questionnaires distributed were returned. All respondents were female (100.0%). The 62 respondents were predominantly from the orthopaedic wards (82.3%) while the remaining was from the surgical ward (17.7%). The large majority, 50 (80.7%) nurses, were satisfied with the implementation of the unit dose system. Most nurses agreed that their workload (47 nurses, 75.8%), medication errors (51 nurses, 82.3%), and drug wastage (48 nurses, 77.4%) were reduced with the initiation of the unit dose system.

CONCLUSION

The majority of the staff nurses were satisfied with the newly introduced unit dose system. Besides allowing for better utilisation of professional resources and lower drug wastage, unit dose system may be safer for the patients. Such implementation can hence be extended to other wards in the hospital or to other healthcare institutions in Malaysia.

KEYWORDS

unit dose system, satisfaction, workload, administration error, medication error, wastage

NMRR-12-479-12456
KNOWLEDGE AND ATTITUDE OF PAEDIATRIC NURSES ON THE APPROPRIATE MANAGEMENT OF FEVER IN YOUNG CHILDREN IN THE WARD SETTING

Hafizah Mohd Radzuan1, Norfazila Jalil1, Nor-Shafura Ahmad1, Tasnim Ahmad Dali1, Intan-Diana Mat Akob1, Norazizo Abd Rahman1, Lina Hashim2, Sivanesan Seevagan2, Jeyaseelan P. Nachiappan3, Amar-Singh HSS2,3, Norshazila-Julia Mohd Shafie1
1 Allied Health Science College Sultan Azlan Shah Ulu Kinta, Perak.
2 Clinical Research Centre (CRC) Perak, Perak.
3 Paediatrics Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION AND OBJECTIVES

Fever, a common event in childhood, is generally an indication of a self-limiting viral infection rather than a bacterial infection or serious illness. In children a temperature of 40°C or lower are more likely to indicate the body’s adaptive response to the infective process than the severity of illness. Many health care professionals perceive fever to be harmful and determine illness severity by the height of the fever.

METHODOLOGY

This was a cross-sectional study to evaluate nurses’ knowledge and attitude in managing fever among children admitted as in-patients to government hospitals at the state of Perak. All government hospitals with a Paediatric Ward were identified and included in this study. From these hospitals, all staff nurses working in the paediatric wards were identified for inclusion. Excluded were nurses who were on leave during the study period, or nurses working night shifts. Nurses’ knowledge and attitude in fever management among children were evaluated using a questionnaire developed based on previous studies. The researchers also adapted 11 items (questions) to measure attitude towards evidence-based fever management from a validated questionnaire of a similar study by Edwards H et al., 2007. Researchers obtained ethical approval from MREC of MOH Malaysia via the National Medical Research Register (NMRR). Researchers also obtained for waiver of informed consent for this study.

RESULTS

6 out 10 government hospitals in Perak returned questionnaires. From the 6 hospital a total of 79 staff nurses out of 86 who met the inclusion criteria completed the questionnaire giving a response rate of 91.8%. Nurses mean total years of working was 9.4 (SD 6.9) with 5.6 years (SD 4.8) in the paediatric ward setting. 43.8% nurses had completed paediatric post basic courses and 51.9% attended courses or continuous medical education (CME) on fever management. The commonest type of thermometer (83.5%) used by nurses was the digital and tympanic thermometers. Most nurses (75.9%) could correctly time the duration of the mercury thermometer to measure body temperature. Nurses’ knowledge of normal human body temperature varied considerably with only 31.6% able to indicate 36.5ºC to 37.5ºC as the normal body temperature. Their perception on fever and high grade fever temperature spanned between 33ºC to 44ºC and was not consistent. Nurses working in non-specialist hospitals (100%) were better able to provide the correct dosage regime for paracetemol (15mg/kg) in children compared with nurses in specialist hospitals (86.0%). Provision of non-pharmacological care for fever management was better by nurses in non-specialists hospitals who were more likely to give a bath to the feverish child as compared to nurses in specialist hospitals (86.0%). Nurses in non-specialist hospitals were more likely to act proactively before involving doctors (25.6% vs. 44.4%, p = 0.078; 37.2% vs 58.3%, p = 0.061 respectively).

CONCLUSION

Studies on knowledge and attitude of fever management by nurses in the Malaysia context are limited. This first local study has shown that there is no guideline or clear idea among nurses as to normal body temperature, fever or high grade fever. Nurse in non-specialist hospital are more likely to act proactively before involving doctors and apply non-pharmacologic measure for fever reduction.

KEYWORDS

nurses, fever, young children, assess, management

NMRR-13-977-17769
KNOWLEDGE OF INSULIN AND INJECTION TECHNIQUE AMONG NURSES IN A DISTRICT SPECIALIST HOSPITAL

Xin-Yi Beh, Ee-Siew Lai, Hui-Sheng Yeoh, Zi-Yi Ch'ng, Norulsaffia Ahmad
Pharmacy Department, Taiping Hospital, Perak.

INTRODUCTION AND OBJECTIVES

Insulin therapy is used in Type 1 and Type 2 Diabetes Mellitus. Good choice of injection site, optimal needle length, use of skin folds and rotation of injection sites help with improving blood glucose control. This study aimed to evaluate the knowledge on insulin and injection technique among nurses in a specialist district hospital in Malaysia.

METHODOLOGY

This is a cross-sectional study involving the distribution of a standardized questionnaire. All nurses working in the surgical, medical, psychiatric, geriatric, orthopaedic, paediatric intensive care units and intensive care units of Taiping Hospital constituted the sampling frame. A target sample size of 199 nurses was selected by simple random sampling. A standardised questionnaire was developed by the researchers by adaptation of the Diabetes Mellitus checklist published by the Malaysian Ministry of Health. The questionnaire contained a total of 20 questions with binary (true / false) outcomes. 10 questions evaluated the knowledge on insulin while the remaining 10 questions evaluated the knowledge on insulin injection technique. The questionnaire was self-administered with each nurse given 15 minutes to complete the questionnaire. The knowledge level of nurses was categorized based on the final score obtained: >80% (good knowledge), 50-80% (moderate knowledge) and <50% (poor knowledge).

RESULTS

A total of 199 questionnaires were distributed, but only 187 (94.0%) were returned. The respondents were predominantly female (96.8%) and with diploma education level (80.7%). The majority (47.1%) of nurses were in the age range of 23-30 years old while remaining were in the age range of <23 (11.8%), 31-40 (30.5%) and >40 (10.7%) years of age. The median knowledge score was 65% (IQR 60-70%). The large majority of nurses (90.9%) had moderate knowledge. Although very few nurses (3.7%) had poor knowledge level, it is worrying that few (5.3%) achieved high knowledge level. Nurses had better knowledge score on injection technique (median=70%, IQR 60-80%) than knowledge on insulin (median=60%, IQR 50-70%). The key area of weakness identified was identification of the individual components of Mixtard® or Humulin 30/70® with only 8.6% of nurses managed to provide the correct answer. Longer working experience (p=0.023) and more frequent use of insulin among ward patients (p<0.001) were associated with better knowledge score. Ward discipline was also found to be a significant predictor of knowledge score (p<0.001) with the paediatric department performed the best, followed by the medical department and the intensive care unit.

CONCLUSION

Knowledge level of nurses on insulin and injection techniques is not satisfactory. There is a need to improve their knowledge level with particular emphasis on the areas of weakness identified, for instance the components of frequently used insulin.

KEYWORDS

knowledge, insulin, injection technique

NMRR-13-372-15035
NURSES’ KNOWLEDGE AND PRACTICE IN PREVENTING PERIOPERATIVE HYPOTHERMIA

Mayzuraliza Ahmad Basah
Hilir Perak Health Department, Perak.

INTRODUCTION AND OBJECTIVES
Perioperative hypothermia is a common problem in anaesthesia and major surgeries. It has significant complications that can compromise tissue healing and increase intraoperative bleeding, which will result in increased hospital stay. Thus, it is important that perioperative nurses possess an in-depth knowledge to adequately manage perioperative hypothermia. This study assessed nurses’ knowledge and practice regarding the prevention of perioperative hypothermia in a regional hospital.

METHODOLOGY
A cross-sectional study was conducted among a convenient sample of registered nurses working in the general operation theatre of Kuala Lumpur Hospital from February to March 2011. Nurses’ knowledge was assessed using an adapted questionnaire and their practice was evaluated via observation using a checklist. The bilingual questionnaire consisted of 2 sections. Section A collected nurses’ socio-demography data, while part B evaluated nurses’ knowledge on the prevention of perioperative hypothermia using a 5-point Likert scale (1 = strongly not agree, 2 = not agree, 3 = undecided, 4 = agree and 5 = strongly agree). A 9-item observation checklist was used to evaluate nurses’ practices in preventing perioperative hypothermia. A pilot study was conducted among 10 nurses prior to the study to identify any shortcomings of the questionnaire. Data were entered into SPSS for analysis.

RESULTS
100 nurses participated in the study. Half of the participating nurses (50%) worked less than 5 years, 29% had 5-10 years of working experience and the remaining 11% worked more than 10 years. 54% did not have a post basic certificate. 66% of the nurses had witnessed a patient suffering from hypothermia. From the observation, only 20% had good practices in the prevention of perioperative hypothermia, where majority (80%) of them did not record patient’s temperature after surgery. Longer working experience was significantly associated with higher level of knowledge on the prevention of perioperative hypothermia (p=0.002). However, study results indicated that high knowledge level was not significantly associated with good practice in the prevention of perioperative hypothermia.

CONCLUSION
The nurses’ knowledge surrounding the concept of hypothermia is central to its successful prevention and management. The longer nurses work in the perioperative environment the better the knowledge of nurses in preventing perioperative hypothermia.

KEYWORDS
hypothermia, perioperative nursing, knowledge, prevention

NMRR-10-1136-7614
NURSES’ KNOWLEDGE REGARDING COMPLEMENTARY AND
ALTERNATIVE MEDICINE THERAPY

Norazian Adnan
Slim River Hospital, Perak

INTRODUCTION AND OBJECTIVES

The increasing use of complementary and alternative medicine (CAM) in the general population requires healthcare professionals to have knowledge of their use. Presently healthcare professionals, including nurses, have limited formal education on CAM. In Malaysia, the Ministry of Health established the CAM division to promote awareness and increase knowledge of this therapy among healthcare providers. This study aimed to assess the knowledge and perception of CAM therapy among nurses at a specialist hospital in Perak.

METHODOLOGY

This is a cross-sectional study involving year two and final year nursing students undergoing the distance learning programme at Universiti Teknologi MARA Puncak Alam, Selangor. Self-administered questionnaires were distributed to a convenient sample of nurses from April to June 2012. Nurses who consented to participate were informed of the study purpose and assured of their confidentiality and anonymity. The questionnaire collected nurses’ socio-demographics and assessed nurses’ general knowledge on CAM, knowledge and understanding of 20 CAM modalities, and perceptions on the use and effects of CAM therapy.

RESULTS

153 nurses participated in the study. Their mean age was 33.5 (SD = 6.7) years old, with 2.5 (SD = 1.1) mean years of working experience. The majority (78.4%) have five and more years of working experience. Most nurses agreed that CAM therapy should be included in the nursing curriculum (69.9%) and be used in nursing practices (79.7%). Half of them could obtain information on CAM therapy (51.6%) and could list at least 5 CAM modalities (51.1%). Although the vast majority (96.1%) agreed that CAM will be one of the treatment methods in the future, only 51.5% were positive about the function of CAM therapy and 45.8% disagreed that the therapy promises cure for diseases. 58.9% agreed that CAM can be used in conjunction with conventional therapy, and 49.7% had actually applied CAM to their patients. 68.6% did not know that CAM consisted of more than 20 modalities according to National Center for Complementary and Alternative Medicine (NCCAM). Nurses who worked 5 years or more believed that CAM therapy should be incorporated into the nursing subject and programme, as compared to their counterparts with less than 5 years of working experience (78.4% vs. 21.6%, p = 0.023). In addition, nurses with working experience of 5 years and above were significantly more able to list at least 5 CAM modalities (p < 0.001).

CONCLUSION

Nurses in our study demonstrated a positive attitude towards CAM but require upgrading their knowledge on it. Nurses with longer working experience were more knowledgeable about CAM therapy and more receptive to changes in the nursing training programme.

KEYWORDS

complementary, alternative, medicine, knowledge, nurses

NMRR ID: Not Available
NURSES’ UNDERSTANDING, PERCEPTION AND ACCEPTANCE OF ORGAN DONATION FROM A BRAIN DEAD PATIENT AT A REGIONAL REFERRAL HOSPITAL

Nagaletchumi Arumugam
Pusat Sumber Organ, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION AND OBJECTIVES

Intensive Care Unit (ICU) nurse are among the front liners who can detect potential organ donors from their hourly GCS observation. Their delay in detecting and notifying potential donors can affect organ donation. A research previously done in Sweden’s Sahlgrenska Academy revealed that nurses their understanding of organ donations in brain dead patients were poor. The purpose of this research is to survey perception of ICU nurses (at a local setting) towards organ donation on brain death patients.

METHODOLOGY

This was a cross-sectional study conducted among 80 conveniently sampled ICU nurses at Raja Permaisuri Bainun Hospital, a regional referral hospital. It was conducted from May to October 2013 over 14 days, in an ICU setting. Their responses were measured via a questionnaire comprising of 13 questions evaluating perception and understanding of brain death, organ donation and their opinion on organ donation in brain dead patients. Questionnaire development was based on prior research and supported by the Organ Donation Manager and Head of Department of Anaesthesia and Critical Care Unit. A pilot study was conducted among 10 nurses using the questionnaire to identify weaknesses and modifications were made. Socio-demographics collected including age, duration of service, Intensive Care Training (post basic trained), ethnicity and religion of the respondent. Respondents were given 15 days to answer the questionnaire before it was collected for data analysis. Confidentiality of respondents was maintained.

RESULTS

All 80 respondents answered and returned the questionnaire of which 30 (37.5%) were post-basic trained and 50 (62.5%) had basic nursing diplomas. 40 (50%) were in the age group of 30-40 years. 50 (62.5%) felt that brain death is considered death and 30 (37.5%) felt that it was not. All respondents (100%) knew what organ donation was. 50 (62.5%) of the respondents agreed to organ donation while 30 (37.5%) did not. Factors contributing to a negative perception on organ donation from a brain dead patient (n = 30) included lack of knowledge and inexperience on criteria for death. Staff with post basic ICU training (77%; n=23) were more likely to accepted brain death compared to non-trained staff (54%; n=27). 33% (n=24) of Malays and 20%(n=1) of Indians disagreed with organ donation. The majority of these respondents stated that religious belief was the reason behind their disagreement.

CONCLUSION

The understanding of brain death and organ donation is relatively good among the ICU staff especially those who have received their post-basic nursing training. Factors such as religious perception and beliefs still hinder the involvement in organ donation.

KEYWORDS

GCS, ICU nurses, response, organ donation, brain death

NMRR ID: Not Available
INTRODUCTION AND OBJECTIVES

Administration of medications to patients is a core function of nurses. Their responsibility is to comply with safe medication practices in order to prevent occurrence of medication errors. Although standard operating procedures are in-place, incidents of medication errors do occur. This study assessed paediatric nurses’ perceptions towards medication errors, their knowledge on standard operating procedures (SOP), and factors contributing to errors.

METHODOLOGY

This was a cross-sectional study conducted in May 2012 among a convenient sample of 60 nurses working morning and afternoon shifts in the paediatric wards of Raja Permaisuri Bainun Hospital. Those on leave and working night shifts were excluded. A pre-tested, 14-item questionnaire, was designed by the researcher and consisted of 3 sections: (a) socio-demographic characteristics, (b) knowledge on medication safety and errors, and (c) open-ended questions on SOP of medication administration and suggestions to prevent errors. Questionnaires were distributed and collected immediately after completion. Confidentiality was maintained as nurses returned the completed questionnaires in sealed envelopes.

RESULTS

All 60 questionnaires were returned. Most nurses were between the ages of 30 and 39 (58.3%), and worked less than 10 years (53.3%). All were trained registered nurses and only 29 (48.3%) had post basic training (Neonatal, Paediatric or Midwifery). All nurses were trained on Medication Safety SOP. Only 4 (6.7%) nurses have encountered medication errors, 48 (80%) have never encountered any, 5 (8.3%) could not remember whether they had, and the remaining 3 (5%) chose not to comment. The vast majority (96.7%) were willing to report incidents of medication errors, but 2 (3.3%) were unwilling to do so. The main reason for not reporting medication errors was fear of punishment (31.6%). Others felt that the situation could not be reversed as medications have been administered (30%), and some did not report as the patient was not harmed (16.6%). However, many (43.3%) did not provide a reason, claiming that they have never encountered any errors. The top 3 factors contributing to errors were interruption or distraction during medication administration (87%), poor handwriting (62%), and look alike, sound alike medications (47%). All nurses knew the ‘7 Rights’ of medication administration. All believed that they would face disciplinary actions if they committed an error during medication administration. Compliance to SOP, including the ‘7 Rights’ during medication administration, avoidance of distraction during medication rounds, and counter-checking of medication administration were suggested by the nurses to prevent errors.

CONCLUSION

Although the majority of the nurses express that would report a medication error incident, their responses to other question suggest otherwise. Non-distracting medication rounds may prevent errors. A non-punitive system of reporting medication errors should be established in order to obtain an accurate error rate.

KEYWORDS

perception, medication errors, paediatric, nurses
OBSERVATIONAL RESEARCH

ANTIBIOTIC PRESCRIBING PATTERN AND ADHERENCE TO MALAYSIA NATIONAL ANTIBIOTIC GUIDELINES IN A DISTRICT HOSPITAL

Yong-Chia Low, Chit-Yee Chee, Yi-Lyn Yean, Huey-Ling Ng
Pharmacy Department, Selama Hospital, Perak

INTRODUCTION AND OBJECTIVES

Appropriate antibiotic use has been associated with decreased emergence of resistant microorganisms and reduced patient morbidity, mortality, antibiotics toxicity and hospital costs. However, the extent of adherence to local antimicrobial therapy guidelines in clinical decision making has not been sufficiently explored. This study was designed to evaluate the adherence to the Malaysia National Antibiotic Guidelines (MNAG) 2008 by prescribers in an inpatient setting in Selama Hospital, a district hospital in Malaysia.

METHODOLOGY

This is a cross-sectional prospective study carried out from January to June 2012 in Selama Hospital, Perak. All hospitalised patients prescribed with oral or intravenous antibiotics during hospitalisation were recruited into the study. Exclusion criteria were missing data from medical case notes and infections or antibiotics which are not listed in MNAG 2008. All dispensing of oral or intravenous antibiotics during the study period were followed up to identify eligible patients. The selection, treatment duration and dosage regimen of antibiotics of eligible patients were subsequently extracted from the patient medical records. Adherence was defined as the prescribing of antibiotics for the treatment or prophylaxis of infections in accordance to the recommendations laid out in MNAG 2008. Non-adherence was defined as any deviations from MNAG 2008 with respect to the selection, treatment duration and dosage regimen of antibiotics. Antibiotic costs were compared by subtracting the cost of each non-adherent antibiotics regimen with the cost of the cheapest recommended antibiotics regimen. Data entry and data analysis including Mann-Whitney U test were performed using SPSS software.

RESULTS

311 hospitalised patients and prescriptions were included in the study. The overall adherence rate to MNAG 2008 was 21.5%. Specific adherence rate with respect to antibiotic choice, treatment duration and dosing regimen were 39.2%, 59.1% and 73.0%, respectively. The commonly prescribed oral antibiotics were amoxicillin (28.4%), amoxicillin/clavulanic acid (14.9%), phenoxymethylpenicillin (13.1%), erythromycin ethylsuccinate (10.0%) and cefuroxime (8.0%). For intravenous antibiotics, amoxicillin/clavulanic acid (28.8%), cefuroxime (16.8%), benzylpenicillin (16.3%), cloxacillin (10.3%) and sulfamethoxazole-trimethoprim (7.6%) were the most commonly prescribed. There was no statistically significant difference in terms of median drug regimen cost (RM22.35 versus RM 19.40) incurred between adherent and non-adherent regimen (p=0.905).

CONCLUSION

Oral amoxicillin and intravenous amoxicillin/clavulanic acid are the most commonly prescribed antibiotics in Hospital Selama. The overall antibiotics prescribing adherence to MNAG 2008, particularly adherence to first line antibiotics, is not satisfactory in Selama Hospital. Adherence however does not significantly reduce drugs cost.

KEYWORDS

antibiotic, adherence, antibiotic guidelines

NMRR-12-205-11390

Learning Note from the Editors:

The exclusion criteria should not include antibiotics which are not listed in MNAG 2008. These should be included as considered as inappropriate.
OBSERVATIONAL RESEARCH

APPROPRIATENESS OF ADULT PARENTERAL NUTRITION USAGE IN A MALAYSIAN SPECIALIST HOSPITAL

Wan-Ning Ng, Wai-Han Wong, Nur-Sri Mohd Azmi, Nirmala-Devi Supramaniam, Li-Yin Ch’ng
Pharmacy Department, Taiping Hospital, Perak

INTRODUCTION AND OBJECTIVES

Parenteral nutrition, PN is an intravenous nutrition for patients with non-functional gastrointestinal tract. Inappropriate usage may give rise to various complications, example mechanical complications such as pneumothorax, air embolism, metabolic complications such as electrolyte disturbances, hyperglycemia or hepatic dysfunction and infectious complications such as contamination of the hub catheter, skin around the site of insertion, administered solution and dressing around the insertion site. European Society for Clinical Nutrition and Metabolism (ESPEN) guidelines 2009 provide a general clinical guidance in deciding a suitable candidate. This study was aimed determine the appropriate usage of PN in Taiping Hospital in accordance to ESPEN guideline 2009 with regard to the initiation and discontinuation of PN in Taiping Hospital.

METHODOLOGY

A retrospective review of patients who received adult PN from 2010 to 2011 was conducted in Taiping Hospital. Relevant data of all adult patients who were prescribed with PN were collected and analysed. Data on patient’s demographics, underlying diagnosis, indications, duration, route of administration and reasons for cessation were collected. Paediatric patients were excluded. In 2010 and 2011, PN was used only in ICU, surgical and Obstetric and Gynaecology wards in Taiping Hospital. Therefore PN use was categorized into surgery (pre-operation or post-operation), oncology, gastroenterology, pancreatitis and others. The use of PN was classified as appropriate or inappropriate by the researchers in accordance with ESPEN guidelines 2009. PN are indicated in patients who are undernourished in whom enteral nutrition (EN) is not feasible or not tolerated, or in those with postoperative complications impairing gastrointestinal function who are unable to receive and absorb adequate amounts of EN for at least 7 days. Indications that are not stated in the ESPEN guidelines will be classified as inappropriate.

RESULTS

Total of 127 and 148 patients were started on PN in 2010 and 2011 respectively. Appropriate use of PN was 89.8% (114 patients) in 2010 and 94.6% (140 patients) in 2011. From this study, most of patients who received PN were postoperative: 48.2% (55 out of 127 patients) in 2010 and 55.7% (78 out of 148 patients) in 2011. All postoperative cases started on PN were appropriate. Appropriate use of PN in oncology cases was 26.3% in 2010 and 13.6% in 2011 and for gastroenterology cases was 20.2% in 2010 and 17.9% in 2011. There were no pre-operation cases observed in 2010, however 10% of appropriate use of PN in preoperational cases was observed in 2011. Initiation of PN was inappropriate in pancreatitis patients, 5.3% in 2010 and 2.8% in 2011. Inappropriate PN usage was 13 patients (10.2%) in 2010 and 8 patients (5.4%) in 2011. PN was inappropriately used for acute pancreatitis (8 patients in 2010 and 4 patients in 2011), UGIB (2 patients in 2010 and 3 patients in 2011), pan-gastritis (2 patients in 2010 and 1 patient in 2011) and poor oral intake secondary to malnutrition problem (1 patient in 2010).

There are 3 main reasons for cessation of adult PN in Taiping Hospital, which include tolerate orally (90 patients in 2010 and 112 patients in 2011), death or discharged at own risk (37 patients in 2010 and 31 patients in 2011) as well as patients transferred to other hospital (5 patients in 2011).

CONCLUSION

Majority of parenteral nutrition use in Taiping Hospital was appropriate in accordance to ESPEN guidelines 2009.

KEYWORDS

adult, parenteral nutrition, appropriateness, ESPEN guidelines 2009

NMRR-12-24-10861
COMPARING MEDICATION DOCUMENTATION DISCREPANCIES BY PRESCRIBERS IN A REGIONAL REFERRAL HOSPITAL, MALAYSIA

Sze-Ni Khoo¹, Lan-Sim Chew¹, Wei-Yin Lim², Sue-Anne Chia¹, Ee-Lin Chew¹
¹ Pharmacy Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak
² Clinical Research Centre (CRC) Perak, Perak.

INTRODUCTION AND OBJECTIVES

Unintentional discrepancies and errors in handwritten orders for drug prescription into case notes and drug charts can be a significant source for adverse drug events. This study compared documentation discrepancies and errors by prescribers in four multidiscipline wards of a regional referral hospital in Malaysia.

METHODOLOGY

A retrospective analysis of in-patients written drug prescriptions in case notes and drug charts was conducted from June to September 2012. All admissions in Raja Permaisuri Bainun Hospital between February to June 2011, from 4 multidiscipline wards (Medical, Orthopaedic, Paediatric, Surgical) were identified and stratified proportionally to be randomly selected into the study. Case notes for all selected admissions were traced and each was reviewed for written drug documentation discrepancies. Written drug orders in the case notes were searched and compared with the corresponding prescriptions in the in-patient drug charts for the same admission. Discrepancies between the two were identified, recorded and categorised either into omission or differences of dose, frequency, duration, dosage form, route of administration and drug type. In addition to discrepancies, prescribing errors identified were also recorded. Admissions involving patients being transferred to other wards, not requiring pharmacotherapy, and prescriptions containing continuous drug infusions were excluded from the study.

RESULTS

A total of 2917 admissions were identified from the 4 multidiscipline wards. From this sampling frame, 293 cases were selected via proportional stratified random sampling. Of these, 39 cases were untraceable and 38 were excluded because no pharmacotherapy was given during admission. The final study sample consisted of 216 cases with 1611 in-patient drug prescriptions. 56.0% of the 216 cases had at least 1 drug documentation discrepancy and the rate was 2.7 documentation discrepancy per patient. Of the 1611 prescriptions reviewed, 286 (17.8%) had 1 drug documentation discrepancy between case notes and drug charts. Of the 286 prescriptions with drug documentation discrepancies, 41.6% had a prescribing error. Omission was the commonest documentation discrepancy type (72.0%), with omission of frequency being the most frequent (33.6%). Documentation discrepancy for the same drug order, was significantly higher when the prescriber of case notes and drug charts were different [X²(1) =26.384, p<0.001]. The odds for documentation discrepancies for different prescribers were twice that of the same prescriber (OR = 2.056, 95% CI: 1.556 - 2.716). There was a significant difference in documentation discrepancy rate between the 4 departments evaluated (X²(3)= 10.211, p=0.017).

CONCLUSION

More than half of the patients had 1 or more medication documentation discrepancies, and approximately 40% of prescriptions with discrepancy had an error.

KEYWORDS

drug documentation, discrepancies, errors, different prescribers

NMRR-12-313-11790
OBSERVATIONAL RESEARCH

DESCRIBING THE USE OF MEDICINE AND IDENTIFICATION OF POTENTIALLY INAPPROPRIATE MEDICINE AMONG ELDERLY PATIENTS ADMITTED TO A SPECIALIST HOSPITAL

Mun-Pung Choy1, Ee-Siew Lai2, Norulsaffia Ahmad2, Kee-Huat Chuah3, Hang-Cheng Ong3, Soon-Chai Low3, Wee-Kooi Cheah3
1 Clinical Research Centre (CRC) Taiping, Perak. 2 Pharmacy Department, Taiping Hospital 3 Medicine Department, Taiping Hospital

INTRODUCTION AND OBJECTIVES

Elderly patients tend to have multiple medical conditions that require ingestion of several types of medications. Due to age-related changes in pharmacokinetics and pharmacodynamics in elderly, they are susceptible to the adverse effects of medications prescribed by the healthcare providers. This was a study that described the use of medicine and the identification of potentially inappropriate medicine (PIM) among elderly patients admitted into Taiping Hospital.

METHODOLOGY

This study was conducted as an extension of sub-analysis from a 2-year retrospective review on geriatrics patients for bedsores conducted in 2012. All patients admitted into 2 designated wards i.e. Male Medical Ward and Female Medical Ward, aged above 60 years old and discharged between 1st September 2011 and 29th February 2012, were included in the analysis. Excluded were patients admitted due to cerebrovascular disease, nephrology, respiratory or endocrinology-related illnesses, with extended length of stay due to rehabilitation, and with incomplete medical data. Medication histories upon admission and prior to discharge were reviewed. Oral medicines prescribed for chronic conditions were considered for medication use analysis. Beer’s criteria were applied to identify PIM, both acute and chronic.

RESULTS

A total of 92 elderly patients were reviewed in this study. Their mean age was 75.6 years old (SD ± 6.3 years). In this study, we found that on the average, each elderly patient was prescribed 5.7 types of medicines and each took 8.5 oral pills on a daily basis throughout their admission. At discharge, each patient was prescribed on average 5.3 types of medicines, and were expected to take on average 7.8 number of oral pills daily at home. Types of medicines and number of pills needed daily were reduced slightly for all the elderly patients upon discharged. 16 of the 68 elderly patients with complete medication history had at least one PIM during admission. The 3 most common medicines associated with PIM identified in this study were prazosin (7.3%), immediate-release nifedipine (4.3%), and ticlopidine (3.3%). 10 elderly patients were prescribed with at least one medicine associated with PIM upon discharge.

CONCLUSION

Most elderly patients need more than 4 types of medicine and take at least 6 pills per day. From the extensive list of PIM in Beer’s criteria, only a few were identified in this study. The applicability of Beer’s Criteria to identify PIM in the elderly needs to be evaluated, considering differences in drug formulary and practice.

KEYWORDS

elderly, potentially inappropriate medicine, hospital

NMRR-12-722-12604
OBSERVATIONAL RESEARCH

EVALUATION OF VANCOMYCIN DOSAGE GUIDELINE IN NEONATES IN A SPECIALIST HOSPITAL

Sing-Chian Tan, Chew-Beng Ng, Aida-Noordina Ahmad Rahim, Nur-Afera Abdul Ghani, Sudharma Sherng-Yhau Na, Saiful-Rijal Muhammad
1 Pharmacy Department, Taiping Hospital
2 Paediatrics Department, Taiping Hospital

INTRODUCTION AND OBJECTIVES

Vancomycin doses are adjusted based on serum trough concentrations. Because vancomycin activity is primarily time-dependent, frequent dosing is necessary to achieve a higher trough concentration. Higher trough concentration can increase the likelihood of achieving a more effective overall antibiotic exposure. The Royal Prince Alfred Hospital (RPA) guideline recommended 12-26 hourly intervals of vancomycin administration in neonates. A newer guideline by NeoFax® recommended a more frequent intervals; 6-18 hourly administration. This study aimed to compare between the 2 guidelines, of the achievement of initial therapeutic vancomycin trough serum concentration (10-20 mcg/ml), in neonates prescribed with intravenous vancomycin.

METHODOLOGY

This is a observational study, conducted from January 2013 to July 2013 in Taiping Hospital. 34 serum samples of neonates prescribed with RPA dosing and another 20 serum samples of neonates prescribed with NeoFax® dosing, were identified prospectively through the Clinical Pharmacokinetic Service (CPS) records. From the record unit, the case notes of these neonates were retrieved and relevant demography and clinical data extracted. Vancomycin trough level of neonates with normal renal function and initial vancomycin trough level taken before the 4th dose were included in the analysis. The vancomycin trough serum concentrations were then categorized into sub-therapeutic (<10mcg/ml), therapeutic (10-20mcg/ml), and supra-therapeutic (>20mcg/ml) vancomycin concentrations. Descriptive statistics, Pearson Chi-square, and Fisher’s Exact Test were performed using SPSS software.

RESULTS

The mean body weight, mean corrected gestational age, and mean glomerular filtration rate of neonates in both the RPA and NeoFax® groups were similar. 10 (29.4%) neonates in the RPA group and 6 (30.0%) in the NeoFax® group achieved therapeutic vancomycin concentrations. 20 (58.8%) neonates in the RPA group and 14 (70%) in the NeoFax® group had sub-therapeutic vancomycin levels. 4 (11.8%) neonates in the RPA group had supra-therapeutic vancomycin levels. The percentage of neonates who attained therapeutic vancomycin levels did not differ significantly between the 2 dosing guidelines (p = 0.793). In addition, the percentage of neonates with therapeutic vancomycin levels did not differ significantly between the different gestational age groups (p=0.999) or body weight categories (p=0.148).

CONCLUSION

NeoFax® dosing guideline with more frequent dosing did not result in higher trough levels when compared to the RPA guideline. However, the small sample size in this study is inadequate to provide convincing evidence for this conclusion.

KEYWORDS

vancomycin, neonates, dosage guideline

NMRR-12-1306-14063

Learning Note from the editors:

1. Far too many studies have been conducted in Malaysia by pharmacists on Vancomycin and Aminoglycosides. In addition most have a small sample size, are underpowered and have a weak methodology. What is required is a good review of the data internationally and locally, not more studies.

2. There are ethical issues of not obtaining consent from parents or patients when dosing schedules are altered, especially in research context. Adequate informed consent is required.
EVALUATION OF KNOWLEDGE ON COLCLEAN SOLUTION AND BOWEL PREPARATION AT A SPECIALIST HOSPITAL

Shea-Jiun Choo¹, Kah-Keet Foo¹, Seraphina Jun-Ling Tan¹, Jie-Yun Lee¹, Bee-Chee Lee², Ramasamy Umasangar²
¹ Pharmacy Department, Taiping Hospital, Perak
² Surgical Department, Taiping Hospital, Perak

INTRODUCTION AND OBJECTIVES

Diagnostic accuracy and therapeutic safety of colonoscopy depends on the quality of the colonic cleansing or preparation. Inappropriate and inadequate counselling on Colclean solution for bowel preparation before colonoscopy has been reported to result in poor bowel preparation and defaulting of colonoscopy. This study was aimed to evaluate the knowledge on Colclean solution and bowel preparation among healthcare providers and patients undergoing colonoscopy at Hospital Taiping.

METHODOLOGY

A cross-sectional study was conducted among pharmacists and nurses providing counselling on bowel preparation, and patients attending the surgical outpatient clinic of Hospital Taiping. Self-administered questionnaires were used to evaluate knowledge on Colclean solution and bowel preparation among study participants. The questionnaire was designed based on the Colclean solution product leaflet and bowel preparation guidelines published by the Ministry of Health, Malaysia. It evaluated knowledge on the indication, administration time and methods of Colclean solution, as well as food and drinks to avoid before colonoscopy. Prior to the study, the questionnaire was pre-tested to confirm its content validity.

RESULTS

A total of 101 participants (37 pharmacists, 22 nurses, and 42 patients) were evaluated. All knew the indication and time of administration of Colclean solution. However, only 40.5% of pharmacists, 40.9% nurses, and 26.2% patients knew that Colclean solution should be diluted with water before administration. Most knew that high fibre foods (45.9% pharmacists, 59% nurses, 40.4% patients), solid food (70.2% pharmacists, 68.2% nurses, 50% patients), and drinks (45.9% pharmacists, 40.9% nurses, 45.2% patients) should be avoided prior to colonoscopy.

CONCLUSION

Healthcare providers and patients evaluated in this study demonstrated inadequate knowledge on the method of administration of Colclean solution and bowel preparations prior to colonoscopy. Continuous education and training should be conducted to improve and sustain knowledge among healthcare providers and patients.

KEYWORDS

knowledge, Colclean solution, bowel preparation

NMRR-13-442-15419
KNOWLEDGE, ATTITUDE AND PRACTICE OF VITAMIN SUPPLEMENTATION AMONG ADULT PATIENTS IN A DISTRICT SPECIALIST HOSPITAL

Kamariah-Shamsinar Kamarul Bahari, Yee-Han Ng, Pei-Yun Loo, Suraya Rahman
Pharmacy Department, Taiping Hospital, Perak.

INTRODUCTION AND OBJECTIVES

The use of vitamin supplementation is currently prevalent in the general Malaysian population and is thought to be driven by the perception of improved general health with vitamin supplementation. The study aimed to evaluate the knowledge, attitude and practices of vitamin supplementation among adult patients in Malaysia.

METHODOLOGY

This was a cross-sectional study involving patients admitted to Taiping Hospital, a district specialist hospital in Malaysia, between December 2012 and November 2013. Exclusion criteria were age less than 21 years old, psychiatric problems and illiteracy. A questionnaire was developed by the researchers based on a previous study by Qidwai et al. 2008 and was pre-tested. The questionnaire, which was available in 3 languages common to the Malaysian population (Malay language, English and Chinese language), consisted of 4 sections: socio-demographic characteristics, knowledge, attitudes and practices of vitamin supplementation. Multiple choices were provided for each question for the patients to choose from. The target sample size was 278. Eligible patients were recruited by convenience sampling. Following the attainment of the written informed consent, a face-to-face interview was conducted based on the questionnaire.

RESULTS

A total of 170 eligible patients was included in the study. This constitutes 61.2% of the target sample size. The study subjects consisted of male (51.2%) and female (48.8%) in almost-equal proportion. The majority were of Malay ethnicity (58.8%), followed by Chinese (24.7%), Indian (15.9%) and others (0.6%). There was reasonably uniform distribution of study subjects in different age groups: 21-30 (31.8%), 31-40 (21.2%), 41-50 (18.8%) and >51 (28.2%) years old. The large majority (97.6%) were aware of vitamin supplementation. However, a lower proportion of the study subjects were actually taking vitamin supplements (84.7%). Of the 144 subjects taking vitamin supplements, 34.7% did not take the vitamin supplements according to the recommended dose but most study subjects (72.9%) did inform the doctors or pharmacists on their vitamin use. The study subjects obtained information on vitamin supplementation from variable source: family, friends and relative (35.9%); media (32.9%); doctors (27.1%); others (4.1%). It was generally believed that vitamin A promotes eye health (71.8%). The majority also agreed that vitamin C is helpful in reducing the risk of cancer (68.2%), improving the immune system (57.1%) and preventing cold and flu (88.8%). Vitamin B was also believed to be beneficial in preventing tingling sensation and numbness (57.1%). While the study subjects were considered to have a generally good understanding of the function of specific vitamins, they were largely unaware of the potential harmful effects of vitamin supplements. Of which, the ignorance (73.5%) of the avoidance of vitamin A during pregnancy is worrying.

CONCLUSION

There is a high rate of vitamin supplementation amongst adult patients. The potential harmful effects of vitamin supplements and the importance of adherence to the recommended dose should be emphasised.

KEYWORDS

vitamin supplements, knowledge, attitude, practice

NMRR-13-379-15043
INTRODUCTION AND OBJECTIVES

Multi-source feedback (MSF) allows comprehensive assessment of healthcare professionals with respect to clinical performance and professional behaviour from a variety of perspectives, including that from the managers, peers and subordinates. MSF is able to offer an unbiased, rounded and multi-faceted overview of a healthcare professional’s performance in place of a top-down single person evaluation. Currently, provisionally registered pharmacists (PRPs) in Malaysia are assessed by only one assessor with emphasis placed on the PRPs’ ability to perform technical tasks but with the absence of assessment on professional behaviour. Usually, no formal feedback is given to the PRPs hence leaving little space for self-reflection and improvement. The purpose of the study was to evaluate the use of MSF programme in appraising the performance of PRPs in 3 selected specialist hospitals in Malaysia.

METHODOLOGY

This is a cross-sectional descriptive study involving assessment of PRPs using MSF approach in 3 specialist hospitals in Malaysia over a period of one year (2013). The 3 specialist hospitals were conveniently selected. They comprised of 1 regional referral specialist hospital (Raja Permaisuri Bainun Hospital, HRPB) and 2 specialist district hospital (Slim River Hospital, HSR and Seri Manjung Hospital, HSM). A standardised MSF form was adapted by the researchers from a MSF tool developed by Burford B et al. 2010. The MSF assessment comprised of 3 domains: pharmaceutical care delivery, problem solving ability and personal attributes. Verbal informed consent was obtained from all eligible PRPs when they first reported in to begin their preregistration training. Four MSF assessments at 3-month interval were conducted for each eligible PRP during their one year preregistration training. MSF assessment involved confidential reviews done by 3 conveniently chosen, trained reviewers (a pharmacist, a pharmacy assistant, and a PRP) based on the standardised form. Assessment of each reviewer carried equal weightage. Hence, the final MSF score was derived by averaging the MSF score given by each individual reviewer. The higher the score, the better is the performance. The maximum possible MSF score per individual is 50. The PRPs were informed of the MSF results by the site supervisor at each pharmacy unit within a-week’s time. The first and the fourth MSF score were compared to evaluate improvement in PRPs’ performance.

RESULTS

A total of 32 PRPs were included in the study. 20 (62.5%) PRPs were from HRPB, while 7 (21.9%) were from the HSR and 5 (15.6%) were from HSM. Overall, there were significant improvement in the average MSF score from 34.4 (SE 0.53) in the first assessment to 36.2 (SE 0.52) in the fourth assessment (p<0.001). Significant improvement in average score was observed in both the pharmaceutical care delivery domain (3.32, SE 0.07 vs 3.64, SE 0.05, p<0.001) and the problem solving domain (3.26, SE 0.07 vs 3.48, SE 0.07, p=0.01). The average score for the personal attributes domain increased from 3.66 (SE 0.06) to 3.74 (SE 0.06) but was not statistically significant (p=0.3). Scrutinising individual hospital, only PRPs in HRPB had marked improvement in their average MSF score (34.2, SE 0.74 vs 35.9, SE 0.62, p=0.03). The increase in MSF score in HSR (34.5, SE 1.21 vs 37.0, SE 1.52, p=0.18) and HSM (34.9, SE 0.44 vs 36.3, SE 1.02, p=0.27) was not statistically significant.

CONCLUSION

MSF programme may improve the PRPs performance. A small significant rise in MSF scores may not translate into improved clinical performance. Further study is warranted to make direct comparison of MSF programme with the routine performance appraisal.

KEYWORDS

multi-source feedback, pharmacist, performance

NMRR-13-576-14835
INTRODUCTION AND OBJECTIVES

The aim of the study was to assess patient satisfaction on the quality, written instruction, pharmacy dispensing service of extemporaneous syrup preparation for paediatric patients in the outpatient pharmacy of a regional referral hospital, Malaysia.

METHODOLOGY

A cross-sectional study involving the use of a questionnaire was conducted from 1st November to 31st December 2012 at Raja Permaisuri Bainun Hospital. A bilingual (Malay and English language) questionnaire was developed by the researchers. Overall satisfaction level and specific satisfaction level regarding the quality, written instruction, and the pharmacy dispensing service of the extemporaneous syrup preparation were measured on a 5-point Likert scale. Satisfaction score ranges from 1 to 5, with greater satisfaction associated with a high score. The questionnaire was pre-tested in 5 parents/caregivers. Following the attainment of written informed consent, the self-administered questionnaires were distributed to conveniently sampled parents/caregivers, who were obtaining supply of extemporaneous syrup preparations at the outpatient pharmacy of Raja Permaisuri Bainun Hospital. Illiterate parents/caregivers were excluded. Responses from the parents/caregivers were analysed. A score of 4 and 5 on Likert scale connotes “satisfied” while a score of 1 to 3 indicates “not satisfied”. 

RESULTS

In the study, a total of 94 questionnaires were distributed but only 79 (84.0%) questionnaires were returned by the parents/caregivers. The parents/caregivers comprised mainly of Malay ethnicity (53.1%), followed by Chinese (26.6%), Indian (15.2%) and others (5.1%). With respect to education level, the majority of the parents/caregivers received up to secondary education (51.9%). In the study, 63.3% of the study sample received 1 extemporaneous syrup preparation while the remaining received 2 syrups (16.4%), 3 syrups (15.2%) and more than 3 syrups (5.1%), respectively. Frequently dispensed extemporaneous syrup preparations were pyridoxine (11.6%) and frusemide (11.6%), followed by spironolactone (10.9%), captopril (10.9%) and trihexyphenidyl (10.9%). The parents/caregivers were predominantly satisfied with the quality (96.2%) and the written instruction of the extemporaneous syrup preparation (98.7%). There were however a slightly lower proportion of parents/caregivers who were satisfied with the pharmacy dispensing service (88.6%). In addition, a comparatively high proportion of parents/caregivers agreed to the statement that the extemporaneous syrup preparation contains sedimentation (37.9%). A significant proportion of parents/caregivers (32.9%) also find that the waiting time at the outpatient department was long.

CONCLUSION

Most of the parents/caregivers are satisfied with the quality and written instruction of the extemporaneous syrup preparation but less with the accompanying pharmacy dispensing service from the outpatient pharmacy.

KEYWORDS

patient satisfaction, extemporaneous preparation, syrup, paediatric

NMRR-12-236-11717
INTRODUCTION AND OBJECTIVES

Globally, pharmaceutical costs were reported as the second main driver for health care cost escalation. Similar trends were noticed in the Malaysian healthcare system. The total expenditure on medicines procurement for use in government hospitals and clinics increased from MYR 303.80 million in 1998 to MYR 1,510 million in 2008, representing a 397% change in pharmaceutical spending over a 10-year period. In line with the Malaysian government’s aim to promote the local manufacturing industry under the National Key Result Areas (NKRA) programme, the Ministry of Health has implemented a generic drug policy in which government hospitals and clinics have to purchase generic drugs when the patents for originator brand of drugs expire. This study aimed to explore the knowledge and perception of generic medicines among medical specialists in a public hospital setting.

METHODOLOGY

This is a qualitative study conducted from 10th May 2013 to 7th June 2013 in Teluk Intan Hospital, a district specialist hospital in Perak. 10 specialists from different disciplines were recruited for the interview though purposive sampling until saturation of themes occurred. A semi-structured interview guide was used to document responses during the interview. Each individual interview took an average of 30 to 40 minutes and was conducted by a trained senior pharmacist. Probing questions were used to get more in-depth views from participants whenever necessary. Participants were informed of the research objective, confidentiality of their responses and their right to withdraw from the study. Interviews were audio taped, transcribed verbatim with field notes taken during and immediately after the interview. Any disagreement of transcription was solved after consensus was reached between participants and researchers. The transcripts were then analysed with deductive content analysis for a qualitative data analysis.

RESULTS

5 major themes were identified in the thematic content analysis: (1) knowledge of regulatory requirements for generic medicines registration, (2) perspectives on generic medicine’s efficacy, safety and quality, (3) factors affecting choice of prescribed medicine, (4) use of prescribing information, and (5) strategy to increase prescribing using generic names. Participants were aware of the National pharmaceutical Control Bureau (NPCB) regulatory limit for bioequivalence but were unsure of its responsibilities in performing bioequivalent studies and quality control tests. Some perceived the effectiveness of generic medicine to be less when compared to brand original drugs, but others believed that the effectiveness was the same, but not better. Some were concerned with the quality of generic medicines, but others were satisfied with its quality. Factors that affect the prescribing of medicines included availability of drugs, nature of the disease (acute, chronic, life-threatening), cost, effectiveness of generic medicines, and experience with generic medicines. Some participants preferred brand original drugs if the drug is of narrow therapeutic index. Participants obtained drug prescribing information from published articles and journals, conference and workshops, pharmacotherapeutic references (British National Formulary, MIMS), and the internet. Several strategies to increase prescribing of generic medicines were suggested: implementation of policy for compulsory prescribing using generic name, academic detailing or education to change prescribing behaviour, provision of drug charts with brand and generic names, social websites and mobile applications for quick references, and electronic prescribing. However, some were more comfortable prescribing using brand names, and disagreed that education can change prescribing behaviour.

CONCLUSION

In our study, the specialists interviewed lack familiarity regarding the role of the local regulatory authority in performing bioequivalent studies. Some expressed concerns regarding the quality, safety and efficacy of generic medicines especially in life-saving conditions or with narrow therapeutic index drugs. This concern and misconception, if left unattended, will have a negative impact on the development of generic medicine policy in the future.

KEYWORDS

perception, generic medicine, specialists, qualitative

NMRR-13-35-14876
POLYMYXIN PRESCRIBING PATTERN IN A REGIONAL REFERRAL HOSPITAL IN MALAYSIA

Ros-Sakinah Kamaludin¹, Kah-Shuen Thong¹, Chiew-Ang Khor¹, Hong-Bee Ker²
¹ Pharmacy Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.
² Infectious Disease Unit, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION AND OBJECTIVES

A lack of monitoring and non-availability of local guidelines during the early days when polymyxin was first introduced has led to a rather unpredictable prescribing pattern of polymyxin in Raja Permaisuri Bainun Hospital (HRPB), a regional referral hospital in Malaysia. Two types of polymyxin are available at HRPB, namely polymyxin B and polymyxin E (colistin). In recent years, there is an increasing trend in polymyxin usage in HRPB. This study aimed to evaluate the indication, the usage pattern and the outcome in patients who received polymyxin in HRPB.

METHODOLOGY

A retrospective, descriptive study was conducted on all patients who received polymyxin B and colistin in HRPB from year 2009 until 2011. Exclusion criteria were untraceable or incomplete medical records, initiation of polymyxin in other healthcare institution and discharge of patients to other institution before the completion of polymyxin treatment. Eligible patients were identified using the hospital registration numbers recorded in the polymyxin usage record cards in the pharmacy department. Their medical and medication records were subsequently traced from the record office and relevant information on polymyxin usage pattern (indication, route of administration, microorganisms targeted, culture source and adverse drug reaction) and patient’s outcome were collected using a standardised data collection form. Data entry and data analysis were performed on Stata version 11.1.

RESULTS

A total of 91 patients were identified and included in the study. Majority of the prescriptions reviewed were from the critical care unit (54.94%). Polymyxin was started as first line antibiotic in 64 (70.33%) patients. The most common indication for polymyxin was ventilator-associated pneumonia (VAP) involving 58 (63.73%) patients. A total of 92 cultures, which yielded a total of 92 isolates, were obtained from 91 patients. Cultures for microbial sensitivity tests were sampled from the endotracheal tube of 59 (64.13%) patients. 75 (81.52%) bacterial isolates had shown sole sensitivity to polymyxin. In 87 (95.60%) patients, polymyxin was indicated for infections involving a single bacterial isolate of Acinetobacter baumannii. Patient outcomes vary with the use of Polymyxin. 56 (61.5%) of the patients completed the treatment course while 35 (38.5%) did not. Of those who completed the treatment course, 39 (69.9%) were discharged, 12 (21.4%) died due to the infection and 5 (9.0%) died due to non-infective reasons. Of those who did not complete the treatment, 7 (20%) were discharged, 24 (68.6%) died due to the infection and 4 (11.4%) died due to non-infective reasons.

CONCLUSION

In HRPB, polymyxin was most commonly prescribed by the critical care unit and most frequently indicated for VAP. Polymyxin was usually used as first line antibiotic for infections involving Acinetobacter baumannii or for infections involving bacterial isolates showing sole sensitivity to polymyxin. Patient outcome vary with the use of polymyxin, but the majority completed polymyxin treatment and were discharged home.

KEYWORDS

polymyxin, prescribing pattern, Acinetobacter baumannii

NMRR-11-121-8751
OBSERVATIONAL RESEARCH

PREVALENCE OF PRESCRIBING ERROR WITH MANUAL PRESCRIBING SYSTEM AT A REGIONAL REFERRAL HOSPITAL IN MALAYSIA

Chee-Tao Chang, Nalini Krishnasamy, Harveen-Kaur Olikh, Nurizzati Kamaruddin
Pharmacy Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION AND OBJECTIVES

Prescribing errors with a manual (non-electronic) prescribing system are common. However, it is associated with time wastage and has the potential to introduce medication error. Electronic prescribing system will soon be introduced to Raja Permaisuri Bainun Hospital (HRPB), a regional referral hospital in Malaysia. This study aimed to determine the prevalence of prescribing error with manual prescribing system in HRPB. These data will serve as baseline data for future researches to make comparison of the manual prescribing system with the new electronic prescribing system.

METHODOLOGY

This is a cross-sectional study involving all prescriptions received at the central outpatient pharmacy department (OPD) and at 2 satellite outpatient pharmacies (smaller, decentralised pharmacies) in HRPB. All prescriptions received during the 5 week-days within the 3-weeks study period were included. Prescriptions that were not from HRPB and old prescriptions for subsequent refill of medications were excluded. A data collection form was developed by the researchers to collect data which included: indication, prescriber class, dosage regimen, duration, quantity, and choice of medication. A total of 5 pharmacists were responsible to screen the prescriptions for prescribing errors. All prescribing errors identified were counterchecked by 2 senior pharmacists from the research team. All prescribing errors were later classified as omission error or commission error according to the definition set out by Rupp MT et al. Errors of omission are defined as prescriptions with essential information missing while errors of commission involve wrongly written information in the prescriptions.

RESULTS

11,009 prescriptions were included in the study. 8,862 (80.5%) prescriptions were filled in the OPD while the remaining 2,147 (19.5%) prescriptions were filled in the 2 outpatient satellite pharmacies. A total of 461 prescribing errors were identified, resulting in an overall prescribing error prevalence of 4.2%. The 3 hospital departments with the highest prevalence of prescribing errors, in order of declining prevalence, are as follows: accident and emergency department (16.3%), medical department (11.0%) and dermatology department (9.3%). The majority of the prescribing errors involved medical officers (55.3%), and followed by house officers (36.4%) and specialists (6.9%). Of the 461 prescribing errors, 58.3% were omission errors only and 39.3% contained commission errors only, while the remaining 2.4% contained both type of errors. Omission errors commonly involved medication frequency (48.3%), duration (19.8%) and quantity (9.1%), whereas commission error frequently involved incorrect dose (50.0%), medication duration (19.6%) and frequency (18.6%).

CONCLUSION

Prevalence of prescribing error with the manual prescribing system was 4.2%, with omission error being more frequent than commission error. Error rates will be re-evaluated after the introduction of an electronic prescribing system.

KEYWORDS

prescribing error, outpatient pharmacy, manual

NMRR-12-397-11335
SAFETY AND EFFECTIVENESS OF TENOFOVIR DISOPROXIL FUMARATE (TDF) IN HIV-INFECTED PATIENTS IN A REGIONAL REFERRAL HOSPITAL, MALAYSIA

Wei-Yee Ng, Ming-Hui Liew, Atiqah-Akmal Azil, Chiew-Ang Khor, Kean-Yau Woo, Hong-Bee Ker
1 Pharmacy Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.
2 Medical Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION AND OBJECTIVES

Tenofovir Disoproxil Fumarate (TDF) is an antiretroviral drug that was approved by the Food and Drug Administration (FDA) in 2001 to treat human immunodeficiency virus (HIV) infection. Contrary to clinical trials involving only strictly selected patient groups, several case reports, linking the use of TDF-containing antiretroviral regimen with nephrotoxicity, raise concerns on the safety profile of TDF. This study aimed to determine the prevalence of nephrotoxicity in actual clinical setting and to evaluate the clinical efficacy of TDF in the treatment of HIV-infected patients in a regional referral hospital, Malaysia.

METHODOLOGY

This is a retrospective study involving all HIV-infected patients who received TDF-containing antiretroviral regimen in Raja Permaisuri Bainun Hospital from January 2009 to March 2012. Exclusion criteria for TDF-containing regimen were pregnancy, breastfeeding, kidney diseases, bone diseases, active infections requiring antibiotics and malignancy. Patients were identified from the clinic registration cards kept by the infectious disease clinic. A data collection form was developed by the researchers to collect data at baseline and at 48 weeks after the initiation of TDF-containing antiretroviral regimen. Data was retrieved from the clinic’s medical records and included: Creatinine clearance (CrCl), CD 4 cell counts and HIV-1 RNA load. Further information was also collected from patients who discontinued TDF-containing antiretroviral regimen due to suspected nephrotoxicity. Such patients were followed up for 24 weeks after discontinuation of TDF to monitor renal function improvement.

RESULTS

A total of 86 patients were enrolled and included in the study. The majority were male (68.6%) and with a mean age of 43.0 (SD 10.0). Ethnic distribution was as follows: Chinese ethnicity (62.8%), Malay ethnicity (20.9%), Indian ethnicity (10.5%) and others (5.8%). TDF-containing regimen significantly improved the average CD4 cell counts (p<0.001) from 348.2 (95% CI: 292.7-401.5) cells/mm3 to 459.1 (95% CI: 396.2-522.3) cells/mm3. Significant improvement were similarly observed in HIV-1 RNA load (p<0.001). Initiation of TDF-containing regimen reduced the average HIV-1 RNA load from 2.41 (95% CI: 2.02-2.69) log10 copies/ml to 1.53, (95% CI 1.42-1.67) log10 copies/ml(p<0.001). A total of 8 (9.3%) patients discontinued TDF-containing regimen during the study period due to suspected nephrotoxicity. Of the 8 patients, only 1 (12.5%) patient’s renal function was reversed to baseline within 24 weeks following TDF discontinuation.

CONCLUSION

TDF-containing regimen improves CD 4 cell counts and reduce HIV-1 RNA load as expected in HIV-infected patients. All healthcare professionals should be aware that there is a possible association of TDF with nephrotoxicity with a prevalence of 9.3% as determined in this study of 86 HIV-infected patients.

KEYWORDS

Tenofovir Disoproxil Fumarate, HIV, nephrotoxicity, CD4, viral load

NMRR-11-958-10114
THERAPEUTIC DRUG MONITORING OF VANCOMYCIN IN PATIENTS WITH END STAGE RENAL FAILURE (ESRF)

Doris George Visuvasam, Arvinder Jeet Kaur Satday Singh, Chung-Wei Chai, Wai-Yin Yong
Pharmacy Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION AND OBJECTIVES

The optimal trough level of vancomycin is 15-20 µg/ml in order to prevent microbial resistance. Vancomycin is typically initiated at 1 gram stat in patients with end stage renal failure (ESRF). However, there is no consensus for blood sampling time for the subsequent therapeutic drug monitoring (TDM) for vancomycin. In a regional referral hospital, Raja Permaisuri Bainun Hospital (HRPB), the blood sampling for vancomycin TDM is usually obtained 48 hours after the stat dose. Such practice is important to guide the timeframe for the subsequent vancomycin needed doses. Our study aimed to determine the appropriateness of blood sampling 48 hours after the administration of the initial stat dose of vancomycin, and secondarily to evaluate the effects of sociodemographic characteristics and dialysis on vancomycin trough level.

METHODOLOGY

This is a prospective observational study that was conducted from March 2011 till August 2012 in HRPB, involving all ESRF adult patients (≥ 18 years old) provided with 1 gram stat dose of intravenous (IV) vancomycin. ESRF patients with peritoneal dialysis or admitted to wards for critical care were excluded. Following 1 gram stat dose of IV vancomycin, blood sample was obtained 48 hours later as per standard practice. Vancomycin trough level of each eligible patient was traced from the TDM record. The trough level was categorised into three categories according to the consensus statement of the American Society of Health-System Pharmacists (ASHP), the Infectious Diseases Society of America (IDSA) and the Society of Infectious Diseases Pharmacists (SIDP). The three categories are sub-therapeutic level (< 15 mcg/ml), therapeutic level (15 – 20 mcg/ml) and supra-therapeutic level (> 20 mcg/ml). Other information including socio-demographic characteristics, medical history and dialysis details were extracted from the patient’s medical records. Effects of the various socio-demographic characteristics and dialysis on vancomycin trough level were explored using analysis of variance (ANOVA) and Pearson’s Chi-squared test. Written informed consent was obtained from all patients for participation in the study.

RESULTS

52 eligible patients were included in the study. 32 (61.5%) of the patients were male and the overall mean age was 57 years (SD + 14 years). 22 (42.3%) were Malay, 15 (28.8%) Indian, 13 (25.0%) Chinese and 2 (3.8%) of other ethnicity. Majority (82.7%) of the ESRF patients had sub-therapeutic vancomycin trough levels at 48 hours after the administration of the first vancomycin dose. Only 9.6% of the ESRF patients had therapeutic vancomycin trough levels and the remaining 7.7% patients had supratherapeutic vancomycin trough levels. The duration of dialysis (p = 0.096), patient’s age (p = 0.876), gender (p = 0.879) and ethnicity (p = 0.540) did not affect the vancomycin trough levels.

CONCLUSION

48 hours blood sampling time post-vancomycin stat-dose is not ideal as the majority of ESRF patients had a subtherapeutic vancomycin trough level. Hence, earlier sampling time is suggested to appropriately guide the next vancomycin dosing and to reduce microbial resistance.

KEYWORDS

vancomycin, end stage renal failure, ESRF, therapeutic drug monitoring

NMRR-11-91-8666
ABILITY OF HEALTHCARE PROFESSIONALS TO PERFORM HEEL PRICK IN NEONATES

Wei-Yin Lim, Amar-Singh HSS, Pue-Siah Chin, Lionel Chia, Fatimah-Jusoh, Norhaslin-Mad Yusoff, Normazia Dolah, Sithra-Devi Subramaniam, Haymalatha Rajagam
1 Clinical Research Centre (CRC) Perak, Perak.
2 Paediatrics Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.
3 Allied Health Science College Sultan Azlan Shah Ulu Kinta, Perak.

INTRODUCTION AND OBJECTIVES

Inappropriate skill and knowledge of the heel prick procedure among health care providers result in pain, distress and complications to the neonate. This study aims to determine the ability of health care professionals in performing the heel prick procedure for neonates at hospitals and health clinics in Perak through written assessment.

METHODOLOGY

This is a cross sectional study that was conducted in May 2013 in 10 randomly selected government health institutions in Perak. Selected healthcare professionals working with neonates in the selected institutions, were required to undergo a 30-minute written closed book assessment session at their working centre. The assessment evaluated the participants’ demography, working experience, knowledge on heel prick site, knowledge on procedural preparation and heel prick complications on neonates using extended matching question (EMQ). A certain number of assessment paper set was sent to all selected institutions. The institution administrator assisted in the appointment of appropriate staff to undergo the assessment at a specified date and time. An invigilator was present during the assessment sessions for all participating institutions. Confidentiality of the participating institutions and all participants were maintained.

RESULTS

230 assessment papers were sent to the 10 randomly selected institutions and 193 (83.9%) answered papers were returned. 2 assessment papers were answered by officers who did not work with neonates and thus were excluded from the study analysis. The 191 answered papers were answered mostly by nurses (70.2%), followed by house officers (18.8%), medical officers (9.4%) and medical assistants (1.6%). The results showed 75 (39.3%) of the participants could not correctly identify the heel prick site, 136 (71.2%) were unable to theoretically prepare for heel prick procedure, 169 (88.5%) were unable to list the correct heel prick procedures and 143 (74.9%) were unable to list important heel prick complications. The majority of the participants demonstrated poor performance in the examination (77.0%). Participants with work experience above 5 years (p < 0.001) and prior training (p = 0.001) were significantly better in identifying the heel prick site. Prior training (p < 0.001) and increased volume of heel prick performed in the past 1 month (p = 0.002) significantly improved procedural preparations knowledge. Staff with longer working experience scored better in the procedure theory assessment than those with lesser experience (p = 0.002). Knowledge score on heel prick complications were significantly higher among doctors (p = 0.009) and hospital based staff (p = 0.001).

CONCLUSION

The findings from the written assessment on neonate heel prick from this study may reflect the inability of a substantial portion of healthcare professionals to perform heel prick on neonates correctly. There is a need to strengthen formal training and conduct routine audits.

KEYWORDS

heel prick, neonates, healthcare professionals, extended matching question (EMQ)

NMRR-13-246-15158
Observational Research

Ability of Paediatric Hospital Staff to Perform an Intravenous Insertion at a Regional Referral Hospital

Khairul-Wardah Abd Razak¹, Nazimah-Ahmad¹, Noradibah-Shamsul Bahri¹, Ruhayati-Tukas Abdullah¹, Siti-Fatimah Sahid¹, Kogilavani-Arumugam¹, Nor-Alzura Zulkifili⁴, Khadijah N², Amar-Singh HSS²,⁴, Sok-Yee Lee¹, Norshazila-Julia MS¹

¹ Allied Health Science College Sultan Azlan Shah Ulu Kinta, Perak.
² Paediatric and Retrieval Department, Hospital Raja Permaisuri Bainun Ipoh, Perak.
³ Emergency Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.
⁴ Clinical Research Centre (CRC) Perak, Perak.

Introduction and Objectives

Intraosseous infusion (IO) is the process of injecting directly into the marrow of a bone to provide a non-collapsible entry point into the systemic venous system. This technique is used in emergency situations to provide fluids and medication when intravenous access is not available or not feasible. In emergency situations, rapid intravenous access in children may be difficult to achieve. IO access offers an easy, safe and life-saving alternative for immediate vascular access. This is a study conducted to evaluate the ability of hospital staff to perform IO insertion at a regional referral hospital.

Methodology

This is a cross-sectional observational study that was conducted in Paediatric, Emergency Department and Retrieval Unit, Hospital Raja Permaisuri Bainun from 19th-20th November 2012. The study comprised of a 15 minute IO insertion procedure performance assessment on a paediatric mannequin using the Observed Structured Clinical Examination (OSCE) platform. The OSCE was designed based on the current Paediatric Advanced Life Support (PALS) guidelines by the researchers. 56 medical staffs from HRPB were selected conveniently to attend the OSCE. Each participating staff was assessed based on 8 procedural steps for IO insertion. Score was determined using a step by step (8 steps) evaluation form by the researchers through observation during the OSCE.

Results

The participants consisted of 28 (50%) medical officers (MO), 16 (29%) nurses and 12 (21%) medical assistants (MA). Of all the participants, 28 (50.0%) had previous APLS course, 48 (85.7%) had previous PALS course and 33 (58.9%) had Retrieval Update course. Majority of the participants (77%) had less than 10 years’ experience working in the medical field. Only 4 (7.14%) participants were able to perform all 8 correct steps in the OSCE. All 4 were from Retrieval Unit and comprised of 2 nurses and 2 MA. Participants from the Paediatric & Retrieval department scored better in the OSCE than participants from Emergency department, and this difference was statistically significant (t = 2.274, p=0.028). Participants who worked 10 years or more, scored better than participants who worked for less than 10 years. The difference is also statistically significant between the two groups (t = 2.077, p=0.045). There is no significant difference in mean OSCE scoring between participants with and without previous trainings.

Conclusion

This study showed that skill and good practice to insert IO access in paediatric patients among studied staff in HRPB is still inadequate. Trainers conducting PALS, APLS and Retrieval Update courses should be aware that intraosseous insertion skills are not adequately acquired and participants require more practice and evaluation of this procedure.

Keywords

intraosseous insertion, OSCE, perform.

NMRR-12-855-13227
DO PAEDIATRIC HEALTHCARE PROFESSIONALS HANDLE CHEMOTHERAPEUTIC DRUGS APPROPRIATELY?

Jeyarani Palanisamy, Nagalatchumi Marathaiveran, Nurkhairiah Mohd Nor, Jeyarani Shanmuganathan, Siti-Niza Othman, Halimah Md Isa, Nor-Aizura Zulkifli, Arvinder-Singh Harbaksh Singh, Amar-Singh HSS, Norshaliza-Julia Mohd Shafie

1 Allied Health Science College Sultan Azlan Shah, Ulu Kinta, Perak
2 Clinical Research Centre (CRC) Perak, Perak.
3 Paediatrics Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION AND OBJECTIVES

Healthcare workers who administer chemotherapeutic drugs at are at risk for unintentional chemotherapy exposure. Exposure risks can be greatly reduced by making sure proper procedures and protective equipment for handling hazardous drugs are complied with. This study aimed to evaluate the handing of chemotherapeutic drugs by healthcare professionals in a paediatric setting of a regional referral hospital.

METHODOLOGY

A cross-sectional study was conducted at the general paediatric ward (GPW) and oncology day care centre (ODCC) of Raja Permaisuri Bainun Hospital, a Malaysian regional referral hospital. All episodes of administration of intravenous (IV) chemotherapy to children were included in the study. Excluded were episodes of chemotherapy administered after officer hours or during weekends, administration of oral chemotherapy, and the transfer of chemotherapy from the pharmacy to wards. A standardised checklist was designed based on current standard operating procedures (SOP) of safe handling of cytotoxic drugs to evaluate the handling of chemotherapeutic drugs with respect to administration, safe disposable of consumables, and spillage. Researchers observed the staff without their knowledge, using antibiotic data collection as a camouflage. Consent was not obtained with approval from the ethics committee to avoid the Hawthorn effect, but no unique identifiers of staff were collected. The researchers targeted to observe 100 episodes of chemotherapy handling.

RESULTS

During the study period, the researchers only managed to observe 59 episodes of chemotherapy administration and disposal each, and 11 episodes of chemotherapy spillage. 84.5% of the episodes were observed at the GPW and the remaining at the ODCC. Majority of the chemotherapy were handled by nurses (91.4%). 30 (50.8%) chemotherapeutic drugs were administered via IV bolus and 29 (49.2%) via IV infusion. Gloves were used in all 59 episodes of administration, while masks and gowns were used in 98.3% and 76.3% of the episodes respectively. Majority (80.0%) of the 30 episodes of IV bolus administration involved the usage of luer-lock fitting on needle and tubing, but the use of absorbent sheets under the injection site was observed in half (50%) of the episodes, and the use of a disposable injection tray during administration was observed in 70% of the episodes. For chemotherapy administered via IV infusion, only 1 out of 29 episodes did not use a disposable injection tray during administration. The use of absorbent sheets under the injection site was observed in half (50%) of the episodes. Of the 59 disposal episodes observed, masks (89.8%), gloves (83.1%), and gowns (67.8%) were worn most of the time, but goggles and boots were worn in only 1 episode. During disposal of chemotherapeutic drugs, cytotoxic waste containers were available in 52.5% of episodes while precautions towards body fluid were undertaken in 69.5% of episodes. Of the 11 spillages observed, 9 (81.8%) occurred due to disconnection of the IV tubing and 2 (18.2%) were spills on the floor. During these spillages, spills kits were available 90.9% of the time, but only 2 episodes involved the use of spill kits.

CONCLUSION

Results of this study showed that only some of the healthcare professionals were able to handle chemotherapy drugs according to the SOP. The usage of fully PPE in handling cytotoxic drugs was not satisfactory, and spillages were not handled properly.

KEYWORDS

cytotoxic drug administration, standardised checklist, disposal, spillage, observation

NMRR-13-978-17777
OBSERVATIONAL RESEARCH

HEALTHCARE PROFESSIONALS RESPONSIVENESS TO NICU MONITOR ALARMS IN A REGIONAL REFERRAL HOSPITAL

Nor-Aizura Zulkifli1, Jagdish Kaur2, Rossaslinda Zuhari2, Nurul-Nadiya Shahidan2, Wan-Aziani Wan Ahmad2, Amar-Singh HSS1,3, Arvinder-Singh HS1, Noor-Khatijah Nurani3, Haymalatha Rajagam2

1 Clinical Research Centre (CRC) Perak, Perak.
2 Allied Health Science College Sultan Azlan Shah Ulu Kinta, Perak.
3 Paediatric Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION AND OBJECTIVES

Critically ill neonates in the neonatal intensive care unit (NICU) are attached to monitors that can detect any sudden physiological changes at any time and activate its sound alarm. The monitor alarm systems are intended to alert healthcare professionals about any changes in the neonates’ conditions, allowing them to take immediate action when necessary. This is a study that aimed to assess the responsiveness of healthcare professionals to monitor alarm triggers in a neonatal intensive care unit (NICU) of a Malaysian regional referral hospital.

METHODOLOGY

This is a cross-sectional observational study conducted in April 2013, in the NICU of Raja Permaisuri Bainun Hospital, a regional referral hospital in Perak. During the study period, all healthcare professionals working in the NICU were observed and timed by a non-participatory observer for their responsiveness to monitor alarm triggers. All observations were done covertly to minimise bias arising from behavior modification in response to being observed. Collecting data for case reports was used to camouflage the observations for responsiveness to monitor alarm triggers. Duration of time for response after triggered alarms and actions were recorded by the observers and documented into a standardised checklist. 400 responses to alarm triggers were expected to be evaluated in a month time duration.

RESULTS

400 responses to alarm triggers were evaluated and timed during the study. The responses were from nurses (87.5%), followed by house officers (5.8%), and medical officers (1.3%). Of the 400 alarm trigger responses, 231 (57.8%) responses were evaluated without the responding staff being aware of the observation. The remaining 169 (42.3%) responses were evaluated with the staff’s awareness of being observed due to an unintentional information leak. Of those unaware of the observation, 29.4% attended to the well-being of patient in less than 5 seconds from the time alarms were triggered, 22.1% attended within 6-10 seconds, 17.7% attended within 11-15 seconds, 11.3% attended within 16-20 seconds, 10.8% attended after more than 20 seconds and 8.7% did not respond to the alarm at all. Of those who were aware of the observation, 38.5% attended to the well-being of patient in less than 5 seconds from the time alarms were triggered, 2.4% attended within 6-10 seconds, 7.7% attended within 11-15 seconds, 3.6% attended within 16-20 seconds, 34.3% attended after more than 20 seconds and 13.6% did not respond to the alarm at all. The proportion of aware staff that attended the patient in less than 5 seconds was significantly higher than those who were unaware of the observation (p<0.001). Interestingly, the proportion of aware staff who did not respond to the alarm was also significantly higher than those who were unaware of the observation (p<0.001).

CONCLUSION

This study affirmed that the majority of staff was responsive to monitor triggering alarms in the NICU. Responsiveness was significantly altered when HCPs were aware of the observation. Intermittent audits may improve responsiveness to alarms.

KEYWORDS

healthcare professional, alarm monitor, neonates, neonatal intensive care unit, NICU

NMRR-12-817-13224
ROUTINE MANAGEMENT OF NEONATAL JAUNDICE IN TERM NEONATES IN MALAYSIAN SPECIAL CARE NURSERIES

Qing-Xi Ooi¹, Siti-Afifah Mohd Sarib², Normi Mohd Sharif², Siti-Zuridah Yahaya², Fadilah Arsad², Amar-Singh HSS¹,³, Haymalatha Rajagam²
1 Clinical Research Centre (CRC) Perak, Perak.
2 Allied Health Science College Sultan Azlan Shah, Ulu Kinta, Perak.
3 Paediatrics Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION AND OBJECTIVES
The availability of different guidelines in Malaysia with vastly similar but slightly different recommendations brings about varying different management of neonatal jaundice (NNJ) in term neonates. This study aimed to determine the routine management of NNJ in term neonates in Malaysian Special Care Nurseries (SCNs).

METHODOLOGY
A cross-sectional telephone interview study was conducted in May 2013. All government, university, and private hospitals with a SCN in Malaysia were included. A standardised questionnaire, evaluating 4 main areas of interest including criteria for admission, serum bilirubin level for phototherapy, serum bilirubin level for exchange transfusion and serum bilirubin level for discharge, was formulated with its scientific validity confirmed by a consultant paediatrician. After the attainment of verbal informed consent, the paediatrician or senior medical officer was preferentially interviewed based on the questionnaire. Responses were subsequently marked against the recommendations laid out in the Integrated Plan for Detection & Management of Neonatal Jaundice (2009) and the Paediatric Protocols for Malaysian Hospitals (3rd Edition).

RESULTS
40 government, 9 private and 3 university hospitals were sampled. 4 (7.1%) hospitals declined participation. A total of 52 interviews were conducted, involving 37 (71.2%) senior medical officers, 14 (26.9%) paediatricians and 1 (1.9%) neonatologist. Choice of guideline was significantly different ($\chi^2(3) = 18.76$, p<0.001) between government and non-government hospitals. 23 (44.2%) respondents were unable to provide the correct criteria for admission in healthy jaundiced neonates in the first 24 hours of life. 46.2% failed to recognise the need to admit jaundiced healthy neonates with ABO incompatibility. Total serum bilirubin levels for phototherapy at age 48 and 72 hours of life were provided incorrectly by 32 (61.5%) and 29 (55.8%) respondents, respectively. The vast majority were also unable to quote the correct total serum bilirubin level indicating exchange transfusion at age 48 (80.8%) and 72 (78.8%) hours of life.

CONCLUSION
Management of NNJ in term neonates varies considerably in different settings in Malaysia. Such practices may be detrimental to care. Uniform adoption of available national guidelines by healthcare providers in health settings is needed.

KEYWORDS
neonatal jaundice, NNJ, management, term neonates, special care nurseries

NMRR-13-250-15152
DO CALORIE INTAKE AND PHYSICAL ACTIVITY AFFECT THE BODY
MASS INDEX IN PRIMARY SCHOOL-GOING CHILDREN?

Qing-Xi Ooi1, Lionel-Dick-Hua Chia1, Nafizah Omar2, Azlinawati Aziz2, Nur-Liyana Roslan2, Siti-Sakinah Lokman2, Noor-Aini Mat Ghani2, Amar-Singh HSS1,3, Bee-Sim Chua3, Norshazila Julia2
1 Clinical Research Centre (CRC) Perak, Perak.
2 Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta, Perak.
3 Paediatrics Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak

INTRODUCTION AND OBJECTIVES
Childhood obesity is a growing problem in developed and developing countries. Caloric intake and physical activities are intuitively thought as factors causing obesity but such postulation is without substantial scientific evidence. This study aimed to determine the proportion of overweight and obese children, and to explore the relationship between body mass index (BMI), caloric intake and physical activity in primary school children in Ipoh Perak, Malaysia.

METHODOLOGY
This is a cross sectional study involving face to face interview and BMI measurement on primary school children (aged 7-12 years old). It was conducted in December 2013, and involved the setup of health promotion booths at 5 randomly selected hypermarkets in Ipoh as the recruitment sites. Weight and height of participating children were measured using a calibrated weighing machine and stadiometer. The children were then classified into 4 BMI-for-age categories (underweight, normal weight, overweight, obese) using growth charts from the Centers for Disease Control and Prevention (CDC). During the interview, a standardised, pre-tested 24 hour diet recall questionnaire was administered to measure the children’s daily caloric intake. Validated Physical Activity Questionnaire (PAQ) was also administered to quantify their physical activities. PAQ-C Score of 1 indicates low physical activity, whereas a score of 5 indicates high physical activity. Competency in the study conduct was ensured through trainings provided by certified trainers in anthropometric measurement and 24 hours diet recall to the researchers. Children and parents were selected conveniently to participate in the study with a target sample size of 196 children.

RESULTS
Only 3 (60.0%) out of 5 hypermarkets granted permission to use their premises. A total of 274 children were approached and 149 (54.4%) children agreed to participate. 67 (53.6%) children who declined participation were noted to be overweight through visual evaluation by researchers. The study sample consisted of children with a median age of 9 (IQR 8-11). 86 (57.7%) were boys and 117 (78.5%) were of Malay ethnicity. 91 (61.1%) children were normal or underweight. 26 (17.4%) children were overweight and the remaining 32 (21.5%) children were obese. The overall mean daily caloric intake was 1769.7 kcal (SE 53.5 kcal). The mean daily caloric intake in the underweight and normal weight group (1606.5 kcal, 95% CI 1495.2, 1717.7 kcal) was significantly lower than the overweight group (1963.3 kcal, 95% CI 1717.7, 2209.0 kcal) and the obese group (2076.5 kcal, 95% CI 1774.4, 2378.6 kcal). The overall mean PAQ-C score was 2.48 (SE 0.05) indicating that the children had medium level of physical activity. The children in the underweight and normal weight group had a significantly higher PAQ-C mean scores compared to children in the overweight (p=0.004) and obese group (p=0.005).

CONCLUSION
This study found that there is a high proportion of primary school going children that are overweight and obese (38.9%). Childhood overweight and obesity were found to be significantly associated with increased caloric intake and minimal physical activity.

KEYWORDS
calorie Intake, physical activity, Body Mass Index, BMI, primary school, children

NMRR-13-980-17776
GLOBAL CHILDHOOD UNINTENTIONAL INJURY STUDY: MULTI-SITE SURVEILLANCE DATA

Siran He¹, Jeffrey-C Lunnen¹, Prasanthi Puvanachandra¹, Amar-Singh HSS²,³, Nukhba Zia¹, Adnan A Hyder¹
1 Johns Hopkins International Injury Research Unit, Baltimore Maryland, USA.
2 Clinical Research Centre (CRC) Perak, Perak.
3 Paediatric and Retrieval Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION AND OBJECTIVES

This pilot study aims to analyze the epidemiology of childhood unintentional injuries presenting to hospitals in five selected sites in low- and middle-income countries (LMICs).

METHODOLOGY

Standardized data were collected from children aged 0-12 years who presented at participating Emergency Departments (EDs) with unintentional injuries during 2007. Statistical analyses were conducted to compare the characteristics of these injuries and the determinants of four injury outcomes were explored.

RESULTS

Among 2686 injured children, falls (50.4%) and road traffic injuries (16.4%) were the most common; with boys more affected (64.7%). Home injuries affected younger children (average 5.41 versus 7.06 years, p<0.01), more girls (38.2% versus 31.7%, p<0.01), and were mostly falls or burns (53.5% and 12.1%). 24% of injured children were admitted to hospital, and six died. Injury outcomes were associated with differences in risk factors such as age and sex to varying extents.

CONCLUSION

This study is a response to the World Health Organization’s call for better quality child injury data in developing countries. Standardized ED surveillance reveals unintentional injuries, particularly falls and road traffic injuries are a health care burden in all sites.

KEYWORDS

injury, trauma, developing countries

NMRR ID: Not Available

HOW DO PARENTS MANAGE FEVER IN THEIR YOUNG CHILDREN?

Siti-Noor Amisah¹, Faziah Abdul Rahman¹, Nur-Zalifa Isaac¹, Norhidayah Abdul Rahman¹, Norazlina Ali¹, Lina Hashim², Amar-Singh HSS²,³, Karen Leong¹, Sok-Yee Lee¹, Norshazila-Julia Mohd Shafie¹
1 Allied Health Science College Sultan Azlan Shah, Ulu Kinta, Perak
2 Clinical Research Centre (CRC) Perak, Perak.
3 Paediatrics and Retrieval Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION AND OBJECTIVES

Fever, a core temperature of more than 38°C, remains the commonest cause of parental distress that may lead to paediatric consultation in the emergency department. This is a study that aimed to evaluate the knowledge and ability of parents to manage fever in their young children.

METHODOLOGY

This is a study that was conducted in October 2012, at 5 randomly selected health clinics in Kinta district. Parents attending these clinics were conveniently selected to participate in the study. All parents who consented were asked to answer a self-administered, pre-tested, trilingual questionnaire that was designed to assess (a) ability to define fever, (b) ability to manage childhood fever, (c) knowledge on fever complications and (d) factors contributing to paediatric consultation for childhood fever. Parents who completed and returned the questionnaires were given childhood fever management guidelines adapted from the National Institute for Health and Care Excellence guidelines.

RESULTS

300 parents participated in the study. The majority (52.3%) were Malays, with secondary school education (53.0%) and most breadwinners (22.0%) were unskilled workers. 52.0% of parents correctly identified the normal body and 51.3% identified fever temperature ranges. However only 28.3% knew the high temperature range. Most (80.7%) respondents used touch rather than a thermometer to identify fever. This practice was significantly more common among respondents with college education compared to respondents without college education (82.5% vs. 49.3%, p < 0.001) and respondents with skilled professions compared to respondents with partly skilled or unskilled professions (66.5% vs. 49.6%, p = 0.005). The majority (80.3%) of the respondents were concerned about the development of a febrile fit. Three commonest choice of management for childhood fever of any grade as reported by the respondents were immediate medical consultation (50.3%), home self-medication (41.0%) and home tepid sponging (39.0%). Decision for medical consultation for high grade fever was significantly more common among respondents with college education compared to respondents without education (42.3% vs. 19.7%, p < 0.001). This decision was also more common among respondents with skilled professions compared to those with partly or unskilled professions (33.0% vs. 17.4%, p = 0.005).

CONCLUSION

Most of the respondents have some knowledge on childhood fever, but the current knowledge is insufficient for them to manage childhood fever effectively. Clinicians and healthcare professionals need to empower parents with knowledge to enable them to appropriately manage childhood fever at home.

KEYWORDS

fever, parents, young children, management

NMRR-12-817-13224
INTRODUCTION AND OBJECTIVES

According to a study published in Lancet in 2013, optimal breastfeeding of infants under 2 years of age has the potential to prevent over 800,000 deaths in children under 5 in the developing world. However, only 39% of children less than 6 months of age in the developing world are exclusively breastfed. This study aimed to explore the initiation and breastfeeding and its practices among multiparous mothers attending the Maternal and Child Health Clinics (MCHC) within the Kinta District of Perak.

METHODOLOGY

This is a cross-sectional study conducted at all 13 MCHC in the Kinta District from February to April 2012. A self-administered questionnaire adapted from previous studies (Kong & Lee, 2004 and Chandrashekhar et al., 2006) was distributed by designated clinic nurses to a convenient sample of multiparous mothers who breastfed their babies for at least 6 months. Primigravidas and primiparous mothers were excluded. A total of 382 multiparous mothers were targeted to participate in the study. A pilot study for the questionnaire was conducted among 37 multiparous mothers not included in the study. Only 33 of the 65 items in the original questionnaire were used as other items were not relevant to the Malaysian population. The questionnaire collected socio-demography data of mothers, initiation and decision making on breastfeeding, types and duration of breast feeding, and practices of breastfeeding. Written consent was taken prior to the study, and mothers were ensured of their confidentiality and anonymity. Descriptive statistics and Chi-square test or Fisher’s exact test were used in the final analysis of the study.

RESULTS

377 of the 382 questionnaires were returned, yielding a response rate of 98.6%. Most mothers were Malays with mean age of 31.0 (SD=4.6) years. Majority had higher school education (96.3%). Only 17.0% had parity of more than 4, and the remaining 83.0% had 2 or 3. The vast majority had access to breastfeeding information (96.8%). 272 (72.1%) practiced early initiation of breastfeeding (breastfeeding immediately after birth or within an hour after birth) while 105 (27.9%) practiced late initiation (breastfeeding started few hours after birth or a day after). Half of the mothers (52.0%) practiced partial breastfeeding (mixture with formula milk), 27.3% practiced full breastfeeding (mixture with plain water), and 20.7% practiced exclusive breastfeeding (no additional fluids). Only 9 (2.4%) exclusively breastfeed their child up to 6 months. Most had good practices of breastfeeding (66.3%). Malay ethnicity, working mothers, household income above RM 4,000, information on breastfeeding, provision of information on breastfeeding by healthcare providers, early initiation of breastfeeding, and full breastfeeding were significantly associated with good practices of breastfeeding (p<0.05).

CONCLUSION

A high proportion of multiparous mothers practiced early initiation of breastfeeding. However, only a small proportion exclusively breastfeed up to 6 months. From this study, the main factors that influence the practices of breast feeding were information, occupation, and ethnicity of mothers. Future studies concerning this topic should focus on ways proven to increase the practice of exclusive breastfeeding.

KEYWORDS

breastfeeding, practice, multiparous mothers
KNOWLEDGE, ATTITUDES AND PRACTICE OF EFFECTIVE FAMILY PLANNING METHODS AMONG HIGH RISK MOTHERS ATTENDING HEALTH CLINICS FOR ANTENATAL CHECK-UPS

Sivakamasundari Ratnam
Buntong Health Clinic, Ipoh, Perak.

INTRODUCTION AND OBJECTIVES

Maternal mortality is an important cause of death in the world. Family planning is one of the recognised ways to mitigate the risks associated with maternal mortality through reducing overall fertility with an “unmet need” for family planning programmes. One in three maternal deaths related to pregnancy and childbirth could be avoided if women who wanted effective contraceptive had access to it. This study aimed to determine the knowledge, attitudes and practice of effective family planning methods among high risk mothers attending health clinics for antenatal check-ups.

METHODOLOGY

This is a cross-sectional study among high risk antenatal mothers attending routine follow-up appointments at the Gunung Rapat Maternal and Child Health Clinic from 19th March to 6th April 2012. In this study, high risk mothers refer to women with higher chance of pregnancy and child birth complications. Bilingual, self-administered questionnaires were distributed to a purposive sample of mothers. Mothers who voluntarily consented to participate were informed of the study purpose and assured of their confidentiality and anonymity. The questionnaire collected socio-demography, and knowledge, attitude, and practice towards family planning.

RESULTS

A total of 50 high risk antenatal mothers participated in this study. Among these mothers, the most prevalent risk factor was birth spacing of less than 2 years (26%), followed by lower segment caesarean section scars from previous child birth (12%), and gestational diabetes mellitus (5%). Majority were Malays (84%) aged between 25 to 29 years old (54%), of secondary school education (64%) with monthly gross family income between RM 1001 to RM 3000. Most (60%) had parity of 5 and above. The vast majority (98%) had heard about family planning, and 90% considered spacing of births to be the main purpose for this. Contraceptive pills (86%) and condoms (80%) were the top 2 well known contraceptive methods. These mothers commonly referred to the mass media (78%) or friends (76%) for sources of information on family planning methods. Most mothers agreed that hospitals (86%) and health clinics (82%) were the top 2 available sources of information about family planning. Majority (90%) believed that contraceptives are beneficial and most (78%) had used one or more methods of contraceptive in the past. The reasons for the use of contraceptives were easy availability (67%), comfortable and easy to use (52%), husband’s choice (44%), and effectiveness in family planning (41%). Barriers to the use of contraceptives reported were fear of side effects (82%), lack of knowledge on contraceptives (58.3%), opposed by partner (41.6%), and against religious beliefs (16.7%).

CONCLUSION

Although the vast majority of high risk mothers in this study were aware of family planning methods, many obtained information from the mass media and friends, and some had personal perceptions about family planning.

KEYWORDS

effective family planning, high risk mothers

Research ID: 16677
WHY ARE PARENTS RELUCTANT TO IMMUNISE THEIR CHILD?

Norhabibah Rahmat1, Nurul-Aisyah Mustafa1, Fatimah-Sham Mohd Yusof1, Rohana Abd Rahman1, Suriram Itam1, Chin-Hwa Chan1, Wei-Yin Lim2, Netia Jeganathan2, Amar-Singh HSS2,3, Norshazila-Julia Mohd Shafie1
1 Allied Health Science College Sultan Azlan Shah, Ulu Kinta, Perak.
2 Clinical Research Centre (CRC) Perak, Perak.
3 Paediatrics Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION AND OBJECTIVES

A sizable minority of parents have concerns about immunisations, and a few refuse some or all vaccines. An understanding of the extent of parental concerns is required to identify and address misplaced concerns. Thus, this study investigated parental reasons for reluctance towards immunising their child in an administrative region.

METHODOLOGY

A cross-sectional study was conducted in November 2013 to determine the reasons for parental reluctance to immunise their child. All Ministry of Health (MOH) health centres in the Kinta district providing immunisation to children were identified. These health centres were stratified into 3 groups, and 10 health centres (5 health clinics, 2 mother and child health clinics, and 3 rural clinics) were selected via disproportionate stratified random sampling. Children aged 15 to 24 months who defaulted immunisation for 3 months or longer were identified for inclusion. Excluded were children who completed immunisation according to the MOH schedule, admitted to hospitals where they received a modified immunisation schedule, or contraindicated to vaccine(s). Parents of children who met the study criteria were interviewed via telephone to determine the reasons for defaulting immunisation of their child. Verbal consent was obtained prior to the interview. A demographic characteristics form and a bi-lingual telephone interview questionnaire were developed for data collection.

RESULTS

A total of 10,189 immunisable children aged 15-24 months were identified at these 10 randomly selected health centres. Of these, 95 fulfilled the study eligibility. Contact was possible to establish with 52, but only 39 completed the telephone interviews, yielding a response rate of 41.1%. Of these, 8 (20.5%) refused immunisation, while 31 (79.5%) did not refuse but defaulted immunisation, translating to an estimated refusal and defaulter rate of 16 in 10,000 children and 60 in 10,000 children immunised per year respectively.

All parents who refused immunisation were Malays with secondary level education, and most were of lower social classes C1 & C2 (48.4%) and E (38.7%). Children of refusal parents missed immunisation at a younger age. Refusal parents had more children in the household, and missed a higher number of vaccines compared to defaulter parents. The 3 most commonly missed vaccines were the same for both groups (MMR, 3rd dose of HepB, 3rd dose of DTaP/IPV/Hib), but none in the defaulter group missed the BCG vaccine and the first 2 doses of the HepB vaccine. Clinic staff made more attempts to contact parents of the refusal group (75.0%) than the defaulter group (29.0%). The majority of refusing parents believed in alternative treatment and considered homeopathy for their child’s immunisation (75.0%) rather than conventional immunisation. Most parents who defaulted 1 or more immunisation appointments reported to be busy with work (32.3%).

CONCLUSION

This study has shown that a small number of parents refused immunisation. This is the first time this problem has been studied systematically in the country. Internationally, this is a growing problem and is important that the MOH Malaysia monitor this rate as well as intervene to prevent a worsening of the situation.

KEYWORDS

parents, refuse, immunise, child

NMRR-13-979-17774

MMR = measles, mumps & rubella vaccine
HepB = Hepatitis B vaccine
BCG = Bacillus Calmette–Guérin (tuberculosis) vaccine
DTaP / Hib / IPV = diphtheria-tetanus-pertussis / Haemophilus influenzae type b / Inactivated poliovirus vaccine
OBSERVATIONAL RESEARCH

ADMISSION TRENDS OF PATIENTS WITH MENTAL ILLNESSES AT A PSYCHIATRIC REGIONAL REFERRAL HOSPITAL (2008 - 2010)

Fatimah Sain
Allied Health Science College Sultan Azlan Shah, Ulu Kinta, Perak

INTRODUCTION AND OBJECTIVES

Hospital Bahagia Ulu Kinta (HBUK), a psychiatric regional referral hospital in Perak, receives mental illness referrals from government health institutions in the state. Several published studies have shown variations in diagnosis, treatment, socioeconomic status, and ethnicity of patients admitted to psychiatric hospitals. Currently, data on new admissions of psychiatric patients to HBUK is limited. This study aimed to explore admission trends of patients with mental illnesses at HBUK between year 2008 and 2010.

METHODOLOGY

This is a 3-year retrospective review of adult psychiatric patients admitted to HBUK from 1st January 2008 to 31st December 2010. Patients 18 years and above admitted for the first time with a newly diagnosed mental illnesses were included in the study. Medical records were retrieved from the record office and relevant information was collected using a standardised data collection form by a research assistant and cross-checked by a researcher. Data collected were diagnosis, age, gender, ethnicity, and referral location. All diagnosis were made by doctors at HBUK and was further categorised into (i) organic, (ii) psychotic, (iii) affective, (iv) anxiety, and (v) other disorders based on the Diagnostic and Statistical Manual of Mental Disorders (DSM IV) Classification.

RESULTS

A total of 1903 admissions were included in the study. There was a decreasing trend of new admissions to HBUK from 697 in 2008 to 644 in 2009 and further to 562 in 2010. The most common diagnosis was psychotic disorders, which demonstrated an increasing admission trend from 45% in years 2008 and 2009 to 50% in 2010. Similarly, patients admitted due to anxiety disorders increased from 8% in 2008 to 10% in 2009 and 11% in 2010. Admission for affective (2008: 21%, 2009: 22%, 2010: 18%) and other disorders (2008: 26%, 2009: 23%, 2010: 21%) showed a decreasing trend over the 3 years. Most patients were of age groups 26-35 (2008: 43%, 2009: 47%, 2010: 56%) and 36-45 years (2008: 41%, 2009: 44%, 2010: 32%). More males (2008: 70%, 2009: 65%, 2010: 79%) were admitted for psychiatric treatment over the 3-year period. Approximately half of the admitted patients were Malay, which increased from 48% in 2008 to 53% and 54% in 2009 and 2010 respectively. Chinese patients constituted approximately one third of the admissions (2008: 37%, 2009: 31%, 2010: 38%), while the admission of Indians (2008: 13%, 2009: 14%, 2010: 7%) and patients of other ethnicities (2008: 2%, 2009: 2%, 2010: 1%) demonstrated a decreasing trend from 2008 to 2010. Most cases were referred from various health institutions in Selangor (2008: 33%, 2009: 32%, 2010: 33%) and Perak (2008: 27%, 2009: 26%, 2010: 26%).

CONCLUSION

Most patients admitted to HBUK for the first time were young Malay male patients aged between 26 to 35 years old, and diagnosed with psychotic disorders. Despite the steady decrease in total admissions, a large number of patients are from the younger age group. Future research should investigate the reasons for the occurrence of mental illness in young adults.

KEYWORDS

admission trends, psychiatric, mental illness

NMRR-12-855-10025
CHRONIC PAIN WITH ANXIETY AND DEPRESSION: A COMPARISON BETWEEN PATIENTS ATTENDING MULTIDISCIPLINARY PAIN AND RHEUMATOLOGY CLINIC

Wahinuddin Sulaiman¹, Norhasniza Mohamed Zanyuin², Kin-Kheong Mah², Kavita M. Bhojwani³
1 Medical Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak
2 Kuala Lumpur Royal College of Medicine Perak University, Ipoh, Perak
3 Anaesthesiology and Critical Care Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak

INTRODUCTION AND OBJECTIVES

Chronic pain is widely regarded as a bio-psychosocial disorder which has a complex relationship with any form of psychological distress especially depression and anxiety components. Previous studies have reported that patients with rheumatoid arthritis have high levels of depression and anxiety. The objective of this study was to determine anxiety and depression levels among patients attending the multidisciplinary pain and rheumatology clinics of a regional referral hospital.

METHODOLOGY

A cross-sectional study was conducted among patients attending the rheumatology and pain clinics of Hospital Raja Permaisuri Bainun Ipoh. All patients aged 18-65 diagnosed with rheumatoid arthritis (RA) or chronic pain for more than 3 months according to the International Association for Study of Pain were included in the study. Validated Chronic Pain Grade Questionnaires (CPG), Depression Anxiety Stress Scale (DASS), and the abbreviated version of World Health Organization’s Quality of Life Instrument (WHOQOL-BREF) were self-administered by patients who consented to participate. Socio-demography and history of co-morbidities were also collected.

RESULTS

A total of 88 patients were selected from rheumatology and pain clinics, of which 48 (54.5%) were RA patients and the remaining had non-RA chronic pain (fibromyalgia, neuropathic pain, etc.). Both groups were comparable for socio-demographic and clinical characteristics but female patients significantly outnumbered male patients in the rheumatology clinic. 4 RA and 1 non-RA chronic pain patients experienced Grade I and higher pain severity. The prevalence of pain in both groups were similar (RA: 91.7%, non-RA: 97.5%, p = 0.475). Anxiety (55.7%) was found to be more prevalent compared to depression (38.6%) among all patients. The prevalence of anxiety was similar (p = 0.337) between RA (50.0%) and non-RA chronic pain patients (62.5%). Chronic pain grade (CPG) 2 (pain persistence days) and CPG 4 (disability points) significantly correlated with depression scores of non-RA chronic pain patients (p = 0.004). There was no significant difference in all WHOQOL-BREF domains (physical, psychological, social, and environmental) between RA and non-RA chronic pain patients.

CONCLUSION

In this study, anxiety was more prevalent than depression among all patients with chronic pain. Days of pain persistence and disability points significantly correlated with depression for patients with non-RA chronic pain. Quality of life was similar between RA and non-RA patients with chronic pain.

KEYWORDS

anxiety, chronic pain, depression, rheumatoid arthritis

NMRR-12-388-12112
OBSERVATIONAL RESEARCH

PATIENT SATISFACTION WITH FOLLOW-UP MONITORING CARE AT THE RHEUMATOLOGY OUTPATIENT CLINIC

Ping-Seung Ong, Wahinuddin Sulaiman, Salwa Hanim
Medical Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak

INTRODUCTION AND OBJECTIVES

A new follow-up monitoring care system was implemented in the rheumatology outpatient clinic to space out visiting appointments. The objective of this study was to determine patient satisfaction with the new follow-up monitoring care system provided by the rheumatology monitoring team (RMT) consist of rheumatologists, pharmacists, and nurses in a regional referral hospital.

METHODOLOGY

A cross-sectional study was conducted from August to September 2012 to assess the satisfaction of the follow-up monitoring care system provided at the rheumatology outpatient clinic of Raja Permaisuri Bainun Hospital, Ipoh. A 12-item self-administered questionnaire was distributed to patients who verbally consented to participate. Satisfaction was rated on a visual analogue scale (VAS, 0-10) with 0 being completely unsatisfied and 10 being strongly satisfied. The questionnaires were completed anonymously by patients while waiting to see their doctors.

RESULTS

A total of 100 patients were included in the study. Most were females (73%) with secondary school education (53%) with mean age of 52±12.3 years. Only 8 stopped working due to the disease. Most attended the rheumatology clinic for the treatment of rheumatoid arthritis (74%). The mean satisfaction score of the overall treatment received from the rheumatology monitoring team was 8.2±1.8. Patients were mostly satisfied with the treatment received from rheumatologists (mean score 8.2±1.7), followed by pharmacists (mean score 8.0±1.7) and nurses (mean score 7.9±2.0). The lowest charted satisfaction was the waiting time to see the doctor on the scheduled day of appointment (7.0±2.53). The mean patient rating of satisfaction on disease knowledge, side effects of drugs, duration of scheduled appointment, length of consultation, request for earlier appointments, and improvement of condition with treatment were above 7 on the VAS 0-10 scale.

CONCLUSION

This study showed that although satisfaction towards overall treatment received from the rheumatology monitoring team was high, some aspects of services such as waiting time to see the doctor could be further improved.

KEYWORDS

rheumatology monitoring team, patient satisfaction, monitoring care system

Research ID: 19226
COMPARING POINT OF CARE DEVICES FOR INTERNATIONAL NORMALISED RATIO TESTING WITH STANDARD LABORATORY METHODS AT A HOSPITAL BASED ANTICOAGULATION CLINIC

Doris George Visuvasam, Wai-Keng Foong, Choy-Yuen Choo, Puteri Huziani
Pharmacy Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION AND OBJECTIVES

Warfarin is the most common oral anticoagulant for the prevention of stroke in atrial fibrillation (AF), valvular heart disease, and treatment of deep vein thrombosis and pulmonary embolism. Frequent International Normalised Ratio (INR) testing is required for patients on warfarin. Point of care (POC) devices to measure INR can reduce the long waiting time for a venepuncture and test results collection from the laboratory. The aim of the study is to compare the INR values measured with two POC devices with a reference laboratory method.

METHODOLOGY

All patients attending the anticoagulant clinic at Raja Permaisuri Bainun Hospital from August to September 2013 were included in the study. Patients who consented to participate had their blood sampled via venepuncture, and INR measured by a reference laboratory method using ACT TOP 500 CTS. Within an hour, these patients were then randomly assigned to have their INR measured with either Coaguchek XS® or INRatio®, 2 different INR POC devices, via a finger-prick blood drop. Agreement of the INR measurements was assessed using 3 INR categories: less than 2, 2 – 3.5, and more than 3.5. The reference laboratory INR values were compared with the INR values measured with the 2 POC devices. Demographic and clinical characteristics of patients were also collected.

RESULTS

A total of 100 patients participated in the study, where equal number of patients was allocated into either Coaguchek XS® or INRatio® groups. However, 3 in the Coaguchek XS® group withdrew consent after venepuncture was taken. Thus, the final sample consisted of 97 patients (Coaguchek XS®: n=47, INRatio®: n=50). More than half (59.8%) of the patients were on warfarin due to AF. Socio-demographic and clinical characteristics of patients in both groups were similar. INR values measured with INRatio® (r = 0.803) and Coaguchek XS® (r = 0.939) strongly correlated with laboratory INR measurements respectively (p<0.001). INR values measured by Coaguchek XS® were found to have excellent agreement with standard laboratory values for all 3 INR categories of INR (weighted kappa index = 89.8%, 95%CI: 80.1 - 99.5%). On the other hand, INR values measured by INRatio® showed fair agreement with the standard laboratory values (weighted kappa index = 44.9%, 95%CI: 26.8, 63.0). The INRatio® device tends to overestimate INR values compared to the Coaguchek XS® device. The mean difference between laboratory INR values and INRatio® was 0.3 INR units (95%CI: -1.3, 1.9) and 0.04 INR units (95%CI: -0.66, 0.74) for Coaguchek XS®.

CONCLUSION

INR values measured by the Coaguchek XS® device was more strongly correlated and had a higher degree of agreement with the laboratory INR values when compared to the INRatio® device.

KEYWORDS

International Normalised Ratio (INR), point of care (POC), Coaguchek XS, INRatio

NMRR-12-975-13172
EVALUATING 8-ITEM MORISKY MEDICATION ADHERENCE SCALE AND PILL COUNT AS MEASURES OF MEDICATION ADHERENCE AND INVESTIGATING THE FEASIBILITY OF ROUTINE MEDICATION RETURN BY PATIENTS

Siew-Hong Ling¹, Wei-Yin Lim², Yi-Jie Hu¹, Li-Yuan Lee³, Hui-Li Lin¹, Noor-Azrina Sanik¹, Nurul-Zuhanis Mohamed¹, Yean-Foong Yee¹
¹ Pharmacy Department, Seri Manjung Hospital, Perak.
² Clinical Research Centre (CRC) Perak, Perak.
³ Medical Department, Seri Manjung Hospital, Perak.

INTRODUCTION AND OBJECTIVES

An estimated 20% to 50% of patients with chronic disorders are non-adherent to therapy. Self-reporting of medication adherence has the problem of over-estimating adherence, and further complicated by recall bias, social desirability bias, and errors in self-observation. We evaluated medication non-adherence via pill count and 8-item Morisky Medication Adherence Scale (MMAS-8) as well as the feasibility of routine medication return by patients attending the medical outpatient department (MOPD) of a district specialist hospital in Malaysia.

METHODOLOGY

A prospective study was conducted in two phases over a 4-month period (May to August 2013) to estimate the sensitivity and specificity of MMAS-8 as measurement of medication non-adherence, using pill count as the gold standard. All patients with chronic disease attending the MOPD of Seri Manjung Hospital during the study period were included in the study. Excluded were patients (a) who collected medications by post, (b) prescribed medication for 1 month or less, (c) prescribed medications in non-tablet/capsule form only, (d) with documented psychiatric illness, significant visual or hearing impairment, (e) who did not self-administer medications. In phase 1, patients were instructed to bring unused/excess medications from home to each clinic visit or prescription refill date. Pharmacists provided 1-month supply of medications to the patients, and a reminder card was attached to each prescription. In the following phase, patients’ medication non-adherence was assessed using MMAS-8 and pill count during their scheduled prescription refill date. MMAS-8 scores were categorised as poor (≤ 6) and good (> 6) adherence. Pill count percentages were translated into poor (if patients took < 90% or > 105% of prescribed medications) and good (if patients took 90-105% of prescribed medications) adherence. Patients’ cognitive function was assessed using the Mini-Cog tool, and evaluated along with demographic characteristics as potential predictors of medication non-adherence.

RESULTS

There were 415 eligible patients of whom only 40% returned medications during their scheduled prescription refill date. 250 (60.2%) agreed to participate. Among those who agreed to participate, 145 (58.0%) returned to the pharmacy for prescription refills, but only 103 (41.2%) returned medications as instructed. Sensitivity and specificity analysis was thus performed among these 103 patients. Poor adherence prevalence was 62.1% using pill count and 61.4% measured by the MMAS-8. In our study, MMAS-8 had a sensitivity of 70.3% (95% CI: 57.6-81.1) and specificity of 48.7% (95% CI: 32.4-65.2) in relation to pill count as the gold standard of adherence measurement. The positive and negative predictive values of MMAS-8 were 69.2% (95% CI: 56.6-80.1) and 50.0% (95% CI: 33.4-66.6) respectively. Univariate analysis showed that age, gender, ethnicity, marital status, education level, employment status, comorbidities, total daily pills, and cognitive function were not significant predictors of medication non-adherence (p > 0.05).

CONCLUSION

Self-reported non-adherence measured by the MMAS-8 should be interpreted with care. With a sensitivity of 70.3%, this tool only correctly identified 70 out of 100 patients poorly adherent to therapy. The rate of routine medication return by patients in this study is low.

KEYWORDS

MMAS-8, pill count, medication non-adherence, medication return

NMRR-13-563-15585
VALIDATION OF MALAY VERSION OF MONTREAL COGNITIVE ASSESSMENT IN PATIENTS WITH COGNITIVE IMPAIRMENT

Wooi-Kooi Cheah¹, Hoon-Lang Teh², Diana-Huang³, Mun-Pung Choy⁴, Alan Ch’ng⁵, Ewe-Eow Teh⁶, Irene Looi⁵
1 Medicine Department, Taiping Hospital, Perak.
2 Medicine Department, Kulim Hospital, Kedah.
3 Clinical Research Centre (CRC) Pulau Pinang, Pulau Pinang.
4 Clinical Research Centre (CRC) Taiping, Perak.
5 Medicine Department, Seberang Jaya Hospital, Pulau Pinang.
6 Psychiatry Department, Pulau Pinang Hospital, Pulau Pinang.

INTRODUCTION AND OBJECTIVES

In Malaysia, the assessment tool currently used for cognitive assessment is the locally validated Malay version of Mini Mental State Examination (MMSE). However, it is limited by its ability to detect earlier stages of cognitive impairment. Montreal Cognitive Assessment (MoCA) in various languages has been shown to be a more sensitive tool. We aimed to validate the Malay version of MoCA (MMoCA) and to compare it with the Malay version of MMSE, using Clinical Dementia Rating (CDR) scale as the gold standard.

METHODOLOGY

The original version of the MoCA was translated into the Malay language by a psychogeriatrician and back translated by a bilingual physician who is not familiar with the tool. This version was then reviewed by the researchers to ascertain the face validity of the MMoCA, taking into consideration the semantic and linguistic equivalent to the original version. The final version of MMoCA was tested on 20 pilot subjects for internal consistency. The researchers and recruited assessors were subsequently trained on MMoCA administration to ensure inter-rater consistency. This was followed by recruitment of elderly patients (≥60 years old) by convenience sampling from 4 government hospitals in Malaysia. Cognitive impairment group included subjects with mild cognitive impairment (MCI) and dementia. The diagnosis of dementia was made using the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) while MCI using the Petersen criteria. The severity of the cognitive impairment was assessed by using the CDR scale by certified assessors. CDR is a five-point scale in which CDR-0 represents no cognitive impairment while the remaining four points connote different stages of dementia: CDR-0.5 (very mild dementia), CDR-1 (mild), CDR-2 (moderate), and CDR-3 (severe). CDR is used as the gold standard, with cognitive impairment defined as CDR>0 while no cognitive impairment defined as CDR-0 in this study. Study subjects were categorised into 2 groups using CDR: cognitive impairment group and the normal control group. All subjects were required to complete both the MMoCA and MMSE-Malay version. Both MMoCA and the Malay version of MMSE carry scores ranging 0–30, with better cognition with increase in score. The assessors were blinded from the CDR results to minimise bias.

RESULTS

A total of 66 subjects was enrolled in the study with 44 (66.7%) normal control, 14 (21.2%) with dementia, 8 (12.1%) with MCI. The male to female ratios in the normal control group (48.9% vs 51.1%) and the cognitive impairment group (52.6% vs 47.4%) were similar. However, the mean age of the cognitive impairment group (72.7, SD 4.9 years old) was higher compared to the normal control group (66.0, SD 5.2). There was also a higher proportion of the cognitive impairment group (47.4%) receiving more than 12 years of education in comparison to the normal control group (9.3%). Using a cut-off point of less than 22, MMoCA had a sensitivity of 0.82 (95%CI 0.67 – 0.92) and specificity of 0.82 (95%CI 0.60 – 0.95) to detect cognitive impairment. In comparison, Malay version of MMSE had lower sensitivity 0.77(95%CI 0.62 – 0.89) and lower specificity 0.64(95%CI 0.41 – 0.83) using a cut-off point of less than 27. The positive predictive value (PPV) of MMoCA (PPV=0.9, 95%CI 0.76 – 0.97) were superior to that of the Malay version of MMSE (PPV=0.81, 95%CI 0.66 – 0.92). The negative predictive value (NPV) of MMoCA (NPV=0.69, 95%CI 0.48-0.86) was also similarly superior in comparison to the Malay version of MMSE (NPV=0.58, 95%CI 0.36-0.78).

CONCLUSION

The MMoCA is superior to the Malay version of MMSE with better sensitivity, specificity, positive and negative predictive values.

KEYWORDS

MMSE – Malay (Malay version of Mini Mental State Examination), MMoCA (Malay version of Montreal Cognitive Assessment), CDR (Clinical Dementia Rating), AD (Alzheimer’s disease), MCI (Mild Cognitive Impairment).

NMRR-12-206-11084

Editorial Comment:

This is a difficult study to conduct and the effort should be applauded. However, the small number of cognitively impaired subjects with a mixed group (dementia with mild cognitive impairment) limits the inferential value of the study.
INTRODUCTION AND OBJECTIVES

“Body stuffing” refers to concealment of illegal drugs within the human person to avoid arrest. Although uncommon in Ear, Nose and Throat (ENT) practice, physicians and otolaryngologists should be aware of this condition and the potential for ENT orifices and cavities to conceal drugs. The aim of this review was to identify uncommon sites of concealment in “body stuffing” as the information could be potentially useful for law enforcement officers and medical practitioners dealing with such patients.

METHODOLOGY

A literature search of Medline (Pubmed), ScienceDirect and the Cochrane databases was done for abstracts and full text articles relating to body packing or body stuffing. No limits were placed on the period of search. The search period was hence limited by the period covered by the above mentioned databases. Date of last search was 4th of October 2012. Additional abstracts and full text articles were reviewed based on references from the available full texts. The following search terms were used either singly or in combination: body packing, body stuffers, body packers, cannabis, heroin, cocaine, foreign body, nasal cavity and unusual sites. All articles were reviewed for inclusion in the study. At this stage, animal studies, experimental studies and studies not in the English language were excluded.

RESULTS

A total of 55 full text articles and 1 abstract were reviewed after removing duplicates and non-relevant titles. 17 articles were included in the results. In this review, 1155 cases of total body stuffing were identified and of these, 1124 cases were body stuffing with a specific drug. Cocaine was the commonest drug stuffed, amounting to 965 (84%) cases. This was followed by heroin with 89 (8%) cases. Other reported substances included methamphetamine (56 cases, 5%), cannabis (13 cases, 1%) and diazepam (1 case, 0.1%). Cases of polydrug concealment have also been reported. Based on 5 retrospective studies, totalling to 305 body stuffers, males were more frequently involved (69% – 85%). The reported mean age were 34, 35 and 29 years of age in three of these studies. The majority (1144 cases, 99%) involved drugs concealment in the oral cavity or through ingestion. Other unusual sites for body stuffing reported were external auditory canal (5 cases, 0.4%), rectum (3 cases, 0.3%), superior oropharynx and glans penis (1 case each). Cocaine toxicity was reported in 3 studies while heroin toxicity in 1 study. In a study of 98 body stuffers, 55% with cocaine ingestion presented with tachycardia. 9% showed symptoms of intoxication in a study of 65 heroin body stuffers. Overall, from the 1155 cases, there were a total of 19 (1.6%) cases of death due to drug toxicity. An additional 6 (0.5%) cases of aspiration and 1 case (0.1%) of oesophageal obstruction were reported.

CONCLUSION

Body stuffing involving ENT orifices is uncommon. However they are the most frequent unusual sites for concealment. Authorities and attending physicians should be aware that these orifices can be used to conceal drugs and proceed to a full ENT examination if warranted.

KEYWORDS

body stuffing, body packing, narcotics, ENT orifices

NMRR ID: Not Available
CHANGING TRENDS IN OESOPHAGEAL ENDOSCOPY: A SYSTEMATIC REVIEW OF TRANSNASAL OESOPHAGOSCOPY

Junainah Sabirin¹, Maharita Abd Rahman¹, Philip Rajan²
¹ Health Technology Assessment Section, Ministry of Health Malaysia, Putrajaya.
² Clinical Research Centre (CRC) Perak, Perak.

INTRODUCTION AND OBJECTIVES

The safety, efficacy, and economic implications of using transnasal oesophagoscopy (TNE) is compared with the use of conventional rigid or flexible oesophagoscopy for oesophageal disorders in otorhinolaryngology (ORL) clinics in this systematic review.

METHODOLOGY

11 electronic databases were searched for articles on transnasal oesophagoscopy (TNE). All relevant articles comprising randomised controlled trials, cross-sectional studies, reviews and case reports were included. All the relevant literature were appraised using the Critical Appraisal Skills Programme (CASP) and evidence was graded based on guidelines from US/Canadian Preventive Services Task Force and NHS Centre for Reviews and Dissemination (CRD) University of York, Report Number 4 (2nd Edition), March 2001 for test accuracy studies.

RESULTS

A total of 67 relevant titles were identified and 39 abstracts were screened using the inclusion and exclusion criteria and 17 full text articles were included in this report. The articles comprised of one cross-sectional diagnostic study, 13 cross sectional studies, two cross-sectional studies with economic evaluation, and one case report. The search did not yield any health technology assessment reports, systematic reviews or randomised controlled trials related to TNE. This review shows that there was fair level of evidence to suggest that TNE was effective for screening examination in patients with dysphagia, globus pharyngeus, and reflux symptoms and detection of metachronous oesophageal carcinoma. It is proposed that, TNE be used to biopsy suspicious lesions in the upper aerodigestive tract, placement of wireless pH capsule, transnasal balloon dilation of the oesophagus, secondary tracheoesophageal puncture, and management of foreign bodies. The review indicates TNE was well tolerated and can be safely performed in an office setting with topical anaesthesia. Complications associated with TNE were also mild and uncommon. There were evidence to suggest potential cost savings by performing TNE in the office setting compared with conventional investigation and examination for dysphagia. TNE may lead to a change in practice from investigation and treatment in the operating theatre or day care center to an office-based practice.

CONCLUSION

Based on the review, there is evidence on the feasibility of TNE, particularly as a screening or diagnostic tool. More high-quality evidence is needed to assess its practicality for general use.

KEYWORDS

transnasal oesophagoscopy, safety, efficacy, economic implications, review


NMRR ID: Not Available
MANAGEMENT OF OTITIS MEDIA WITH EFFUSION IN CHILDREN: A SYSTEMATIC REVIEW

Zulkiflee Salahuddin1, Philip Rajan2, Sobani Din3, Nik-Khairuluddin Nik Yusoff4, Jaclyn Pei-Lee Teoh5, Siti-Sabzah Mohd Hashim6, Asma Abdullah7, Norizzati-Bukhary Ismail Bukhary8, Mazapuspavina Md Yasin9, Roza Sarimin10, Mohd-Aminuddin Mohd Yusof10, Hafeza Ahmad11, Rafidah Mazlan12, Shahrom Ab Rahman1, Juliana Samsudin13, Suhaide Manan13

1 Otorhinolaryngology Department, Raja Perempuan Zainab II Hospital, Kota Bharu, Kelantan.
2 Otorhinolaryngology Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.
3 Otorhinolaryngology Department, Sungai Buloh Hospital, Selangor.
4 Paediatrics Department, Raja Perempuan Zainab II Hospital, Kota Bharu, Kelantan.
5 Pharmacy Department, Puchong, Selangor.
6 Otorhinolaryngology Department, Sultanah Bahiyah Hospital, Alor Star, Kedah.
7 Faculty of Medicine, Pusat Perubatan Universiti Kebangsaan Malaysia, Kuala Lumpur.
8 Bandar Baru Bangi Health Clinic, Sungai Buloh, Selangor.
9 Faculty of Medicine, Universiti Teknologi MARA, Selangor.
10 Health Technology Assessment Section, Ministry of Health, Putrajaya.
11 Otorhinolaryngology Department, Putrajaya Hospital, Putrajaya.
12 Faculty of Health Science, Universiti Kebangsaan Malaysia, Kuala Lumpur.
13 Otorhinolaryngology Department, Kuala Lumpur Hospital, Kuala Lumpur.

INTRODUCTION AND OBJECTIVES

Otitis media with effusion (OME) is common in young children, with a bimodal peak at 2 and 5 years of age. The main symptom of OME is hearing impairment. This condition is often under diagnosed, leading to untreated hearing problem, which can cause speech and language developmental delay and poor school performance. The objective of this review was to provide evidence-based guidance in the selection of treatment options for the management of OME.

METHODOLOGY

All studies on OME in children published between August 2010 and August 2011 were searched systematically from electronic databases including the Guidelines International Network (G-I-N), Pubmed/Medline, Cochrane Database of Systemic Reviews (CDSR), Database of Abstracts of Reviews of Effectiveness (DARE), journal full text via OVID search engine, and International Health Technology Assessment. The search was repeated to include papers published up till February 2012. Reference lists of all retrieved articles were also searched and experts in the field were contacted to identify further studies. Experimental and animal studies and literature not in the English language were excluded from the review. All eligible papers were appraised using Critical Appraisal Skills Programme (Oxford) by at least 2 reviewers. Reviews were presented in evidence tables and discussed during development group meetings. Eligible papers were graded using the US/Canadian Preventive Services Task Force Level of Evidence (2001).

RESULTS

356 titles were identified and 147 titles with abstracts were screened. 31 eligible articles were included in the review. Management of OME was divided into non-surgical and surgical interventions. The outcome studied was resolution of OME in children. There was good evidence for non-surgical intervention as the initial mode of management, consisting of active observation and medical therapy. Spontaneous resolution of OME was noted in 56% of patients in three months. Short term (< 6 weeks) intranasal steroid can be used for OME with concurrent allergic rhinitis and adenoid hypertrophy. There was good evidence that oral steroids, prolonged intranasal steroids, antibiotics, antihistamines or decongestants, autoinflation, homeopathy and mucolytics were not beneficial in reducing the resolution rates of OME compared to controls. Due to the fluctuating nature of the disease, the decision for surgical intervention in OME is based on several factors such as duration of disease and presence of structural (retracted tympanic membrane) or functional (disequilibrium, speech and language delays, poor academic performance) complications. A waiting time of at least 3 months is recommended before surgical intervention is considered in persistent disease with hearing impairment of more than 25 dB, or structural changes to the tympanic membrane. Myringotomy with ventilation tube (VT) insertion is the procedure of choice. Combined adenoïdectomy should be considered in children with persistent OME and hypertrophied adenoids.

CONCLUSION

The initial management of OME in children consists of active observation. Short term (up to 6 weeks) use of intranasal steroids can be used in children with concurrent adenoid hypertrophy or allergic rhinitis. Surgical management is considered after 3 months of persistent OME. Myringotomy with VT insertion is the procedure of choice.

KEYWORDS

systematic review, otitis media with effusion, management

NMR ID: Not Available
HYDROA VACCINIFORME LIKE CUTANEOUS T CELL LYMPHOMA: A RARE VARIANT

Tick-Sheng Ang¹, Jyh-Jong Tang¹, Norain Karim²
1 Dermatology Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.
2 Pathology Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION

Hydroa vacciniforme-like cutaneous T cell lymphoma (HV-like CTCL) is a rare variant of cutaneous lymphoma which is associated with chronic latent Epstein-Barr virus (EBV) infection. This condition is mainly reported in children but can occasionally affect adults. HV-like CTCL typically present with recurrent papulovesicular eruption associated with swelling, bullae, ulcers, crusts and scars involving both area exposed and not exposed to ultraviolet radiation.

CASE 1

A 45 years old Chinese lady presented with recurrent erythematous nodules associated with blistering and ulceration over the face, upper and lower limbs since 1997. It was not associated with fever, loss of appetite or loss of weight. Clinically there were multiple erythematous plaques and nodules with vesicles and ulceration distributed mainly on sun exposed area including face, extensors of both forearms and legs. Some lesions were covered with necrotic crust. There was no lymphadenopathy or hepatosplenomegaly. Skin biopsy showed confluent epidermal necrosis with presence of an angiocentric atypical lymphoid infiltrate in the dermis extending to the subcutaneous fat. There was vascular invasion and thrombo-occlusion. Atypical cells were CD2+, CD3+ with loss of CD5 expression and less than 25% were CD4+ and CD8+. A cluster of neoplastic cells in the upper dermis is CD30+. CD20 and CD56 were negative. EBV in-situ hybridization (EBER) was strongly positive. Granzyme B+ and TCR alpha/beta (beta-F) expression were seen in some groups of neoplastic cells. Full blood picture, bone marrow and CT thorax/abdomen aspiration revealed no significant abnormality. She was diagnosed to have HV-like CTCL and commenced on oral Prednisolone and Methotrexate (up to 17.5mg/week). Her lesions improved with intermittent flares and new lesions on sun exposed area. Yellowish xanthomatous plaque was found on site of previous lesions which had resolved. Skin biopsy showed presence of foamy macrophages with vaculated cytoplasm consistent with xanthoma.

CASE 2

A 7 years old Chinese boy presented with recurrent papulonecrotic skin ulceration over scalp, both forearms and legs since 2008. The lesions started as papules and then ulcerated and covered with necrotic crust. Clinically there were multiple skin ulcers with necrotic papules on the sun exposed areas mainly scalp, both legs and forearms. There were also old healed atrophic scars over the same areas. Generalized lymphadenopathy and hepatosplenomegaly were present. Skin biopsy showed epidermal necrosis with presence of atypical lymphoid cells infiltrate in the dermis extending into subcutaneous tissue. The infiltration also involved vessels (angiocentric) with evidence of vasculitis. Immunophenotyping showed positivity to pan T cell markers CD2, CD3, CD4, CD5 and CD7 with expression of TCR beta. In situ hybridization was positive for EBV-encoded RNA (EBER). Left cervical lymph node biopsy showed partial effacement and expansion of the T cell area by the atypical lymphoid cells with similar immunohistochemical findings as skin biopsy. The in situ hybridization for EBV encoded RNA (EBER) was also detected in the lymph node biopsy. Contrast enhanced CT neck/thorax/abdomen/pelvis showed lymphadenopathies at neck, axilla, mediastinum, abdomen, pelvis and inguinal region with hepatosplenomegaly. Full blood picture was normal. The patient was diagnosed as HV-like cutaneous lymphoma with lymph node involvement. He defaulted subsequent follow up before initiation of therapy.

CONCLUSION

Hydroa vacciniforme-like cutaneous T cell lymphoma (HV-like CTCL) is a rare EBV-related cutaneous lymphoma. Diagnosis of this condition requires high index of suspicion especially during initial phase of the presentation. Combination of prednisolone and methotrexate may be an option of treatment for this condition.

KEYWORDS

Hydroa Vacciniforme, CTCL, papulovesicular, EBV

NMRR ID: Not Available
CASE REPORTS AND CASE SERIES

TRIGEMINAL TROPHIC SYNDROME: A CASE REPORT AND LITERATURE REVIEW

Esther-Anuradha Supramanian¹, Jyh-Jong Tang¹, Norain Karim²
1 Dermatology Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.
2 Pathology Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION

Trigeminal trophic syndrome is rare cause of chronic ulceration of the face. It is usually a complication after an injury to the trigeminal sensory nuclei, spinal trigeminal tract, ganglion, or peripheral nerve branches. It is characterized by unilateral trigeminal anaesthesia, facial paraesthesia, and crescent-shaped ulceration of the alanos.

CASE PRESENTATION

A 50 years old man presented to us with ulcerative plague over scalp and left side of face for 6 months. He has diabetes mellitus, hypertension and history of cerebral vascular accident with right hemiparesis 1 year prior to this presentation. The ulcerative lesions started on left side of scalp and then involved left upper eyelid, left inner canthus and left alanos. These lesions were painless and associated with contact bleeding. The old lesion on the scalp and left inner canthus eventually healed but the ulcer on left alanos and upper eyelid progressively increased in size. He also complained of numbness over left side of his face due to previous stroke. There was no history of preceding trauma, fever, photosensitivity or joint pain. There was no burning or crawling sensation over these area. He denied scratching or rubbing on the affected area. On examination, there were new and old ulceration confined to left side of his face. There were two ulcerative plaques on left upper eyelid and left alanos. The ulcer on left alanos had eroded the nasal cartilage leaving a triangular shape of ulcer with punch out appearance. The ulcer was clean with healthy granulation tissue. There was also another similar ulcer on left upper eyelid with clean base and minimal crust. Two healed crescentic ulcers with scarring over left side of scalp and left inner canthus. There were no lesions elsewhere in the body. Examinations of other systems were unremarkable. His full blood count, liver and renal function, ESR, urine analysis were within normal limits. Syphilis, Hepatitis B and C serology and HIV screening were negative. The ANA, ENA, pANCA, cANCA were also negative. Mantoux test and Chest radiography were normal. Multiple skin biopsies were done but all revealed epidermal ulceration with inflammatory infiltrates without evidence of vasculitis, malignancy or granulomas. Special staining for fungi and acid fast bacili were all negative. Tissue cultures for mycobacteria tuberculosis and fungi were also negative. Immunofluorescence study was negative. The skin biopsy findings ruled out the differential diagnosis and the final diagnosis of trigeminal trophic syndrome was made. He was started on amitriptyline and carbamazepine with daily occlusive dressing for the ulcer on the face. The old lesions slowly dried up but he developed new lesion over scalp and left lower eyelids after 3 months of treatment.

CONCLUSION

The report of this case is to increase awareness to recognize this disfiguring condition to ensure prompt diagnosis and further management. Skin biopsy is essential to exclude other causes of facial ulceration. Treatment includes controlling of the paraesthesia, pain management, behavior modification, medical and surgical management of the wound.

KEYWORDS

trigeminal trophic syndrome, ulceration, paraesthesia, scalp

NMRR ID: Not Available
HIGH PRESSURE INJECTION INJURIES: A CASE SERIES

Azma-Haryaty Ahmad, Adi Osman, Abdul-Kursi Abdul Latif, Wai-Mun Chung
Emergency and Trauma Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION

Injuries related to high pressure injection devices are more frequently observed in recent years. This is related to the increase in usage of such devices in the industrial sector, for instance, use of hydraulic system and point spraying devices. High pressure injection injuries typically involved injuries on the hand. We report two recent unusual cases of high pressure injection injuries involving the gastrointestinal system that presented to the Emergency and Trauma Department (ETD) of Raja Permaisuri Bainun Hospital, a regional referral hospital in Malaysia.

CASE PRESENTATION

A 36 year-old Malay male presented to the ETD with a sudden onset of severe abdominal pain. He had history of being sprayed with car-paint at high velocity on his back. During the initial presentation, he was fully conscious but was experiencing severe abdominal pain. On examination: blood pressure was noted to be 96/62 mmHg with a heart rate of 110 bpm. His abdomen was tensed and guarded with generalised tenderness; sluggish bowel sounds was present. No respiratory distress was noted. There were also no tenderness and no evidence of mucosal tear or bleeding on per rectal examination. Erect chest radiography (CXR) finding was normal. Focused Assessment with Sonography in Trauma (FAST) however was positive with findings of fluid collection at the hepatorenal area. He was immediately sent to operating theatre for emergency open laparotomy and a perforated transverse colon was found intra-operatively. He underwent diversion colostomy and subsequently was discharged 5 days post-operation with a functioning colostomy. He had no other complications.

The second case involved a 40 year-old Burmese male that was presented to the ETD department with a sudden onset of severe, generalised abdominal pain and anal bleeding (fresh blood). He had history of being unintentionally shot at his anal region with a high velocity injection device used to clean vehicles at work. At presentation, he was fully conscious and was in respiratory distress. Examination showed: blood pressure of 198/99 mmHg with a heart rate of 106 bpm. He was given oxygen with high flow mask at 15L/m and his oxygen saturation was 100%. Massive subcutaneous emphysema at the neck region was present. Lung examination was normal. His entire abdomen was tender, guarded and reduced bowel sounds was noted. There was evidence of rectal wall tear with minimal bleeding. FAST was negative. CXR had shown that air was present under the diaphragm. He was immediately sent to operating theatre for emergency open laparotomy. A small rectal perforation with the presence of small retroperitoneal air was noted intra-operatively. Corrective surgical procedures were performed and diversion colostomy constructed. He was discharged 6 days post-operation with a functioning colostomy with no other complications.

CONCLUSION

Improper handling of high pressure injection devices can potentially cause significant damages and injuries to the body. More stringent control of the use of these devices is necessary.

KEYWORDS

high pressure injection, injuries, intra-abdominal

NMRR ID: Not Available
INTRODUCTION

Patients who develop cardiac arrest are associated with significant mortality. Even if the patients survive the catastrophic event, the chances of higher neurological and multi-organ dysfunction are very high. We report a case of therapeutic hypothermia post cardiac arrest.

CASE PRESENTATION

A 75 year-old Malay male was brought to the Emergency and Trauma Department (ETD) of Batu Gajah Hospital (a district hospital in Malaysia) after being found unconscious. Bilateral jerky movements were observed. Following the diagnosis of ventricular fibrillation, defibrillation was performed and the cardiac rhythm was reverted to sinus after 5 minutes of cardiopulmonary resuscitation (CPR). He was intubated post-defibrillation since he was persistently comatose. His blood pressure was 214/119 mmHg with a heart rate of 119 bpm. Post resuscitation 12-lead electrocardiogram (ECG) showed sinus rhythm.

The patient arrived at the ETD of Raja Permaisuri Bainun Hospital (a regional referral hospital in Malaysia) for Computed Tomography (CT) scan of the brain to rule out an intracranial bleed. A repeated 12-lead ECG showed an ST elevation in lead II, III, aVF and V5-V6. Bedside echocardiogram (ECHO) revealed dilated left atrium/left ventricle, ejection fraction (EF) of 45% with trivial aortic regurgitation (AR) but with no diastolic abnormalities. Diagnosis of the patients was established as cardiac arrhythmias secondary to acute inferolateral myocardial infarction.

The patient fulfilled the eligibility criteria for therapeutic hypothermia, including 1) Post cardiac arrest (any rhythm as cause of arrest is eligible) 2) return of spontaneous circulation (ROSC) less than 30 minutes 3) within 6 hours post ROSC 4) comatose and 5) in cardiogenic shock where mean arterial pressure (MAP) is more than 60 mmHg with or without inotropic support. Therapeutic hypothermia was initiated. Prior to the induction phase, the patient was referred for intensive care support. Essential blood samples were taken for investigations and measurement of body core temperature was done using esophageal temperature probe. Induction phase was initiated by producing cooling effects to the patient with both non-invasive (placement of ice packs at axilla and groin regions; thermal blanket underneath) and invasive techniques (bladder infusion and irrigation with cold saline at 4°C). The core body temperature was targeted at 32-34°C before the commencement of the maintenance phase for the subsequent 24 hours. During the maintenance phase, the core body temperature was similarly maintained at 32-34°C. The patient was later sent to invasive cardiology laboratory (ICL) for coronary angiography and found to have 70-95% blockage at Left Anterior Descending artery (LAD). He developed another ventricular fibrillation prior to Percutaneous Coronary Intervention (PCI) and was started on inotropes. Inotropes were stopped post-PCI and he was admitted to the intensive care unit (ICU). After the completion of the maintenance phase, a 24 hours de-cooling off period ensued. Therapeutic hypothermia was completed after a total of 48 hours and inotropes were stopped on day four of ICU admission. The patient was able to open eyes on day six and he was extubated on day eight. A repeated bedside ECHO had shown an improvement in EF to 67%. The neurological outcomes post-therapeutic hypothermia was significantly improved. The patient managed to achieve higher mental status while the cranial nerves and musculoskeletal system was intact and functional.

CONCLUSION

The use of therapeutic hypothermia in the patient is successful with respect to EF and functional recovery. With the increase in reported successes with therapeutic hypothermia, the use of therapeutic hypothermia in post cardiac arrest is promising.

KEYWORDS

therapeutic hypothermia, post cardiac arrest

NMRR ID: Not Available
BILATERAL VISUAL LOSS DUE TO LUPUS RETINITIS IN A PATIENT WITH SYSTEMIC LUPUS ERYTHEMATOSUS AND ANTIPHOSPHOLIPID SYNDROME

Yee-Yan Lee, Sridhar Ramanaidu, Chek-Loong Loh, Hong-Kee Ng
Nephrology Unit, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION
Systemic Lupus Erythematosus (SLE) is a chronic, multisystemic autoimmune disorder in which the debility to the patients depends on the severity and the number of the organ systems involved. Retinopathy has been reported to be present in up to 30% of patients with SLE. However, it remains underemphasized and under-diagnosed by the medical community. Delayed diagnosis and initiation of treatment can result in permanent visual loss.

CASE PRESENTATION
We report a case of a 16-year-old lady with class IV Lupus Nephritis which was diagnosed in May 2012. She achieved partial remission of her nephritis with treatment of mycophenolate mofetil and prednisolone. Her treatment history for SLE included 1 dose of cyclophosphamide (0.75g/m2) in May 2012 which was complicated by severe pneumonia resulting in a change in therapy to mycophenolate mofetil. She was presented in October 2012 with acute bilateral visual impairment (6/24 bilaterally) associated with uncontrolled hypertension. Her serum creatinine had remained stable at her baseline of 150 micromol/L. Fundoscopy examination showed extensive cotton wool spots with areas of hemorrhage. No papilloedema was present. Optical coherence tomography (OCT) demonstrated macular edema and fundal fluorescein angiography (FFA) showed loss of perifoveal capillary network and late leakage in macular region suggestive of retinitis. She was also diagnosed with antiphospholipid syndrome based on positive antibody screening and a history of spontaneous lower limb deep venous thrombosis. She was given IV methylprednisolone 500mg daily for 3 days and her mycophenolate mofetil dose was increased from 750mg BD to 1g BD. Anticoagulation therapy with warfarin was started and retinal photocoagulation laser therapy was performed. This resulted in improvement to her vision (6/9 bilaterally) and resolution of the inflammatory changes seen on fundoscopy. In November 2012, she was admitted for hypertensive emergency with severe headache with no neurological deficits. Computed Tomography (CT) of the brain showed right occipital hypodensity suggestive of posterior reversible encephalopathy syndrome (PRES). Concurrently, she developed worsening of retinopathy requiring IV nitrates for blood pressure control, retinal photocoagulation therapy and pulse IV methylprednisolone 500mg daily for 3 days. In January 2013, assessment revealed quiescent eye disease. A repeat renal biopsy was performed in view of persistent proteinuria of 1.36g/day despite stable serum creatinine of 170 micromol/L, which showed active renal disease.

Multi-targeted therapy with the addition of cyclosporin 50mg BD was commenced. At the time of reporting, the patient still has active nephritis, even though her retinitis appears to be under control.

CONCLUSION
SLE retinitis is associated with antiphospholipid syndrome, which should be routinely screened for in SLE patients. Hypertension is associated with SLE activity which can also contribute to target organ impairment. Presence of retinopathy suggests highly active SLE disease and is a negative prognostic indicator which warrants escalation of immunosuppressive therapy. Hence, fundoscopic examination should be an important part of routine examination of patients with SLE.

KEYWORDS
lupus retinitis, SLE, antiphospholipid syndrome

NMRR ID: Not Available
SEVERE SYMPTOMATIC HYPOCALCAEMIA AND HYPOKALAEMIA CAUSED BY ORAL SODIUM PHOSPHATE SOLUTION (FLEET®) IN A HEMODIALYSIS PATIENT WITH TERTIARY HYPERPARATHYROIDISM

Sridhar Ramanaidu, Yee-Yan Lee, Chek-Loong Loh
Nephrology Unit, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION

Oral sodium phosphate solution is a commonly prescribed agent for bowel preparation prior to lower gastrointestinal endoscopic procedures. Cases of serious electrolytes imbalance and death after consumption of this agent by patients with risk factors have been reported. This is a case report of a similar occurrence which occurred at the nephrology unit of a regional referral hospital in Malaysia.

CASE PRESENTATION

A 75 year old Chinese lady, presented to the Emergency Department with complain of acute onset of extreme generalised body weakness with muscle cramps. She was known to have Adult Polycystic Kidney Disease with end stage renal failure (ESRF) complicated by severe tertiary hyperparathyroidism. She was considered asymptomatic apart from minor bone pains for her severe hyperparathyroidism. Elective parathyroidectomy was not considered by the patient and her family due to an advanced age. Management of severe hyperparathyroidism for her were phosphate restricted diet, use of phosphate binders and the use of intravenous vitamin D. She was on regular haemodialysis for the past 6 years.

She was referred to the surgical department for a diagnostic colonoscopy for symptoms of altered bowel habits. Her baseline blood parameters measured during the routine clinic follow up 2 weeks before the day of procedure were as follows: serum intact parathyroid hormone (IPTH) 2811 pg/ml; calcium 2.39 mmol/L (uncorrected); phosphate 1.41 mmol/L; magnesium 1.05 mmol/L; serum albumin 43 g/L; alkaline phosphatase 1206 u/L; sodium 141 mmol/L; potassium 3.7 mmol/L; haemoglobin 13.8 g/L. She brought home 2 doses of 45 ml oral sodium phosphate solution (Fleet®), a laxative containing sodium acid phosphate 24.4 g and sodium phosphate 10.8 g for each 45 ml.

Hours before the scheduled diagnostic colonoscopy, she ingested the first 45 ml of Fleet®. The exact time of ingestion was not documented. Subsequently, she developed acute onset of extreme generalised body weakness with muscle cramps after passing few bouts of watery stools. She came to the Emergency Department for the presenting symptoms on the same day.

Her blood parameters at the Emergency Department revealed as follows: serum IPTH 1817 pg/ml; calcium 1.44 mmol/l (uncorrected); phosphate 3.68 mmol/L; magnesium 0.75 mmol/L; serum albumin 40 g/L; alkaline phosphatase 1084 u/L; sodium 142 mmol/L; potassium 2.9 mmol/L; chloride 93 mmol/L; urea 18.6 mmol/L; serum Creatinine 466 mmol/L. Electrocardiogram (ECG) showed sinus rhythm with “U” waves and no prolonged QT interval.

She urgently received a session of haemodialysis and was supplemented with 10 ml of intravenous calcium gluconate 10% and 2g potassium chloride in 200ml normal saline infusion. The electrolyte imbalance normalised and the patient became asymptomatic of generalised body weakness and cramps. She was fully recovered and was discharged home the following day.

CONCLUSION

Case report of oral sodium phosphate solution (Fleet®) causing life threatening electrolyte problems in patients with renal failure, highlights the importance for physicians’ careful consideration in choosing laxatives. We suggest the use of non-sodium phosphate based laxatives in patients with renal failure.

KEYWORDS

haemodialysis, renal failure hyperphosphatemia, hypocalcaemia, oral sodium phosphate

Research ID: 15921
AN ARROW FOREIGN BODY INVOLVING PAROTID GLAND, MAXILLARY SINUS AND TIP OFF NOSE

Suhana, Thevagi M, Lina LC, Avatar Singh
Otorhinolaryngology Department, Hospital Universiti Kebangsaan Malaysia, Otorhinolaryngology Department, Taiping Hospital, Perak.

INTRODUCTION
Penetrating injuries in head and neck are potentially dangerous. There is a risk of vascular and nerve injuries. Penetrating injury to the maxillary bone or sinus can cause bleeding in the sinus, which may in turn injure the infra-orbital nerve leading to ipsilateral facial hypoesthesia. On the other hand, penetrating injury to the nasal septum can cause permanent septal perforation. Hence, urgent medical attention is needed for penetrating injury to the maxillary bone, sinus or nasal septum.

CASE PRESENTATION
A 24 year-old male was accidentally shot by an arrow on his face. The arrow was embedded in his face with the head-point wound situated at the tip of the nose while the body-end wound found at the pre-auricular region, about 1 cm anterior from the tragal point. On arrival, no active bleeding was noted from the entry and exit point and the facial nerve was intact. A computed tomography (CT) scan showed the arrow foreign body was transversing from the left superficial parotid gland to the maxillary sinus, reaching the tip of nose. There was no involvement of facial vessels or nerve. The arrow was then removed by pulling it out from its entry wound under general anesthesia. No septal perforation was noted. He was discharged well the following day.

CONCLUSION
Proper radiology investigation is helpful in determining facial foreign body’s depth, shape and size as well as adjacent structures. Knowledge on these is crucial to ensure successful removal of foreign bodies without further complications.

KEYWORDS
foreign body, maxillary, sinus, facial, penetrating

NMRR ID: Not Available
THE CHILD WITH SUSPECTED HEARING LOSS: A CASE REPORT

Philip Rajan
Otorhinolaryngology Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION

Otitis media with effusion (OME) is a condition characterised by accumulation of fluid in the middle ear without signs of acute inflammation. It is common in children, with 80% of them having at least one episode of OME by the age of 10 years. Most cases of OME resolve spontaneously, requiring no further treatment. However, resolution failure results in prolonged hearing impairment, which can lead to speech and language delay and poor school performance.

CASE PRESENTATION

An 8-year-old girl was noticed by her parents to be less attentive and she would respond only after being called several times. She had just recovered from an upper respiratory tract infection two weeks before. The parents brought her to see a primary care physician. The patient had no other complaints and the rest of the history was unremarkable. Physical examination was normal except for the otoscopic findings showing dull tympanic membrane (loss of cone of light) and air bubbles in the middle ear. Tuning fork tests indicated conductive deafness.

The child developed her symptoms following an upper respiratory tract infection. Nasal congestion predisposes her to OME. The accumulation of fluid in the middle ear causes conductive deafness. Diagnosis was confirmed by otoscopy with characteristic findings of air-bubbles in the middle ear. Conservative management was expectant as most cases of OME resolve spontaneously. However, the persistence of disease for 3 months required referral to an otorhinolaryngologist for further management to prevent structural and functional effects of the disease.

CONCLUSION

The case above is a common paediatric condition that is fairly ‘silent’ and if left untreated can result in structural damage to the tympanic membrane and hearing impairment. Early detection is important for it can result in early intervention and prevention of complications.

KEYWORDS

otitis media with effusion, hearing loss, children

NMRR ID: Not Available
TRANSIENT VOCAL CORD PALSY DUE TO INFECTION MIMICKING MALIGNANCY

Kai-Jun Tey, Nikma-Fadlati Umar, Syarifah-Zuraida Syed Mohd Zahudi, Keng-Lu Tan
Otorhinolaryngology (ENT) Department, Slim River Hospital, Perak.

INTRODUCTION

Vocal cord palsies commonly present to otorhinolaryngology (ENT) clinics with hoarseness or breathing difficulties. When vocal cord palsies take a more severe course, urgent medical attention might be required for life-threatening airway obstructions. Trauma and malignancy are the most common causes for vocal cord palsy, with unilateral cord palsy more common than bilateral cord palsy. It is important for the ENT physician to determine the causative factors. Multiple examinations are sometimes necessary. Here, we present a case of vocal cord palsy with signs and symptoms suggestive of malignancy, which were later diagnosed as just a transient event secondary to pneumonia.

CASE PRESENTATION

A 46-year-old male presented to the ENT clinic with complaint of hoarseness associated with dysphagia for a duration of 5 days. The patient had a past medical history of hypertension, diabetes mellitus, dyslipidaemia and allergic rhinitis. He was also treated for pneumonia 2 weeks before and was recovering with a residual cough. On examination, the patient’s voice was hoarse. He was not in respiratory distress, not tachypneic, and experienced no shortness of breath or stridor. On palpation, no neck swelling was found and auscultation of the lungs was unremarkable. Flexible nasopharyngolaryngoscope showed left vocal cord palsy at the paramedian position, with right vocal cord normal in appearance and mobile. The left arytenoid cartilage appeared oedematous and bulky. Chest X-ray was normal. However, computed tomography (CT) scan from the base of the skull till thorax revealed soft tissue fullness in the region of left arytenoids and left aryepiglottic fold. No lymphadenopathy was noted on CT scan but patchy opacities were visualised over the left lung apex suggestive of infective process. Subsequent tuberculosis workout was negative. He was then planned for direct laryngoscopy and biopsy. During his pre-operative assessment a week later, the left vocal cord palsy was resolved and his symptoms alleviated. Flexible endoscopy showed that the arytenoid swelling has reduced. During subsequent follow-up, the patient remained asymptomatic with resolved vocal cord palsy without intervention.

CONCLUSION

Although unilateral vocal cord palsy with unilateral arytenoid swelling mass points to malignancy clinically, the possibility of viral infection as the aetiology of transient vocal cord palsy should be entertained if the history and clinical findings favour infective cause rather than neoplasm. This differential diagnosis would lead to less invasive and proper management.

KEYWORDS

vocal cord palsy, infection, mimic, malignancy

NMRR ID: Not Available
UNUSUAL FOREIGN BODIES OF THE HEAD AND NECK: A RETROSPECTIVE CASE SERIES

Aidayanti Daud, Philip Rajan, Harvinder-Singh Dalip Singh, Gurdeep-Singh Mahinder Singh
Otorhinolaryngology Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION

Foreign-bodies are routinely encountered in otorhinolaryngology (ENT) practice, particularly in children. Most of the foreign bodies are in the ears, followed by the nose, pharynx, esophagus and laryngotracheal tree. Common foreign bodies found in the nose are nuts, plastic toys, button, beads, paper and button batteries; in ears are seeds, plastic toys and beads; and in the pharynx are fish bones, chicken bones, dentures, seeds and coins. The aim of this study was to determine unusual foreign bodies of the head and neck.

CASE PRESENTATION

This is a retrospective, descriptive review of unusual foreign bodies presented to the ENT department of a regional referral hospital in Malaysia from 2003 to 2012. A total of 7 cases were identified. The foreign bodies included a transorbital chopstick penetrating the upper airway, a metal grass-cutter blade in the upper airway, an arrow in the maxillary sinus, a cutting burr in the left cheek, a sharp pin in the oesophagus, a razor blade in the hypopharynx and recreational drug in nasal cavity. There were several ways foreign bodies were introduced: occupational related (2 cases), trauma related (2 cases), negligence (1 case), suicide attempt due to psychiatric illness (1 case) and criminal intent (1 case). In the 2 occupational related cases, the introduction of foreign bodies is largely preventable. Better safety protocol in the factory and the use of the rubber blades introduced in recent years instead of the metal blades for grass cutting will minimise risk of exposure to these occupational hazards. In all 7 cases, the foreign bodies were successfully removed.

CONCLUSION

Unusual foreign bodies introduced to the head and the neck are variable. Some were found to be occupational related. Better safety protocol including the use of protective measures and complementary equipment would be helpful to reduce cases of unusual foreign bodies.

KEYWORDS

foreign body, transorbital, trachea, oesophagus, arrow, occupational hazard

NMRR-13-52-15006
UNUSUAL OF PAROTID GLAND PRESENTING AS SIALOLITHIASIS: CASE REPORT AND LITERATURE REVIEW

Sivapatha-Sundaram Sreetharan¹, Philip Rajan²
1 Otorhinolaryngology Department, Pantai Batu Pahat Hospital, Johor.
2 Otorhinolaryngology Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

INTRODUCTION

Patients presenting with pain and swelling over the parotid gland usually have infective or obstructive sialadenitis. Obstructive sialadenitis may be due to calculi, fibromucinous plugs, duct stenosis, foreign bodies, anatomic variations, or malformations of the duct system leading to a mechanical obstruction associated with stasis. Foreign bodies causing obstructive parotid sialadenitis are extremely rare. This case demonstrates the difficulties in making diagnosis of foreign body in the parotid gland and management for this condition.

CASE PRESENTATION

A 63-year-old lady complained of left facial pain for 10 days. She has had a left facial swelling for 3 years which was not increasing in size. The pain was not exacerbated after meals, and she had no recollection of ingestion of any foreign bodies. She previously had a CT scan performed for the same condition. She was informed that she had calculi in the left parotid gland and was advised to undergo for surgery to remove it. On clinical examination, the left parotid gland was slightly enlarged but was not inflamed. On examination of the oral cavity, no pus was seen from the left parotid duct. No neck nodes were palpable, and the right parotid was normal. CT scan showed enlarged and diffusely enhanced left parotid gland with a 17 mm linear calcification. There was no evidence of any abscess. Bilateral periparotid and level 2 and 3 neck shotty lymph nodes were noted. A diagnosis of left parotid sialolithiasis was made and the patient was planned for exploration of the parotid gland and removal of the calculi. On the operating table, the calculi were localized using an image intensifier. Methylene blue dye was infiltrated right down into the estimated location of the lesion. A mini face-lift incision was made, and the skin flap was elevated. After elevation of the superficial musculoaponeurotic system (SMAS), the parotid gland was carefully dissected following the track marked out by the methylene blue. A 1.7 cm metallic wire was found and removed. There were no calculi or pus noted. The rest of the gland appeared normal. The wound was closed without any drain. The patient recovered well and there was no facial nerve palsy.

CONCLUSION

Recurrent parotitis due to Stensen’s duct obstruction is commonly caused by strictures or calculi. It is rarely caused by foreign bodies. This case demonstrated that CT scans can misdiagnose foreign bodies in the parotid gland. In selected cases, a less invasive procedure can be successfully performed with the concurrent use of imaging and neuromonitoring.

KEYWORDS

foreign body, parotid gland, sialolithiasis

ADVERSE DRUG REACTIONS AT A MALAYSIAN DISTRICT SPECIALIST HOSPITAL

Norfaradila Mohamed, Yuh-Choo Ng, Wen-Lin Wong, Praneetha Ramakrishnan
Pharmacy Department, Teluk Intan Hospital, Teluk Intan, Perak.

INTRODUCTION AND OBJECTIVES

Adverse Drug Reactions (ADR) is defined as appreciably harmful or unpleasant reactions related to the use of a medicinal product. However, ADR do not necessarily have a causal relationship with the use of medicinal products leading to ADR. The study aimed to review ADR reports and to describe ADR with respect to the type, reversibility and events leading to ADR.

METHODOLOGY

This is a retrospective review study involving comprehensive review of all ADR reports submitted over 2 years’ time (2011-2012) to the pharmacy department of Teluk Intan Hospital, a district specialist hospital in Malaysia. A data collection form was developed by the researchers to retrieve data from the ADR reports. Information on the nature of ADR including the type, reversibility and events leading to ADR were collected. The type of ADR is classified into two major categories: type A reactions and type B reactions. Type A reactions are defined as augmented reactions resulted from an exaggeration of a drug’s normal pharmacological actions when given at the usual therapeutic dose. Type B reactions are defined as novel responses that are not expected from the known pharmacological actions of the drugs.

RESULTS

A total of 73 ADR were reported during the study period. 30 ADR were reported in 2011 while 43 ADR were reported in 2012. 11 ADR reports have incomplete information. Hence, only 62 (85%) ADR reports were included in the study. In 2011, the most common ADR were Type B reactions (43%) whereas in 2012, the most common ADR were Type A reactions (44%). Dispensing error leading to ADR was uncommon. There was only 1 (3.33%) incident in year 2011 and 1 (2.33%) incident in 2012 which are due to dispensing error. The majority (71.3%) of the ADRs subsided upon discontinuation of drugs.

CONCLUSION

Type A and type B ADR were almost similarly common in Teluk Intan Hospital. Very few ADR were related to dispensing error.

KEYWORDS

adverse drug reaction, medications errors

Research ID: 15177
AWARENESS OF FACTORS AFFECTING HAND HYGIENE COMPLIANCE AMONG DOCTORS AND NURSES OF A MULTI-DISCIPLINARY UNIT IN A REGIONAL REFERRAL HOSPITAL

Rita Arakappa
Surgical Multidisciplinary Unit, Raja Permaisuri Bainun Hospital, Ipoh, Perak

INTRODUCTION AND OBJECTIVES

Hand hygiene is a fundamental measure in controlling nosocomial infections in hospitals. However, compliance to good hand hygiene practice among healthcare workers is poor. The primary aim of this study was to evaluate the awareness and factors affecting hand hygiene compliance among doctors and nurses of a multidisciplinary unit in a regional referral hospital.

METHODOLOGY

This is a cross-sectional study conducted in October 2011 among doctors and nurses of the surgical ward at Raja Permaisuri Bainun Hospital. Equal number of doctors (n=15) and nurses (n=15) were conveniently sampled, each consisting of proportionate 60% junior and 40% senior staff respectively. Staffs on leave during the data collection period were excluded. A Hand Hygiene Knowledge Assessment Questionnaire adapted from The Institute of Health Improvement was self-administered to doctors and nurses. The 10-item questionnaire contained 4 sections: (a) determination and (b) perceptions on hand hygiene compliance, (c) factors affecting hand hygiene practices, and (d) suggestions to improve hand hygiene compliance.

RESULTS

Of the total 30 staff evaluated, only 8 (27%) rated themselves as having very good compliance while the remaining 73% rated themselves as having good compliance to hand hygiene practices. All agreed that good hand hygiene practices reduced nosocomial infection in the hospitals, and they were also aware of the hand hygiene practice protocol. Various factors affected hand hygiene compliance: 33.5% were busy, 29.5% claimed hand rubs were far away, and 20% forgot about this practice. Half of the staff (50%) felt that increasing the availability of automatic hand rub dispensers can improve hand hygiene compliance. 4 (13%) staffs suggested having more hand rubs in the wards, and 2 (6%) suggested having more hand hygiene educational programs to improve hand hygiene compliance.

CONCLUSION

Majority of staff claimed good compliance to hand hygiene practices, but many cited personal and inadequate hand hygiene facilities as reasons for non-compliance. Strategies to improve hand hygiene practices should be implemented, and audit of staff should be conducted periodically.

KEYWORDS

hand hygiene compliance, awareness, doctors, nurses

NMRR ID: Not Available

Editorial Comment:

This study requires more data but the editorial committee was unable to obtain the information from the researcher despite many attempts. Hence, the methods and results presented in this abstract are limited and incomplete.
COMPARATIVE ANALYSIS OF MANAGEMENT OF HEAD AND NECK ABSCESSES

Ramaprabah Kandiah, Darshini Nagarajah, Rosalind Simon, Sanjay-Kumar Gudwani, Geeta Kahturia
Otorhinolaryngology Hospital Department, Teluk Intan Hospital, Perak.

INTRODUCTION AND OBJECTIVES

To evaluate the efficacy of aspiration versus incision and drainage (I&D) in the management of head and neck abscesses.

METHODOLOGY

This is a retrospective review involving patients having head and neck abscesses from January 2011 to June 2011 at an Otorhinolaryngology Department of a district specialist hospital in Malaysia. The medical records of these patients were retrieved from the records department. Their socio-demographics, size of abscess, associated systemic diseases, choice of treatment, length of hospital stay (LOHS) and bacteriology were reviewed.

RESULTS

18 patients were identified. 10 patients were females (56%) and 8 patients were male (44%), with age ranging between 1 to 65 years old. The relative frequencies of location of abscess were as follows: parotid 7 cases (38%), posterior triangle 3 cases (16%), Ludwig’s angina 2 cases (11%), level II region 2 cases (11%), submandibular, submental, level III/IV and post auricular region 1 case each (6%). Diabetes mellitus was identified as a predisposing factor in 7 patients (38%). A significant difference was found in the mean LOHS (3.3 days) between patients who were treated with I&D under general anaesthesia (GA) versus I&D under local anaesthesia (LA) (5.8 days), aspiration (7.6 days) and combination of aspiration and I&D (14 days).

CONCLUSION

Surgical drainage with GA and LA is a more effective mode of treatment in head and neck abscesses compared to aspiration as it results in a shorter LOHS and faster recovery.

KEYWORDS

head and neck abscess, incision and drainage, length of hospital stay

Editorial Comment:

This study requires more data but the editorial committee was unable to obtain the information from the researchers despite many attempts. Hence, the methods and results presented in this abstract are limited and incomplete.
CLINICAL AND COST EFFECTIVENESS OF PANTOPRAZOLE VERSUS ESOMEPRAZOLE IN THE TREATMENT OF UPPER GASTROINTESTINAL BLEEDING AT A SPECIALIST HOSPITAL

Shea-Jiun Choo¹, Asrul-Akmal Shafie², Pei-Pei Soo¹, Rathika-Dewi Shah Jehan¹, Siti-Hajar Megat Fauzi¹, Wan-Azuati Wan Omar¹, Xin-Yi Beh¹, Ramasamy Umasangar³
¹ Pharmacy Department, Taiping Hospital, Perak
² School of Pharmaceutical Sciences, Universiti Sains Malaysia, Pulau Pinang
³ Surgical Department, Taiping Hospital, Perak

INTRODUCTION AND OBJECTIVES

Upper gastrointestinal bleeding (UGIB) is a life-threatening emergency which requires urgent assessment and pharmacological management. In Malaysia, the clinical practice guideline recommends proton pump inhibitors (PPI) as the mainstay therapy for UGIB. There has been no published head-to-head cost comparison between pantoprazole and esomeprazole for the treatment of UGIB. This study aimed to evaluate the clinical and cost effectiveness of pantoprazole and esomeprazole in the treatment of UGIB in a specialist hospital.

METHODOLOGY

This is a randomised controlled trial among patients admitted to surgical wards of Hospital Taiping from August to December 2012. Male and female patients aged 18 years and older diagnosed with UGIB, had oesophagogastroduodenoscopy (OGDS) done on admission, and indicated for PPI treatment were included in the study. Excluded were patients with previously documented intolerance/allergy to components of PPI, pregnant or lactating patients, and those with cirrhosis or severe liver disease. Eligible patients who consented to participate were randomised to receive either intravenous pantoprazole or esomeprazole 80mg stat followed by 72-hour infusion at 8mg per hour, and subsequently switched to the oral dosage form. Dosing regimen was decided by the treating doctor based on Forrest classification of the patient. The targeted number of patients to be recruited was 130. Clinical effectiveness was determined by the duration of treatment until bleeding stops and the occurrence of re-bleeding event. Primary outcomes were cost-effectiveness ratio (CER) and incremental cost-effectiveness ratio (ICER) for one bleeding-free day and re-bleeding event averted between pantoprazole and esomeprazole. Costs included medications, hospital stay, consultations, laboratory investigations, blood transfusion, and other relevant procedures.

RESULTS

31 eligible patients were randomly assigned to receive pantoprazole (n = 17) or esomeprazole (n = 14). Socio-demographic and clinical characteristics were similar between both groups. The main cause of UGIB was peptic ulcer disease for the pantoprazole group (58.8%) and drug-induced UGIB for the esomeprazole group (57.1%). At index OGDS, most patients in the pantoprazole group had Forrest IIc ulcers (41.2%) while most patients in the esomeprazole group had Forrest III ulcers (57.1%). The direct cost per patient for pantoprazole and esomeprazole regimen was RM 4,817.60 and RM 4,745.74 respectively. Pantoprazole cost more (RM 4,817.60 vs RM 4,745.74) and was less effective than esomeprazole in stopping bleeding (2.30 ± 2.20 vs. 2.07 ± 1.90 days), yielding ICER of RM 312.43 per bleeding free day. Esomeprazole averted more re-bleeding events (100% vs. 82.35%) than pantoprazole yielding an ICER of -RM 407.2 per re-bleeding event averted. Sensitivity analysis showed that the cost-effectiveness values were most sensitive to shorter duration to achieve bleeding-free day as well as the reduction of blood transfusion cost. There were 5 (29.4%) mortalities in the pantoprazole group and 3 (21.4%) in the esomeprazole group.

CONCLUSION

Esomeprazole was found to be more cost-effective compared to pantoprazole in the treatment of UGIB, in terms of achieving earlier bleeding-free day and averting re-bleeding events. Randomised controlled trials with larger sample size and adequate power are required to confirm this finding.

KEYWORDS
cost effectiveness, pantoprazole, esomeprazole, upper gastrointestinal bleeding

NMRR-12-851-12943

Editorial Comment:
This is a difficult study to conduct and the authors should be congratulated for the effort. Unfortunately the two groups had uneven ulcer severity based on Forrest classification. This impaired comparison between groups. In addition the editorial committee has recalculated the ICER. See below for the correct formula:

\[
\text{ICER} = \frac{\text{Cost pantoprazole} - \text{cost esomeprazole per patient}}{\text{Effect pantoprazole} - \text{Effect esomeprazole per patient}} \times \frac{4745.74}{2.3 - 2.07} = \frac{4817.60 - 4745.74}{0.23 + \text{RM 312.43 per bleeding free day}}
\]
OTHER RESEARCH

COST COMPARISON BETWEEN METOPROLOL AND BISOPROLOL IN CHRONIC HEART FAILURE PATIENT

Kamariah-Shamsinar Kamarul Bahari, Wern-Lin Chua, Aimi-Syaeirah Hafidzi
Pharmacy Department, Taiping Hospital, Perak

INTRODUCTION AND OBJECTIVES
Heart failure is a common and growing medical condition. In the Malaysian population, the prevalence of Heart Failure varies between 3 to 20 per 1000 population, although in persons over the age of 65 years, it could be as high as 100 per 1000 population. Bisoprolol and metoprolol are common drugs used in treatment for heart failure patients. The mechanism of action of bisoprolol and metoprolol are similar, acting as selective inhibitor of β1-adrenergic receptors, blocking beta1-receptors. This study was aimed to compare the treatment of chronic heart failure between two drugs: metoprolol and bisoprolol.

METHODOLOGY
Patients were recruited by screening prescription in pharmacy to select patients on bisoprolol. Inclusion criteria included those with chronic heart failure that switched regimen from metoprolol to bisoprolol and had been on treatment with bisoprolol for at least 3 months before selection. We obtain data needed from the patient’s medical record as well as interviewed patients using side effects profile checklist. Confidentiality of the patients was maintained.

RESULTS
The mean difference of systolic blood pressure on metoprolol compared with that on bisoprolol was 12.38+ 22.26 (p = 0.042). The mean difference of diastolic blood pressure on metoprolol compared with that on bisoprolol was 5.375 + 7.719 (p = 0.014). According to maximum tolerated dose of metoprolol and bisoprolol dose at 3rd month, only 1 patient (6.25%) had increased daily cost when switch from metoprolol to bisoprolol. Total of 15 patients (n=15, 93.75%) had reduced cost when switch from metoprolol to bisoprolol. The mean daily cost when patients were on metoprolol was RM0.256 while on bisoprolol was RM0.117. For side effect profile, a total of 12.5% (n=2) from the study group experienced hypotension and fatigue respectively; 6.25% (n=1) had bradycardia and dizziness when taking metoprolol whereas for patient on bisoprolol, only 6.25% (n=1) experienced bradycardia.

CONCLUSION
Reduction in systolic and diastolic blood pressure is seen in patients who switched treatment from metoprolol to bisoprolol. In addition, reduced daily cost and less side effects are seen in patients treated with bisoprolol.

KEYWORDS
cost, chronic heart failure, metoprolol, bisoprolol

NMRR-13-309-15036

Editorial Comment:
The study methodology is weak and data presented is limited for any meaningful conclusion.
FAMILY PERCEPTION TOWARDS PATIENTS WITH PSYCHIATRIC DISEASE IN A DISTRICT SPECIALIST HOSPITAL

Salmah Ahmad
Taiping Hospital, Perak.

INTRODUCTION AND OBJECTIVES

There is an increase in the prevalence of psychiatric diseases worldwide and psychiatric diseases are expected to rank second in terms of disease burden by 2030. A sizable proportion of patients with psychiatric illnesses are subjected to considerable stigma from the society and even worse, from their own family members. The study aimed to determine the family perception towards patients with psychiatric diseases in a district specialist hospital in Malaysia.

METHODOLOGY

This is a cross-sectional study conducted in the psychiatry clinic of Taiping Hospital. A questionnaire was developed by the researchers. A pre-test on 20 family members visiting the psychiatric clinic was conducted. The revised questionnaires were distributed to all conveniently sampled family members who accompanied the psychiatric patients for clinic visit.

RESULTS

A total of 68 questionnaires were distributed, however only 60 (88.2%) were returned. More females (66.7%) than males (33.3%) were involved in the study. 55 (80.9%) family members believed that hereditary factors are the cause of psychiatric illnesses. A large proportion of family members (75.0%) had the perception that patients with psychiatric illnesses are dangerous. With respect to the treatment and care of the psychiatric patients, 48 (70.6%) of family members had the opinion that psychiatric patients should be admitted and routinely monitored in the psychiatry ward.

CONCLUSION

The majority of the family members perceive that patients with psychiatric illnesses are dangerous and many had poor understanding of mentally illness.

KEYWORDS

family members, perception, mentally ill, stigma

NMRR -12- 855-13227

Editorial Comment:

This study requires more data but the editorial committee was unable to obtain the information from the researcher despite many attempts. Hence, the methods and results presented in this abstract are limited and incomplete.
HAND HYGIENE COMPLIANCE AMONG REGISTERED NURSES AT THE PAEDIATRIC WARDS OF A REGIONAL REFERRAL HOSPITAL

Mardziah Rashid
Anaesthesia Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak

INTRODUCTION AND OBJECTIVES
Compliance to hand hygiene practices is important in critical units such as the Paediatric Intensive Unit (PICU) and the Neonatal Intensive Care Unit (NICU). Practicing hand hygiene serves to prevent the transmission of nosocomial infections to inpatients and healthcare workers. This study aimed to assess compliance to hand hygiene practices in accordance with the World Health Organization (WHO) recommendations among registered nurses in the PICU and NICU, and to identify factors contributing to non-compliance.

METHODOLOGY
This is a cross-sectional study conducted in 2 phases at Sultanah Bahiyah Hospital in Alor Setar, Kedah. In phase 1, pre-tested, self-administered questionnaires designed by the researcher were distributed to a convenient sample of 50 nurses working at the PICU and NICU to evaluate their knowledge on hand hygiene practices. In phase 2, the same 50 nurses were observed by researchers without their knowledge to evaluate their hand hygiene practices and compliance. Observation was carried out over a 3-day period, using a 7-step hand hygiene technique checklist recommended by WHO. Confidentiality of subjects was maintained. Data collected were analysed with Microsoft Excel.

RESULTS
Of the 50 nurses evaluated, 34 (68%) had less than 3 years of working experience. Based on the questionnaire evaluation, we found that nurses’ knowledge on hand hygiene and nosocomial infections were inadequate. 23 (46%) experienced skin irritation following the practice of correct hand hygiene. From the observation, we found that most nurses (72%) practiced correct hand washing technique as recommended by WHO. However, only 33 (66%) of the nurses washed their hands before and after caring for patients, and 31 (62%) washed hands before and after measuring the vital signs of patients. In addition, 30 (60%) nurses washed their hands after using gloves.

CONCLUSION
The majority of the nurses evaluated in this study had poor knowledge on hand hygiene. Strategies to improve hand hygiene practices should be strengthened, with audits conducted periodically to ensure compliance to hand hygiene practices.

KEYWORDS
hand hygiene compliance, nurses, paediatric wards, nosocomial infections

Editorial Comment:
This study requires more data but the editorial committee was unable to obtain the information from the researcher despite many attempts. Hence, the methods and results presented in this abstract are limited and incomplete.
JOB SATISFACTION AMONG NURSES AT A PSYCHIATRIC REGIONAL REFERRAL HOSPITAL

Fanny-Anasius Joitun
Bahagia Hospital, Perak.

INTRODUCTION AND OBJECTIVES

Mental health nursing has been reported as a stressful profession, with low job satisfaction. The level of job satisfaction in this profession remains a matter of concern and relates to staff performance. This study was aimed to determine the level of job satisfaction among nurses working with psychiatric patients in Hospital Bahagia Ulu Kinta.

METHODOLOGY

This is a cross-sectional study conducted from June to November 2011 among a convenient sample of nurses working in Hospital Bahagia Ulu Kinta. Self-administered questionnaires were distributed to all 25 wards of the hospital. Relevant questions were adapted from a previously published study (Ramasodi JMB, 2010) and used for data collection. Data was then analysed using SPSS.

RESULTS

A total of 50 nurses participated in the study, of which 28 (56%) were satisfied with their job. Factors that influenced nurses’ job satisfaction were relationship with colleagues (80%), management recognition (60%), manageable workload (40%), recognition by patients (34%), and personal growth and development (32%). There were no significant associations between job satisfaction and socio-demographic characteristics of the nurses.

CONCLUSION

More than half of the nurses in this study were satisfied with their job. However, few relate job satisfaction to workload or personal growth and development.

KEYWORDS

job satisfaction, nurses, psychiatric

Editorial Comment:
This study requires more data but the editorial committee was unable to obtain the information from the researchers despite many attempts. Hence, the methods and results presented in this abstract are limited and incomplete.
JOB SATISFACTION LEVEL FOR MIDWIVES AND NURSES IN A DISTRICT SPECIALIST HOSPITAL AND ITS RELATIONSHIP WITH JOB PERFORMANCES

Rosidah Yusoff
Obstetrics and Gynaecology Department, Seri Manjung Hospital, Perak.

INTRODUCTION AND OBJECTIVES

Job satisfaction is thought to be associated with better job performances. Reducing the turnover of healthcare professionals in the healthcare institutions can be achieved by ensuring that healthcare professionals find satisfaction in the work environment. The study aimed to evaluate the job satisfaction level among midwives and nurses, and to explore the relationship between job satisfaction and job performances.

METHODOLOGY

This is a cross-sectional study involving 30 conveniently sampled midwives and nurses from the Obstetrics and Gynaecology (O&G) department of Seri Manjung Hospital, a district specialist hospital in Malaysia. Nurses and midwives with at least 6 months working experience in the O&G department were eligible. A questionnaire was developed by the researchers with emphasis placed on 3 major aspects: (a) patient’s care, (b) working condition, and (c) professional growth. 3-point Likert scales were employed to grade the satisfaction level. The score ranges from 1 to 3, with greater satisfaction associated with the higher score. The self-administered questionnaires were distributed to eligible midwives and nurses.

RESULTS

30 midwives and nurses were involved in the study. The large majority (90%) were satisfied with the current working condition. However, only 43.3% of the respondents were satisfied with their continual professional development. Similarly, only 50.0% of the respondents felt satisfied with the patient’s care provided. These nurses and midwives were generally having low job satisfaction (93.3%) with the large majority (72.3%) of nurses and midwives intending to leave.

CONCLUSION

The overall job satisfaction is low amongst midwives and nurses at the O&G department of Seri Manjung Hospital. However, many of them are satisfied with their current working condition.

KEYWORDS

job satisfaction, job performance, nurse, midwives

EDITORIAL COMMENT:

This study requires more data but the editorial committee was unable to obtain the information from the researcher despite many attempts. Hence, the methods and results presented in this abstract are limited and incomplete.
MEDICATION ADHERENCE AND ASSOCIATED FACTORS AMONG DIABETIC PATIENTS IN A DISTRICT HOSPITAL, MALAYSIA

Foo PL, Abdul-Wahab NZ, Chan FY, Sreedaralingam N, Meor Nor Azian MN, Shum KY
Pharmacy Department, Batu Gajah Hospital, Perak.

INTRODUCTION AND OBJECTIVES

Adherence to diabetes treatment generally ranges from 23% to 77%. In Malaysia, only 17.1% are highly adherent. The World Health Organization (WHO) reported that more health benefits worldwide would be resulted from improving adherence to existing treatments, rather than by developing new medical treatments. This study aimed to evaluate medication adherence and to identify factors associated with medication adherence among diabetic patients in Batu Gajah Hospital, a district hospital in Malaysia.

METHODOLOGY

This was a cross sectional study involving face to face interviews with diabetic patients at the pharmacy outpatient department and the diabetic clinic in Batu Gajah Hospital conducted from June 2012 to December 2012. Interviews were conducted based on a standardised questionnaire comprising of different sections: demographic data, disease characteristics and validated 8-item Modified Morisky Scale. Pearson’s Chi-squared test was used to explore the relationship of medication adherence and its possible associated factors.

RESULTS

A total of 368 subjects were interviewed. 69.6% (n=256) subjects had good adherence to their diabetic medications, 19.8%(n=73) had average adherence and 10.6%(n=39) did not adhere to their medications. The large majority of subjects with good adherence were female 75.5% (n=142) and of Malay ethnicity 73.7% (n=146). Subjects who were on monotherapy have the highest percentage of good adherence: 82.1%(n=64) patients on one oral hypoglycaemic agent (OHA) and 85.7%(n=6) only on Mixtard. Subjects using combination therapy of OHA and insulin had low adherence 56.3%(n=40). Adherence was significantly higher 70.4%(n=235) when the patient took full responsibility towards their medication administration. Subjects were also more likely to have good adherence, 71.9%(n=228) if they understood the instructions to take their medications.

CONCLUSION

Medication adherence among diabetic patients in Batu Gajah Hospital was moderate. Gender, race, treatment regimen, dependency on others for medication intake and comprehension of medication intake instructions affected their adherence.

KEYWORDS
diabetic patients, medication adherence, associated factors

Editorial Comment:
This study requires more data but the editorial committee was unable to obtain the information from the researcher despite many attempts. Hence, the methods and results presented in this abstract are limited and incomplete.
NURSES’ KNOWLEDGE ON HYPOTHERMIA PREVENTION IN NEWBORN BABIES AT A SPECIALIST HOSPITAL

Mei-Hong Ong
Paediatric Department, Taiping Hospital, Perak

INTRODUCTION AND OBJECTIVES

Hypothermia in neonates is a common problem, and remains a challenge to neonatal care providers. Previous studies have demonstrated an association between hypothermia and increase morbidity and mortality in newborns. Thus, prevention or treatment of hypothermia is important in neonatal care. This study aimed to determine the level of knowledge among nurses in regarding hypothermia prevention among newborn babies in a specialist hospital.

METHODOLOGY

This is a cross-sectional study among nurses conveniently sampled from the Special Care Nursery (SCN) and the Labour Room of Taiping Hospital. Excluded were nurses on maternity leave, taking post basic courses, and who declined to participate. A pre-tested, validated questionnaire designed by researchers after consultation with experts of this area was used to evaluate the knowledge of nurses. The questionnaire comprised of 3 sections: (a) socio-demographics of nurses, (b) knowledge on hypothermia, and (c) factors contributing to hypothermia in newborns. Nurses’ knowledge was evaluated by their scores, and categorised as poor (0%-89%) and good (90%-100%) knowledge.

RESULTS

Of the 50 questionnaires distributed, 48 were returned, giving a response rate of 96.0%. 25 (52.1%) were SCN nurses and the remaining 23 (47.9%) were labour room nurses. One third of them were between 35 and 39 years old, and most (75%) had a working experience of 10 years and above. More than half of them (56.3%) acquired a diploma in nursing with post basic qualification. Of the 48 nurses evaluated, 34 (70.8%) demonstrated poor knowledge, and only 14 (29.2%) had good knowledge on hypothermia prevention among newborns. Age group (p = 0.196), education level (p = 0.332), and working experience (p = 0.258) of nurses were not significantly associated with their knowledge levels.

CONCLUSION

The large majority of nurses have poor knowledge on hypothermia prevention among newborns. These results highlight the need to improve neonatal thermal support and to raise awareness of potential complications associated with hypothermia.

KEYWORDS

knowledge, hypothermia prevention, newborn babies

NMRR ID: Not Available

Editorial Comment:

This study requires more data but the editorial committee was unable to obtain the information from the researcher despite many attempts. Hence, the methods and results presented in this abstract are limited and incomplete.
REASONS AND APPROPRIATENESS OF MODIFYING INHALER REGIMEN FOR PATIENTS WITH ACUTE EXACERBATION OF BRONCHIAL ASTHMA OR CHRONIC OBSTRUCTIVE AIRWAY DISEASE

Chew-Beng Ng¹, Noor-Fhasliana Saharudin¹, Nur-Syafiqah Abdul Rashid¹, Fatimah-Zaharah Yusof¹, G.R. Letchuman Ramanathan²
¹ Pharmacy Department, Taiping Hospital, Perak.
² Medical Department, Taiping Hospital, Perak.

INTRODUCTION AND OBJECTIVES
A change or an addition to the inhaler regimen is common for patients who were admitted for acute exacerbation of bronchial asthma (AEBA) or acute exacerbation of chronic obstructive airway disease (AECOAD). Such practice is frequently observed in the medical ward of Taiping Hospital, a district specialist hospital in Malaysia. This study aimed to determine the reasons and appropriateness of changing and/or adding inhalers to the existing inhaler regimen among patients admitted for AEBA or AECOAD to Taiping Hospital.

METHODOLOGY
This is a single-centre observational study conducted over a period of 4 months (September 2012- December 2012) in a medical ward setting. All patients who were diagnosed with AEBA and AECOAD were identified by the clinical pharmacist stationed at the medical ward. All changes or addition of inhalers to existing inhaler regimen and the associated reasons (if available) were documented in a data collection form developed by the researchers. Patients with changes or addition of inhalers occurring outside the normal working hours (8am to 5pm) were excluded from analysis. Data collected were analysed by SPSS 16.0.

RESULTS
A total of 68 alterations to the inhaler regimen were identified and included in the study. Such alterations frequently involved salmeterol/fluticasone accuhaler (38.2%). The main reason for modification to the inhaler regimen was poorly controlled asthma or chronic obstructive airway disease (COPD). The large majority of the 68 alterations were clinically appropriate (95.6%). All interventions done by the pharmacist to correct for the inappropriate change in inhaler regimen were accepted by the prescribers.

CONCLUSION
Most alterations to the inhaler regimen are clinically appropriate in the medical ward of Hospital Taiping. The main reason for modification to the inhaler regimen is poorly controlled asthma or COPD.

KEYWORDS
reason, alteration, inhaler

EDITORIAL COMMENT:
This study requires more data but the editorial committee was unable to obtain the information from the researcher despite many attempts. Hence, the methods and results presented in this abstract are limited and incomplete. A study of this nature must have clear, written, agreed criteria for appropriateness.
THE NUMBER OF PATHOLOGICAL JAUNDICE AND PHYSIOLOGICAL JAUNDICE ADMITTED TO NEONATAL WARD IN HOSPITAL

Nor'azah Mat Juaini
Teluk Intan Hospital, Perak.

INTRODUCTION AND OBJECTIVES

Neonatal jaundice (NNJ) is a common disorder of newborn that can cause serious or permanent damage to neonatal if goes unmonitored, unrecognized and untreated in a timely manner. The objective of this study is to determine the number of pathological and physiological jaundice being admitted to the neonatal ward in Teluk Intan Hospital.

METHODOLOGY

This was a cross sectional retrospective review conducted from October 2011 to December 2011 in Teluk Intan Hospital. Data were extracted from the admission book and census book of the postnatal ward. Neonates with diagnosis of physiological or pathological jaundice were analysed by sex, reason of admission and ethnicity.

RESULTS

A total of 118 neonates were admitted during the study period. Among the neonates 51.6% (n = 61) were females and 48.3% (n = 57) were male. Based on ethnicity the majority of admissions were Malays 69.49% (n = 82), followed by Chinese 15.25% (n = 18), Indian 8.47% (n = 10) and Orang Asli 6.77% (n = 8). More neonates with pathological jaundice (55.08%, n=65) were admitted for NNJ to the neonatal ward in comparison with those diagnosed to have physiological jaundice (49.91%, n=53). Neonates presented within 24 hour of life and after 24 hour of life. All neonates with pathological jaundice and physiological jaundice were referred.

CONCLUSION

There is a higher number of admission to the neonatal ward of pathological compared to physiological jaundice.

KEYWORDS

Newborn, jaundice, pathological, physiological

NMRR -12-855-16410

Editorial Comment:

This study requires more data but the editorial committee was unable to obtain the information from the researcher despite many attempts. Hence, the methods and results presented in this abstract are limited and incomplete.
TO INCREASE USAGE OF CODE 1 CONTRACEPTION AMONG HIGH RISK MOTHERS

Nurul A, Lee M, Yeoh SF, Ling HM
Manjung Health Department, Perak.

OUTLINE OF PROBLEM

Pregnancy spacing of 2-years is essential for high risk mothers to reduce the mortality and morbidity rate for both mother and child. Mothers are classified as high risk if they are suffering from hypertension or diabetes, are teenagers, have advanced maternal age, previous birth defects and prior Lower Segmental Caesarean Section (LSCS). Code 1 contraception is said to be the most effective birth control method available.

KEY MEASURES OF IMPROVEMENT

Improving the knowledge and competency of staff in managing family planning for high risk mothers and ensuring high risk mothers have a better understanding of the need for 2 years contraception may improve the percentage of code 1 contraception usage. The indicator chosen was the percentage of high risk mother using code 1 contraception and the threshold was set to not less than 70%.

PROCESS OF GATHERING INFORMATION

This is a cross-sectional study conducted at the Ayer Tawar Mother and Child Health Clinic. Data was collected by convenient sampling method. There were 3 phase in this study. Phase 1 was a pre-remedial phase from the 1st of December 2012 – 28th of February 2013 for identifying the causes of problems and setting-up a model of good care. Phase 2 was the remedial phase from the 1st of March 2013 – 31st of May 2013 and included implementing appropriate interventional methods. Phase 3, the post-remedial period from the 1st of June 2013 – 31st of August 2013 was to evaluate the effectiveness of intervention method. Data was collected via questionnaires for staff and patients, reviewing audit cards, audit returns of contraceptives and training records.

ANALYSIS AND INTERPRETATION

The pre-remedial study showed only 49% (n=17) of high risk mother practice code 1 contraception. Reason for the low usage of code 1 was due to the fear of side effects (70%, n=7), lack of monitoring among high risk mothers (40%, n=4) and lack of referral to medical officer and family medicine specialist.

STRATEGY FOR CHANGE

Intervention activities including re-training of staff (via CMEs), schedule education program for patients, distribution of educational pamphlets and counselling sessions by dedicated team for patient. This was done over the space of 3 months.

EFFECT OF CHANGE

The percentage of code 1 usage among high risk mothers had increased from 49% (n=17) to 81.3% (n=26) after 3 months of intervention. From the 27 respondents among high risk mothers 10 patients (37%) initially refuse code 1 but after counselling session by the dedicated team 2 patients from the 10 (20%) agreed to practice code 1. The study depicts positive response on improving code 1 contraception usage among high risk mother.

THE NEXT STEPS

Regular monitoring and reinforcement are necessary to maintain or improve this achievement.

NMRR ID: Not Available
INTRODUCTION AND OBJECTIVES

Cervical cancer is one of the most common cancers among women worldwide. It is the second most common cause of death among women after breast cancer. Cervical cancer can be prevented and treated. However, the willingness to be screened is one of the contributing factors for late detection. The purpose of this study was to evaluate the practice of Pap smear screening among critical care nurses of a regional referral hospital in Perak.

METHODOLOGY

This is a cross-sectional study conducted at Raja Permaisuri Bainun Hospital. A total of 30 nurses from 3 different critical units in the hospital were conveniently sampled. A questionnaire designed by the researcher was distributed to the nurses, and data collected were analysed.

RESULTS

In this study, half of the 30 nurses (50.0%) had done a Pap-smear screening. Among these 15 nurses, 8 (53.3%) undergo Pap-smear screening periodically in parallel with the recommendations of Pap smear screening by the Ministry of Health. Of those who had not done a Pap smear screening or do not do it periodically, 16 (53.3%) of them considered Pap smear screening not important, 12 (40.0%) had no time to undergo the screening, 18 (60.0%) considered it contrary to religion, principles of life and culture, and 8 (26.7%) feared pain from the screening procedure.

CONCLUSION

Results of this study showed that the practice of Pap smear screening among nurses is low. There is need to further educate nurses who will play a major role in educating the public on the availability and need for cervical screening services.
INCREASING QUIT RATE AMONG CLIENTS IN QUIT SMOKING CLINIC KLINIK KESIHATAN (KK) PANGKOR

Nurasidah Robakin, Puah Juling, Ling HM, Yeoh SF
Manjung Health Department, Perak.

OUTLINE OF PROBLEM

The quit smoking clinic service has been introduced at KK Pangkor since 2010. It was noted that the rate of patients giving up smoking after attending the clinic was poor with KK Pangkor achieving only a rate of 5.2% in 2012. This was of concern as smoking is a major cause of increasing morbidity and mortality among Malaysians. Staff incompetency, ineffective system and management, and various factors influencing defaulters were identified as shortcomings. The objective of this study was to identify the issues causing the low-rates of smoking cessation, effective remedial methods and re-evaluating the remedial method.

KEY MEASURES FOR IMPROVEMENT

The Clinical Practice Guidelines (CPG) on Treatment of Tobacco Use and Dependence 2003 was adhered to strictly. Success was defined as abstaining from smoking for 6 months from the day of smoking cessation. From the national consensus for reducing smokers among patients attending the quit smoking clinic, the standard reduction rate was set at 5%. The outcome was measured in percentages.

PROCESS OF GATHERING INFORMATION

A prospective cross-sectional study was carried out from the 1st of January 2013 to 30th of September 2013. Pre-remedial data was collected from the 1st of Jan to 31st March 2013 by using a universal sampling method on patients attending the clinic. 2 sets of questionnaires were used: set A to be answered by patients focusing on causes of low quit rates (12 questions, 30 respondents) and set B by staff working at the quit smoking clinic to assess their knowledge (10 MCQ questions, 6 respondents).

ANALYSIS AND INTERPRETATION

Remedial action was taken from 1st of April to 30th of Jun 2013. All factors affecting the quit smoking were addressed. Among key factors were inadequate knowledge among assistant medical officers (50%) & nurses (50%), rigid appointment times given (80%), inadequate or complicated explanation (30%), tracing of defaulters (0%), withdrawal symptoms (90%) and peer pressure to quit (100%).

A post-remedial data collection from 1st of July to 30th of September 2013 was conducted. Improvements included: withdrawal symptoms (100%), frequency of follow-up (95%), defaulter tracer (100%) and frequency of follow-up (95%). Smoking cessation rates improved from 5.5% pre-remedial to 15.7% post-remedial hence reaching the national target of 15%.

THE NEXT STEPS

In order to maintain the targeted quit rate, adherence to follow up should be done for a minimum of 6 months. Implementation of a support group should be reinforced to provide support to patients intending to quit smoking. Correct dosing and regular re-evaluation of nicotine dosing is important to improve withdrawal rates. Clinics should evaluate their centers honestly and improve their success rates by implementing the suggested measures.

NMRR ID: Not Available
Editorial Note:

The studies listed below were conducted in Perak in 2013. However the abstracts submitted were very weak and lacked adequate details on methodology and data. The editorial committee was unable to obtain more information despite many attempts. Hence we are listing the topics below for documentation and future reference.

1. Reducing The Incidence of Post Transtibial Amputation Flexion Contracture Via Post Operative Stump Care
   Kee-Hoong Ng, Ananthi Krishnamoorthy, Chon-Kit Lee, Ida-Ayu Salleh

2. Community Screening For Chronic Kidney Disease In A Regional City, Malaysia
   Chandaran M, Nathan P, Chek-Loong Loh

3. Comparison Of The Knowledge And Attitude Towards Kidney Donation Between Healthcare Workers And The General Public In A Regional City, Malaysia
   Chandaran M, Nathan P, Chek-Loong Loh

4. Factors Affecting Antenatal Care Visits Among Pregnant Women In A Mother & Child Health Clinic
   Norazura Ismail

5. A Structured Programme On The Interpretation Of Electrocardiogram For Nurses At The Medical Unit Of A Regional Referral Hospital
   Ratnavathy P. Koval Pillai

6. Scale ‘Intravenous Infusion (I.V. Drip Ruler)

7. Patient’s Satisfaction In A Selected Medical Ward At A Specialist Hospital In Perak
   Umikalsum Baharin

8. Awareness Of Neonatal Jaundice Among Mothers At The Special Care Nursery (SCN) Of Hospital Taiping
   Rusliza Abd Razak

9. Improving the Quality and Effectiveness of Drug Control Oral and Injection to Reduce Waste Costs in Hospital Selama Emergency Unit, Perak
   Yong-Chia Low, Yi-Lyn Yean, Louise Santana Malar, Siti Zuraidah Ahmad, Nor’Azrizan Hashim

10. Assessment Of Endotracheal Tube Suctioning Techniques In The Neonatal Intensive Care Unit Of A Specialist Hospital
    Shammudeswary

11. Obesity Among Nurses In Multidisciplinary Wards At Hospital X
    Siti Hadijah Abdul Rashid

12. Effectiveness Of Health Education Leaflets In Addressing Non-Compliance To Diabetic Retinopathy Appointments
    Halina Shahrom

13. The Level Of Anxiety Among Guardians Who Accompanied A Psychiatric Patient For Treatment At The Out-Patient Department (Opd), Hospital Permai, Johor Bahru
    Rafiza-Md Saad

14. Prevention Of Hypothermia In Newborn Baby During Transportation (Cutie Pie)
    Rohani-Samsudin, Siti-Norsita Awang, Noorleeza-Md. Lazim

15. The Practices Of Breast Self Examination Among The Community Nurses At Zone One Of Pkd Kinta
    Maizun-Karimuddin

16. Study Of “Knowledge, Attitude And Practice Of Breast Self Examination Among Ladies In Kk Tronoh, Perak State, Year 2010”
    Nor-Asiah Abdul Karim

17. Knowledge On Diabetic Foot Ulcer Management Among Diabetic Patients And Health Care Personnel In A District Specialist Hospital
    Christina anak Kim Mui
<table>
<thead>
<tr>
<th>No.</th>
<th>Title of the Research Study</th>
<th>Principal Investigator(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Usage of Antibiotic and Microbial Resistance Pattern in Hospital Slim River</td>
<td>Loke Mun Yee, Wong Hong Yean, Hospital Slim River</td>
</tr>
<tr>
<td>2.</td>
<td>Identification of Endotracheal Intubation by Bedside Ultrasonography As Compared to Gold Standard of Test</td>
<td>Tan Wan Chuan, Hospital Raja Permaisuri Bainun, Ipoh</td>
</tr>
<tr>
<td>3.</td>
<td>Scattered Radiation to the Breasts from CT scan of Head</td>
<td>Solehah Ismail, Hospital Raja Permaisuri Bainun, Ipoh</td>
</tr>
<tr>
<td>4.</td>
<td>Audit On Paracetamol Poisoning Samples In Clinical Pharmacokinetic Service (CPS) Hospital Taiping</td>
<td>Nazedah Ain, Tan Sing Chian, Hospital Taiping</td>
</tr>
<tr>
<td>5.</td>
<td>Evaluation on In-hospital Outcomes of STEMI patients Post-streptokinase Therapy in HSM</td>
<td>Phoon Kah Lai, Hospital Seri Manjung</td>
</tr>
<tr>
<td>6.</td>
<td>Impact Malaysia’s Primary Care On Value of Early Screening?</td>
<td>Shaffari Marzuki, Klinik Kesihatan Sitiawan</td>
</tr>
<tr>
<td>7.</td>
<td>Two years retrospective review of head &amp; neck cancer in hospital Sultanah Bahiyah, Kedah</td>
<td>Nurulhusna Tarmizi, UniKL-RCMP</td>
</tr>
<tr>
<td>8.</td>
<td>Study on healthcare provider adherence on storage of powder for injection and powder for oral suspension of antimicrobial after reconstitution in paediatric ward at Hospital Slim River</td>
<td>Nur Azlina Rusli, Nurul Maizura Alias, Hospital Slim River</td>
</tr>
<tr>
<td>9.</td>
<td>Study on the Rationale Use and the De-escalation of Carbapenem in Hospital Slim River</td>
<td>Gan Boon Yan Leow, Wooi Leong, Stacie Goh Ee Vee, Hospital Slim River</td>
</tr>
<tr>
<td>10.</td>
<td>Determining Incidence Of Toxic Gentamicin Levels Among Neonates At Hospital Teluk Intan</td>
<td>Doris George Visuvasam, Hospital Raja Permaisuri Bainun, Ipoh</td>
</tr>
<tr>
<td>11.</td>
<td>Supergeue Accidentally Used As Ear Drops</td>
<td>Anusha Balasubramanian, Hospital Taiping</td>
</tr>
<tr>
<td>12.</td>
<td>The Transmission of Multidrug Resistance Tuberculosis to Household Contacts and Effectiveness of Intervention in the Preventive of Transmission</td>
<td>Omar Salad Elmi, Hospital Raja Permaisuri Bainun, Ipoh</td>
</tr>
<tr>
<td>13.</td>
<td>A Study On Patient Satisfaction At The Outpatient Department Of Hospitals In Perak</td>
<td>Nor Aida Sanusi, Hospital Slim River</td>
</tr>
<tr>
<td>14.</td>
<td>The Importance Of Compliance To Desferrioxamine Treatment In Reducing Serum Ferritin In Transfused Thalassemia Major Patients</td>
<td>Ngai Wen Jing, Hospital Seri Manjung</td>
</tr>
<tr>
<td>15.</td>
<td>To Determine The Risk Factors And Perinatal Outcomes of Macrosomic Babies Delivered Vaginally In Hospital Raja Permaisuri Bainun, Ipoh In The Year 2011</td>
<td>Nabilah Adam Lee, UniKL-RCMP</td>
</tr>
<tr>
<td>16.</td>
<td>Appropriateness of Adult Parenteral Nutrition Usage in Taiping Hospital</td>
<td>Ng Wan Ning, Hospital Taiping</td>
</tr>
</tbody>
</table>
   **Principal Investigator:** Nurhani Mohd Azmi, Pejabat Kesihatan Dearah, Kerian

19. Molecular characterization, epidemiology and evolutionary analysis of chronic Hepatitis B infections among Orang Asli in Malaysia  
   **Principal Investigator:** Siti Roszilawati Ramli, Hospital Raja Permaisuri Bainun, Ipoh

   **Principal Investigator:** Ang Leng Peow, Hospital Raja Permaisuri Bainun, Ipoh

21. Generic Prescribing in Teluk Intan Hospital  
   **Principal Investigator:** Kok Jia Huei, Hospital Teluk Intan

22. Contending Groups and Institutional Constraints in the Shaping of Malaysian Healthcare Delivery System  
   **Principal Investigator:** Por Heong Hong, Pejabat Kesihatan Daerah, Kinta

23. TBIS Surveillance Evaluation for Tapah Prison  
   **Principal Investigator:** Marina Kamaruddin, Jabatan Kesihatan Negeri, Perak

24. Reactivation of Latent Melioidosis in a Patient Admitted with Acute Renal Failure Secondary to Rhabdomyolysis  
   **Principal Investigator:** Yee Seow Yeing, Hospital Raja Permaisuri Bainun, Ipoh

25. Return of Unused Medicine from Outpatient in Hospital Slim River  
   **Principal Investigator:** Nor Diyana Anuar, Nur Amalina Mat Dawam, Hospital Slim River

26. The Mental Health Law in Malaysia with Special Reference to the Mentally Disordered Criminals  
   **Principal Investigator:** Mazlena Mohamad Hussain, Hospital Bahagia Ulu Kinta

27. An Assessment of Spirituality, Religiosity and Religious Coping Amongst Schizophrenic Patients in a Community Setting and Its Association with Medication Adherence.  
   **Principal Investigator:** Ian Lloyd Anthony, Hospital Bahagia Ulu Kinta

28. Dementia Assessment in Malaysia (DAIM): Validation of Assessment Tool in Malay Language  
   **Principal Investigator:** Cheah Wee Kooi, Hospital Taiping

29. The Relationship between Work Environment and Job Satisfaction among People in Organisation  
   **Principal Investigator:** Nurhashcia Amin, Hospital Slim River

30. A retrospective collaborative (multi-centre) study to determine the Clinical Characteristics of Trigeminal Neuralgia (TGN) patients seen at the Oral Medicine Clinic in Malaysia  
   **Principal Investigator:** Julizawati Ramli, Hospital Raja Permaisuri Bainun, Ipoh

31. Factors influencing the awareness on peri-conceptual usage of folic acid as the preventive measure of neural tube defect among primigravidas in urban setting in Malaysia  
   **Principal Investigator:** Bong Lie Ping, UniKL-RCMP

32. Drug Use Behaviours of Perak and Kelantan Residents in Malaysia  
   **Principal Investigator:** Abdul Haniff Yahaya, Choi Yee Yien, Hospital Teluk Intan

33. Low Back Pain at Work: Knowledge and Attitude of Nurse Managers at the Ipoh Public Hospital  
   **Principal Investigator:** Rahimah Thrin, Hospital Raja Permaisuri Bainun, Ipoh

34. Long Term Outcomes for Extremely Low Birth Weight (ELBW) Neonates in a Regional Referral Hospital  
   **Principal Investigator:** Julizawati Ramli, Hospital Raja Permaisuri Bainun, Ipoh

35. Provision of Basic Life Support (BLS) in Preterm Infants to Parents before Discharge in Malaysia  
   **Principal Investigator:** Yee Sze Ying, Hospital Raja Permaisuri Bainun, Ipoh

36. Are Nasal Prongs Better than Nasal Masks for Continuous Positive Airway Pressure Delivery in Preterm Infants?  
   **Principal Investigator:** Low Yit Ying, Hospital Raja Permaisuri Bainun, Ipoh
37. Parental and Health Care Professionals Opinion on Expressed Milk Donation for Ill Neonates  
   Principal Investigator: Ainon Haninah Abdul Malek, Hospital Raja Permaisuri Bainun, Ipoh

38. Risk Factors for Recurrent Exacerbations of Chronic Obstructive Pulmonary Disease  
   Principal Investigator: Umadevi A. Muthukumaru, Hospital Taiping

39. Patient’s Knowledge on Sublingual Glyceryl Trinitrate (GTN) at The Outpatient Pharmacy, Hospital Slim River  
   Principal Investigator: Daniel Chung Weng Seng, Geetha Sandre Mohanan, Sao Hooi Fen, Sri Yasotha Subramoniyan, Hospital Slim River

40. Penggunaan Dekoder Mediharta Di Kedai Farmasi (Pelesen A)  
   Principal Investigator: Sareh Safwan Abu Seman, Jabatan Kesihatan Negeri, Perak

41. Improving Management of Prolonged Neonatal Jaundice in a health region  
   Principal Investigator: Inthira Sankari Balasubramaniam, Hospital Slim River

42. Improving Prescription Practices in Ministry of Health Primary Care Clinics  
   Principal Investigator: Lim Wei Yin, Clinical Research Centre (CRC) Perak

43. Utilising a Structured Pre-dialysis Education Program to Optimise Preparedness for Dialysis among Chronic Kidney Disease Patients  
   Principal Investigator: Lee Li Yuan, Hospital Teluk Intan

44. Improved patient-ventilator synchrony in a neonate using NAVA  
   Principal Investigator: Chew Eng Lai, Hospital Raja Permaisuri Bainun, Ipoh

45. Ankle Brachial Pressure Index And Smoking Status Among Male Age 40 Years And Above At Poliklinik Jalan Damai, Tapah  
   Principal Investigator: Norzazalina Samsudin, Klinik Kesihatan, Tapah

46. Speech-Language Pathologist’s Knowledge About Hearing Aids Measurements Performance  
   Principal Investigator: Engku Salma, Hospital Raja Permaisuri Bainun, Ipoh

47. Factors Affecting Haematocrit Levels of In-patients Diagnosed with Dengue Fever  
   Principal Investigator: Letchuman Ramanathan, Hospital Taiping

48. The use of self-monitoring blood glucose (SMBG) and its relationship with glycaemic control in insulin-treated type 2 diabetic patients  
   Principal Investigator: Ding Wern Jing, Hospital Raja Permaisuri Bainun, Ipoh

49. Prevelance of outpatient prescribing error in manual method of prescribing in Hospital Raja Permaisuri Bainun  
   Principal Investigator: Chang Chee Tao, Nalini Krishnasamy, Hospital Raja Permaisuri Bainun, Ipoh

50. Antibiotic Prescribing Pattern and Adherence to Malaysia National Antibiotic Guideline in a District Hospital  
   Principal Investigator: Low Yong Chia, Hospital Selama

51. Evaluation Of Pharmacist-Assisted Heart Failure Management In Malaysia  
   Principal Investigator: Cynthia Priyadarshini Gopal, Hospital Raja Permaisuri Bainun, Ipoh

52. Management for Subjective Tinnitus In Hospital  
   Principal Investigator: Wan Suhaifah Wan Husain, Jabatan Kesihatan Negeri, Perak

53. An evaluation of medication-related problems among older people admitted to surgical wards at Taiping Hospital  
   Principal Investigator: Wan Azuati Wan Omar, Hospital Taiping

54. A National Survey Exploring Job Satisfactions Among Government Hospital Pharmacists in Malaysia  
   Principal Investigator: Wan Azuati Wan Omar, Hospital Taiping

55. Rate of NSTEMI & UA Re-admission in Male Medical Ward, Hospital Seri Manjung  
   Principal Investigator: Chiam Zye Wei, Hospital Seri Manjung
56. Pharmacist Intervention on Patient’s Knowledge Towards Diabetic Medications In OPD HSM  
   **Principal Investigator:** Mastura Tahir, Hospital Seri Manjung

57. Indication Induction of labour and association with maternal and perinatal outcome in Hospital Raja Permaisuri Bainun  
   **Principal Investigator:** Wan Muhammad Faris Wan Abd Malik, UniKL-RCMP

58. Research On BAHA  
   **Principal Investigator:** Suhana Abdul Rahim, Hospital Taiping

59. Indication For Induction Of Labor And Association With Maternal And Perinatal Outcomes In Hospital Raja Permaisuri Bainun, Ipoh, Perak  
   **Principal Investigator:** Hafis Shauhini, UniKL-RCMP

60. Inappropriate Medication (IM) Assessment in Hospitalized Geriatric Population Using STOPP and START Criteria  
   **Principal Investigator:** Doris George Visuvasam, Hospital Raja Permaisuri Bainun, Ipoh

61. Keberkesanan Penyusuan Susu Ibu Secara Eksklusif Dikalangan Ibu Bekerja  
   **Principal Investigator:** Anjammal Devi Ramiah, Hospital Raja Permaisuri Bainun, Ipoh

62. Pengetahuan Tentang Jagaan Luka Episiotomy di Kalangan Ibu Primipara di Hospital Tapah  
   **Principal Investigator:** Eda Kartini Abdul Rahman, Hospital Tapah

63. Faktor-Faktor Yang Mempengaruhi Anemia Dikalangan Ibu Hamil Di Klinik Kesihatan Ibu Dan Anak Bagan Serai  
   **Principal Investigator:** Siti Masliah Mohammad, Klinik Kesihatan Bagan Serai

64. Tahap Pengetahuan Ibu Tentang Kepentingan Kaedah “Nonpharmacology” Dalam Melegakan Kesakitan Bersalin.  
   **Principal Investigator:** Rokiah Haji Aziz, Hospital Raja Permaisuri Bainun, Ipoh

65. Pengetahuan Tentang Amalan Ujian Pap Smear Di Kalangan Wanita Di Klinik Kesihatan Tanjung Rambutan  
   **Principal Investigator:** Anis Rahayu Azman, Klinik Kesihatan Tanjung Rambutan

66. Defisit Pengetahuan Tentang Kesakitan Ketika Proses Kelahiran Ibu Primigravida Di Hospital Raja Permaisuri Bainun, Ipoh Perak  
   **Principal Investigator:** Zabaidah Che Lat, Pejabat Kesihatan Dearah, Kinta

   **Principal Investigator:** Suraidah Ibrahim, Pejabat Kesihatan Dearah, Larut dan Matang

68. Pengesanan Awal Tanda-Tanda Fisiologi Jaundis Dikalangan Ibu-Ibu Postnatal Di Hospital Raja Permaisuri Bainun  
   **Principal Investigator:** Haslina Abdul Hamed, Pejabat Kesihatan Daerah, Batang Padang

69. Amalan pemeriksaan sendiri payudara dikalangan wanita 18-50 tahun yang akan dijalankan di Klinik Kesihatan Greentown.  
   **Principal Investigator:** Sapiah Abdul Rahman, Hospital Seri Manjung

70. The Use Of Complementary And Alternative Medicine (Cam) Among Patients With Diabetes Mellitus In Jalapang Health Clinic  
   **Principal Investigator:** Vijaya Palaniappan, UniKL-RCMP

71. An Observation Study: IV Drug Preparation And Administration In General Medical Wards  
   **Principal Investigator:** Doris George Visuvasam, Hospital Raja Permaisuri Bainun, Ipoh

72. Pendiagnosan Kanser Pada Tisu Payudara Wanita Di Hospital Raja Permaisuri Bainun Ipoh  
   **Principal Investigator:** Rabi’ah Addawiyah Abdul Rashid, Hospital Raja Permaisuri Bainun, Ipoh

73. Profiling vestibular function in adult cochlear implant users  
   **Principal Investigator:** Roshila Bujang, Hospital Raja Permaisuri Bainun, Ipoh

74. Amalan penjagaan kaki dalam kalangan pesakit diabetes di Wad Perubatan Hospital Taiping  
   **Principal Investigator:** Sharipah Shaari, Hospital Taiping
| 75. | Proposal Kajian Obesiti Di Kalangan Jururawat U29 Di Hospital Raja Permaisuri Bainun Ipoh Perak  
Principal Investigator: Noor Asmah Hamdan, Hospital Raja Permaisuri Bainun, Ipoh |
| 76. | Knowledge, Attitude And Practice Of Dengue Fever Prevention In Taman Pelangi, Ipoh  
Principal Investigator: Shameem Banu Mirrah Maidin, UniKL-RCMP |
| 77. | Usage Of Carbapenems In Hospital Taiping  
Principal Investigator: Grace Yen Lean Lyn, Hospital Taiping |
| 78. | Evaluation of Medication Therapy Adherence Clinic (MTAC) Warfarin Clinic: Assessing the Improvement of Anticoagulation Knowledge in Patient New to Warfarin Therapy  
Principal Investigator: Chan Shir Nee, Klinik kesihatan, Taiping |
| 79. | Breast And Cervical Cancer Audit: A Retrospective Analysis From 2010-2011 In Larut Matang And Selama District, Perak  
Principal Investigator: Subashini Ambigapathy, Hospital Taiping |
| 80. | Study on the effectiveness of pharmacist medication therapy adherence clinic (MTAC) in management of uncontrolled hypertension in Taiping Hospital  
Principal Investigator: Khor Min Hui, Hospital Taiping |
| 81. | Patient Satisfaction Survey on Extemporaneous Syrup Preparation for Paediatric in Outpatient Pharmacy, Hospital Raja Permaisuri Bainun, Ipoh  
Principal Investigator: Siti Nur Sharida Abdul Kadir, Hospital Raja Permaisuri Bainun, Ipoh |
| 82. | Investigation of severity and extent of Atopic Eczema using imaging techniques  
Principal Investigator: Humaira Nisar, Universiti Tunku Abdul Rahman (UTAR), Tang Jyh Jong, Hospital Raja Permaisuri Bainun, Ipoh |
| 83. | A Study Comparing Medication Documentation Discrepancies by Similar and Different Prescribers in a Regional Referral Hospital  
Principal Investigator: Khoo Sze Ni, Hospital Raja Permaisuri Bainun, Ipoh |
| 84. | Evaluation Of Iron Stores In Regular Blood Donor In Hospital Raja Permaisuri Bainun Ipoh, Perak  
Principal Investigator: Siti Aishah Lazim, Hospital Raja Permaisuri Bainun, Ipoh |
| 85. | Under Is Not Enough! How Aware Are We?  
Principal Investigator: Imran Bin Osman, Kavita M. Bhujwani, Hospital Raja Permaisuri Bainun, Ipoh |
| 86. | Pengetahuan dan amalan anggota Jabatan Kecemasan Hospital Teluk Intan terhadap Standard Precaution  
Principal Investigator: Zulkifli Salleh, Hospital Pulau Pinang |
| 87. | Personal Social Performance Outcome Between Atypical And Conventional Anti-Psychotic Medications In Newly Diagnosed Schizophrenia And Bipolar Disorder  
Principal Investigator: Ahmad Syukri Chew Abdullah, Hospital Bahagia Ulu Kinta, Murniyati Abd Wahid, Hospital Teluk Intan |
| 88. | Survey on Returned Medication in Out-patient Pharmacy Setting, Hospital Taiping  
Principal Investigator: Nirmala Devi Supramaniam, Siti Rohaiza bt Md Saad, Hospital Taiping |
| 89. | A retrospective study of cancer from 1st January 2010 to 30th June 2010 in Hospital Raja Permaisuri Bainun, Ipoh  
Principal Investigator: Sadesvaran Muniandy, UniKL-RCMP |
| 90. | Risk Factors For Breast Cancer In Perak - A Case Control Study  
Principal Investigator: Mohd Nasir Abdullah, Universiti Teknologi Mara (UiTM) |
| 91. | Medication Adherence Among Diabetic Patients in Hospital Batu Gajah and Associated Factors  
Principal Investigator: Foo Pei Ling, Hospital Batu Gajah |
| 92. | Economic Evaluation of Medication Therapy Adherence Clinic (Respiratory) on Asthma Patients  
Principal Investigator: Yong Yee Vern, Hospital Teluk Intan |
93. Tahap Pengetahuan Pemeriksaan Pap Smear Di Kalangan Jururawat
Principal Investigator: Chin Siew Koon, Hospital Raja Permaisuri Bainun, Ipoh

94. Pengamalan Pemeriksaan Payu Dara Dikalangan Jururawat
Principal Investigator: Kaliani Krishnan, Hospital Raja Permaisuri Bainun, Ipoh

95. Insiden Obesiti Dikalangan Anggota Kesihatan Di Pejabat Kesihatan Daerah Hilir Perak
Principal Investigator: Mohd. Yunus Rasidi, Klinik Kesihatan Hutan Melintang

96. Anaemia In Pregnancy:Socio-Demographic Characteristics And Appropriateness Of Management At Buntong Health Clinic
Principal Investigator: Elvind Yip Hung Loong, UniKL- RCMP

97. A Case-Control Study On Risk Factors Of Coronary Heart Disease
Principal Investigator: Hanafi Abdul Hamid, Hospital Raja Permaisuri Bainun, Ipoh

98. A cross sectional study of the risk factors associated with the development of complications as well as cardiovascular risk factors among type 2 diabetes mellitus patients in Klinik Kesihatan Simee
Principal Investigator: Ng Jia Ji, UniKL- RCMP

99. Retrospective Study on Prevalence of Drug-Resistant Streptococcus pneumoniae in Hospital Raja Permaisuri Bainun Ipoh
Principal Investigator: Mohd Khairi Sanusi, UniKL- RCMP

100. Indication For Induction Of Labour And Association With Maternal And Perinatal Outcomes In Hospital Raja Permaisuri Bainun
Principal Investigator: Mohd Hafis Shauhini, UniKL- RCMP

101. The Use of Barrier Wound Protectors in Reducing Surgical Site Infection in Contaminated and Dirty Surgical Wounds
Principal Investigator: Satkunan Mark, Hospital Raja Permaisuri Bainun, Ipoh

102. Population Based Survey on Knowledge & Attitudes towards Antibiotic in Perak
Principal Investigator: Abdul Haniff Mohd Yahaya, Syaheeda Yaakob, Hospital Teluk Intan

103. Patient Safety in a Regional Referral Hospital:An Audit on Competence of Drug Calculation and Preparation Among Pediatric Nurses
Principal Investigator: Haymalatha Rajagam, Hospital Raja Permaisuri Bainun, Ipoh

104. Prevalence of Parasitic Infections in Pangkor Island Community in Peninsular Malaysia
Principal Investigator: Arine Fadzlun Ahmad, Jabatan Kesihatan Negeri, Perak

105. The Audit Of Diabetes Dependent Quality Of Life (ADDQOL) Of Diabetic Patients With Foot Ulcer In Hospital Taiping
Principal Investigator: Hazwani Othman, Hospital Taiping

106. Oral Salbutamol prescription in children with upper respiratory tract infection in Malaysian primary care setting
Principal Investigator: Verno Lee Kar Mun, Klinik Kesihatan Jelapang

107. Improving Adherence to anti-Diabetic Medication
Principal Investigator: Zainul Ikhwan Ahmad Khosairi, Klinik Kesihatan Taiping

108. Retrospective Study Of Diabetes Mellitus And Its Complications Amongst Diabetes Mellitus Patients In Jelapang Heath Clinic
Principal Investigator: Geetha Shanmugam, Klinik Kesihatan Jelapang

109. The Knowledge Level, Compliance and Quality of Life in Heart Failure Patients
Principal Investigator: Tang Xuan Han, Hospital Teluk Intan

110. Tekanan Kerja Dikalangan Jururawat High Risk Ward Hospital Raja Permaisuri Bainun Ipoh
Principal Investigator: Azizah Ariffin, Hospital Raja Permaisuri Bainun, Ipoh

111. QA Study: To Increase the Feedback for 72-hours Antibiotic Review In Hospital Raja Permaisuri Bainun, Ipoh, Malaysia
Principal Investigator: Chew Lan Sim, Hospital Raja Permaisuri Bainun, Ipoh
112. Paediatric Nurses’ Perceptions Of Medication Errors In A Regional Hospital
   Principal Investigator: Lee Hooi Beng, Hospital Raja Permaisuri Bainun, Ipoh

113. A retrospective study on methods of suicidal death reported in the Forensic Department at Hospital Raja Permaisuri Bainun, Ipoh from 2010 - 2011.
   Principal Investigator: Sarah Nazihah Idris, Syafiqah Nabilah Azali, Hospital Raja Permaisuri Bainun, Ipoh

114. Needle Stick Injury among Healthcare Workers in Hospital Raja Permaisuri Bainun
   Principal Investigator: Shaheen Mohd Rosli, Hospital Raja Permaisuri Bainun, Ipoh

115. Chronic Pain with Anxiety and Depression: A Comparison between Patients Attending Multidisciplinary Pain Clinic and Rheumatology Clinic
   Principal Investigator: NorHasniza Mohd Zanyuin, Hospital Raja Permaisuri Bainun, Ipoh

116. Prevalence of NSAIDs/aspirin induced upper gastrointestinal bleeding (UGIB) among patients admitted to surgical ward
   Principal Investigator: Oh Hoey Lin, Hospital Raja Permaisuri Bainun, Ipoh

117. A Cross-Sectional Study On Low Back Pain Among Health Care Workers In Orthopedic Ward In Hospital Raja Permaisuri Bainun, Ipoh, Perak
   Principal Investigator: Mohd Faiz Hafizi Mansor, Hospital Raja Permaisuri Bainun, Ipoh

118. Patient Perception on Painkiller
   Principal Investigator: Chong Chia Jie, Hospital Tapah

119. Tranexamic Acid for the treatment of postpartum haemorrhage: an international, randomised, double blind, placebo controlled trial.
   Principal Investigator: Mukudan Krishnan, Hospital Raja Permaisuri Bainun, Ipoh

120. Job Satisfaction Survey on Pharmacist Practitioners In Ministry Of Health
   Principal Investigator: Mohd Mansor Manan, Jabatan Kesihatan Negeri, Perak

121. Pilot Study on effect of coconut oil supplement on cognition and behaviour in patients with Alzheimers’s Disease
   Principal Investigator: Chan Sook Ching, UniKL- RCMP

122. Medication error: An evaluation of knowledge of nurses to Tinzaparin
   Principal Investigator: Nurfardilla Ferdaos, Hospital Raja Permaisuri Bainun, Ipoh

123. Sokongan Keluarga Semasa Rawatan Pemulihan Di Rumah Pesakit Psikiatri Home Care Hospital Bahagia Ulu Kinta
   Principal Investigator: Norhaslinawani Ahmad, Hospital Bahagia Ulu Kinta

124. Stres dikalangan Jurupulih Perubatan Carakerja di Hospital Bahagia Ulu Kinta.
   Principal Investigator: Nadzhaniza Mohamed Radzi, Hospital Bahagia Ulu Kinta

125. Audit on IV Gentamicin High Dose Extended Interval in Adult Wards in Hospital Raja Permaisuri Bainun Ipoh
   Principal Investigator: Ros Sakinah Kamaludin, Hospital Raja Permaisuri Bainun, Ipoh

126. Persepsi dan reaksi terhadap labour bagi ibu-ibu primigravida di wad antenatal dan bilik bersalin, Hospital Kuala Kangsar,Perak.
   Principal Investigator: Radiah Zakaria, Hospital Kuala Kangsar

127. Kepuasan Bekerja Di Kalangan Paramedik Di Klinik Kesihatan Dalam Daerah Kinta
   Principal Investigator: Shaipul Anwar Mat Saat, Pejabat Kesihatan Daerah, Kinta

128. Education Intervention In Medication Adherence and Knowledge among Hypertensive Patients In District Specialist Hospital
   Principal Investigator: Abdul Haniff Mohd Yahaya, Cheah Bee Fong, Liew Wei Mun, Shum Kah Yian, Tan Mei Jin, Hospital Teluk Intan

129. A Comparison Study on Knowledge and Attitude Among Public and Health Care Workers on Kidney Donation in A Regional City
   Principal Investigator: Muneswaran Chandaran, Hospital Raja Permaisuri Bainun, Ipoh
INVESTIGATOR INITIATED RESEARCH

110. A Survey On Pharmacists’ Perceptions Towards Evidence Based Practice
Principal Investigator: Mohd Mansor Manan, Salmiah Mohd Ali, Jabatan Kesihatan Negeri, Perak

111. Knowledge, Attitude and Practice on dengue fever in Perak Tengah District
Principal Investigator: Mohd Nasir Abdullah, Universiti Teknologi MARA (UiTM)

112. Improving compliance to topical medications among patients with psoriasis in Dermatology Clinic
Principal Investigator: Sharon Gopalan, Hospital Raja Permaisuri Bainun, Ipoh

113. The Survey on Knowledge, Attitude and Practice of Selected Hospital Staff on Medication Taking
Principal Investigator: Kamariah Shamsinar Kamarul Baharin, Hospital Taiping

114. Patient’s Perception On MRI In Hospital Raja Permaisuri Bainun
Principal Investigator: Salina Rezuan, Hospital Raja Permaisuri Bainun, Ipoh

115. A Retrospective Study On The Type Of Autoimmune Blistering Disorders And Its Treatment Modalities In Dermatology Clinic, Hospital Raja Permaisuri Bainun (HRPB), Ipoh.
Principal Investigator: Fatin Hanin Ahmd Shukri, Nur Mealiiela Omar, Hospital Raja Permaisuri Bainun, Ipoh

116. QA Project - Routine change of intravenous cannula in the prevention of superficial phlebitis
Principal Investigator: Alice Verghese, How Ann Kee, Hospital Raja Permaisuri Bainun, Ipoh

117. A Review Of Tuberculosis Among Health Care Worker in 5 Years At Perak State (2007-2011)
Principal Investigator: Nur Afiqah Ahmad, Jabatan Kesihatan Negeri, Perak

118. Evaluation of Francis Media for Screening of ESBL Producing Enterobactericeae from Clinical Specimens.
Principal Investigator: Siti Roszilawati Ramli, Hospital Raja Permaisuri Bainun, Ipoh

119. A Retrospective Study Of Gestational Diabetes Mellitus (GDM) And Its Complication Among GDM Patients At Hospital Raja Permaisuri Bainun (HRPB) Ipoh From Years 2010-2011
Principal Investigator: Siti Noorshahida Johari, Hospital Raja Permaisuri Bainun, Ipoh

120. Evaluation Of Diabetic Patients’ Knowledge On Hypoglycemia In Parit Buntar Hospital
Principal Investigator: Maslinatasha Mahmud, Hospital Parit Buntar

121. Review Of Bacteriology Of Neck Abscesses - A 3 Years Retrospective Study
Principal Investigator: Dakshaini, Hospital Raja Permaisuri Bainun, Ipoh

122. Assessment of self-reported medication adherence, knowledge of therapeutic goals and goal attainment among diabetic patients in primary care setting.
Principal Investigator: Chan Yoke Khuan, Klinik Kesihatan Manjoi, Cheah Soon Yee, Klinik Kesihatan Tanjung Rambutan, Thong Ying Ying, Pejabat Kesihatan Daerah, Kinta

123. A Retrospective Study On Prevalence Of Intertrochanteric Fractures Cases Admitted To Orthopedic Ward In Hospital Raja Permaisuri Bainun, Ipoh Perak From 1st January 2010- 31st December 2011
Principal Investigator: Amir Wahid Azizi, Hospital Raja Permaisuri Bainun, Ipoh

124. Customer Satisfaction Survey On Implementation Of Unit Dose
Principal Investigator: Chan Lai Yee, Hospital Raja Permaisuri Bainun, Ipoh

125. A Retrospective Study On The Patterns Of Injury In All Fatal Road Traffic Accident Reported In The Forensic Department Of Hospital Raja Permaisuri Bainun Ipoh, Perak In 2011
Principal Investigator: Hyder Aazad Hyder Shahrom, Hospital Raja Permaisuri Bainun, Ipoh

126. Tahap pergetahuan terhadap amalan universal precaution dikalangan pelatih jururawat dalam semester 4 di Kolej Sains Kesihatan Bersekutu Perak.
Principal Investigator: Roslina Dun, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

127. A Retrospective Study On Phototherapy And Its Indications In Dermatology Clinic, Hospital Raja Permaisuri Bainun (HRPB)
Principal Investigator: Nur Shakira Shafie, Hospital Raja Permaisuri Bainun, Ipoh
INVESTIGATOR INITIATED RESEARCH

148. To Reduce The Defaulter Rate Among Psychiatric Outpatients Attending The Follow-up Clinic At The Psychiatric Department of Raja Permaisuri Bainun Hospital, Ipoh
   Principal Investigator: Khuzaimah Mohd Zain, Mezon Ismail, Nirmala Nadan, Rohaida Awang Kechik, Hospital Raja Permaisuri Bainun, Ipoh

149. Nurses perception of the factors that influence their back pain among the nurses Spinal care rehabilitation Unit, Hospital Raja Permaisuri Bainun, Ipoh, Perak, Malaysia.
   Principal Investigator: Nor Shuhada Mohd Yunus, Hospital Raja Permaisuri Bainun, Ipoh

150. A Retrospective Study On Operated Thyroid Disease In Hospital Raja Permaisuri Bainun, Ipoh, Perak
   Principal Investigator: Hong Lee Kian, Hospital Raja Permaisuri Bainun, Ipoh

151. Retrospective Study On Prevalence Of Drug Resistance In Tuberculosis Treatment Among The TB Culture Positive Patient In Kinta District In The Year 2011
   Principal Investigator: Abdul Mualim Shah Abdul Rani, UniKL-RCMP

152. Kecenderungan Individu Didalam Pelaksanakan Penyelidikan Dalam Kalangan Personel Sains Kesihatan Bersekutu
   Principal Investigator: Mohd Haizad Yusof, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

153. A retrospective survey study on meningitis among Paediatric Patients In a Regional Referral Hospital
   Principal Investigator: Sharifah Shifaa Syed Abdullah, Hospital Raja Permaisuri Bainun, Ipoh

154. Effectiveness of Age Directed and Integrated Medical Unit
   Principal Investigator: Cheah Wee Kooi, Hospital Taiping

155. Quality Of Life Assesment Of Opiod Substance Abusers On MMT In Hospital Taiping
   Principal Investigator: Majid Othman, Mohd Yusuf Mat Abdullah, Jabatan Pesakit Luar, Taiping

156. Internalized Stigma among Schizophrenia patient in HBUK and its relation to clinical and psychological profiles
   Principal Investigator: Marhani Midin, Hospital Bahagia Ulu Kinta

157. Anatomical variants of surgically important landmarks in the sphenoid sinus : A radiologic study in Malaysian patients
   Principal Investigator: Anusha Balasubramanian, Hospital Raja Permaisuri Bainun, Ipoh

158. An evaluation of Risk Factors for Poor Outcome among Older Patients admitted with Acute Exacerbation of COPD
   Principal Investigator: Umadevi A. Muthukumaru, Hospital Taiping

159. Study On Occupational Safety And Health Awareness Among Medical Laboratory Personnel
   Principal Investigator: Suresh Narayanan, Hospital Raja Permaisuri Bainun, Ipoh

160. Retrospective Study Of Motor Vehicle Accident (MVA) Cases Admitted To The Accident And Emergency Department, Hospitak Permaisuri Bainun Ipoh.
   Principal Investigator: Kamin Balachandran, Hospital Raja Permaisuri Bainun, Ipoh

161. Retrospective study on the pregnancy outcome of Orang Asli patients in Hospital Raja Pemaisuri Bainun
   Principal Investigator: Lau Pui Yee, Hospital Raja Pemaisuri Bainun, Ipoh

162. Cost effectiveness study of pantoprazole and esomeprazole in the treatment of upper gastrointestinal bleeding at Hospital Taiping
   Principal Investigator: Choo Shea Jiun, Hospital Taiping

163. Deliberate Self-poisoning and Self-injury among patients in Taiping Hospital
   Principal Investigator: Ong Kheng Yee, Hospital Taiping

164. Monotherapy against Combined Therapy of Diabetic Cases and Hypertension, 5 Highest Asthma Drugs Prescribed
   Principal Investigator: Abbas Ramly, Hospital Seri Manjung

165. Impact of Different Admission Systems to Acute General Medical Ward on Length of Hospital Stay and Bed Utilization: A 6 Years Experience
   Principal Investigator: Cheah Wee Kooi, Hospital Taiping
166. An Evaluation on the Impact of Home Medication Review Program conducted by Pharmacist on Patients Diagnosed with Schizophrenia Enrolled under Home Care Team, Hospital Bahagia Ulu Kinta, Perak, Malaysia.  
**Principal Investigator:** Tan Yee Mun, Hospital Bahagia Ulu Kinta

167. Molecular Phylogenetic Analysis of Malaria Parasite Plasmodium knowlesi 
**Principal Investigator:** Zahrul Laili Abdul Hadi, Hospital Raja Permaisuri Bainun, Ipoh

168. Kesedaran dan Kesediaan Menderma Organ dalam kalangan Jururawat di Hospital Teluk Intan, Perak Darul Ridzuan  
**Principal Investigator:** Zainurulazwa Zakaria, Hospital Teluk Intan

169. Optic Nerve Sheath Diameter; A Mean Of Detecting Raised Intracranial Pressure In Traumatic and Non-Traumatic Patients  
**Principal Investigator:** Mohd Raffiz Mohd Ali, Hospital Raja Permaisuri Bainun, Ipoh

170. Environmental Risk Management for Leptospirosis in Perak  
**Principal Investigator:** Nurul Fadila, Jabatan Kesihatan Negeri, Perak

171. Students’ Expectation And Satisfaction On Bedside Teaching In Clinical Area  
**Principal Investigator:** Nor Zorina Zorkarphy, Hospital Raja Permaisuri Bainun, Ipoh

172. Refractive error among indigenous primary school-going children in Peninsular Malaysia  
**Principal Investigator:** Calvin Lim Chung Yee, Hospital Raja Permaisuri Bainun, Ipoh

173. Point of care of international normalised ratio testing and patients? Preference at a hospital based anticoagulation clinic  
**Principal Investigator:** Foong Wai Keng, Hospital Raja Permaisuri Bainun, Ipoh

174. Cost effectiveness evaluation of statins among high cardiovascular risk patients in Hospital Taiping  
**Principal Investigator:** Choo Shea Jiun, Hospital Taiping

175. How do Parents Manage Fever in their Young Children?  
**Principal Investigator:** Norhidayah Abdul Rahman, Hospital Raja Permaisuri Bainun, Ipoh

176. Ability Of Newly Qualified Medical Officers To Correctly Use Self-Inflating Bag  
**Principal Investigator:** Nurakma Arippin, Hospital Raja Permaisuri Bainun, Ipoh

177. Improving Knowledge on Antiepileptic Drug Among Children With Epilepsy and their Parents  
**Principal Investigator:** Salena Mohd Isa, Hospital Raja Permaisuri Bainun, Ipoh

178. Ability of Paediatric Hospital Staff to Perform an Intravenous Insertion at a Regional Referral Hospital  
**Principal Investigator:** Khairul Wardah Abdul Razak, Ruhayati Tukas Abdullah, Hospital Raja Permaisuri Bainun, Ipoh

179. Does Published Research in the Medical Journal of Malaysia have Adequate Power?  
**Principal Investigator:** Nor Aizura Zukifli, Clinical Research Centre (CRC), Perak

180. Vascular dementia in Southeast Asia - Cognitive and Neuroimaging Characteristics  
**Principal Investigator:** Cheah Wee Kooi, Hospital Taiping

181. A Retrospective Study of Homicidal Cases for The Year 2009-2012 From Hospital Raja Permaisuri Bainun Ipoh, Perak  
**Principal Investigator:** Nurul Jannah Arifin, Hospital Raja Permaisuri Bainun, Ipoh

182. Enhancing Higher Order Thinking Skills Through Clinical Simulation: A Study On Design, Implementation Process And Outcome  
**Principal Investigator:** Elengovan Varutharaju, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

183. A Validation Study - Remote Patients Control And Continuous Monitoring System Using RFID (Radio Frequency Indentification) System  
**Principal Investigator:** Noraini Mat Husin, Hospital Raja Permaisuri Bainun, Ipoh

184. Kurang kemahiran interpretasi ECG di kalangan paramedik di Hospital Teluk Intan  
**Principal Investigator:** Kamariah Othman, Hospital Teluk Intan
185. Knowledge of Pre-conception Care And Family Planning Practice Among Women With Type II Diabetes  
Principal Investigator: Junaidah Mohd Fadzil, Pejabat Kesihatan Daerah, Kuala Kangsar

186. Keberkesan penggunaan sharpbin dan clinical waste container di kalangan kakitangan kecemasan Hospital Taiping  
Principal Investigator: Raja Mohd Iskandar Hassan Nazri, Hospital Taiping

187. Tahap pengetahuan sistem “Field Triage” di kalangan anggota Paramedik (Penolong Pegawai Perubatan)  
Principal Investigator: Mohd Zaki Abdullah, Hospital Taiping

188. Faktor-faktor penyebab peningkatan kes ulangan asma di kalangan pesakit asma yang dirawat di Jabatan Kecemasan Dan Trauma Hospital Raja Permaisuri Bainun, Ipoh  
Principal Investigator: Palvannan Thamowtharan, Hospital Raja Permaisuri Bainun, Ipoh

189. Kesan sampingan ubatan untuk rawatan tibi paru-paru terhadap pesakit tibi di KK Tanjung Malim  
Principal Investigator: Vikneswaran Letchimanan, Klinik Kesihatan Tanjung Malim

190. Kajian Kemahiran Paramedik Dalam Penggunaan BVM Di Jabatan Kecemasan Hospital Teluk Intan, Perak  
Principal Investigator: Tirunaukkarsu Raja Kumaran, Hospital Teluk Intan

191. Aplikasi mekanik badan dikalangan Jururawat di Hospital Raja Permaisuri Bainun, Ipoh  
Principal Investigator: Sarinder Singh Gill, Hospital Raja Permaisuri Bainun, Ipoh

192. Kajian kefahaman paramedik bagi prosedur “Pacing” pesakit bradikardia di Hospital Teluk Intan  
Principal Investigator: Rohani Muhd Hasan, Hospital Teluk Intan

193. Implementasi Intubasi ‘Laryngeal Mask Airway’ (LMA) Dikalangan Penolong Pegawai Perubatan (PPP) Di Jabatan Kecemasan Dan Trauma Hospital Slim River  
Principal Investigator: Mohd Zohori Zainol, Hospital Slim River

Principal Investigator: Abdul Khadir Zulkifli, Hospital Batu Gajah

195. Kajian Gestional Diabetes Mellitus di kalangan ibu hamil Orang Asli di Jabatan Kemajuan Orang Asli Daerah sg. Siput  
Principal Investigator: Wan Hazazaly Wan Hassan, Hospital Sungai Siput

196. Kajian terhadap pesakit yang kurang bekerjasama dalam mengikuti perawatan Tibi di KK Tanjung Malim  
Principal Investigator: Vikneswaran Letchimanan, Klinik Kesihatan Tanjung Malim

197. Evaluation of central corneal thickness and intraocular pressure post phacoemulsification for senile cataract in patient with and without Primary Open Angle Glaucoma (POAG)  
Principal Investigator: Ng Hong Kee, Hospital Raja Permaisuri Bainun, Ipoh

198. Causes of stress among housemen in Hospital Raja Permaisuri Bainun, Ipoh  
Principal Investigator: Kamal Ariffin Abdul Hamid, UniKL-RCMP

199. Kajian Kepatuhan Protokol “needle prick” dikalangan paramedik di Hospital Sultan Abdul Halim, Sg Petani  
Principal Investigator: Amir Azmi, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

200. Tahap kesedaran staf tentang Pencegahan penyakit pulmonari tuberculosis di Hospital Sultan Abdul Halim Sungai Petani Kedah  
Principal Investigator: Hazali Hanapi, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

201. Cross-sectional study of knowledge, attitude and practice on white coat hygiene among the medical student in Universiti Kuala Lumpur Royal College Of Medicine Perak  
Principal Investigator: Affendi Mohd Ali, UniKL-RCMP

202. A prospective, randomized, parallel group, single blinded study to assess the efficacy and safety of treatment with topical honey in Post Tonsillectomy patients with respect to outcome of wound healing and pain  
Principal Investigator: Choy Mun Pung, Clinical Research Centre (CRC), Taiping
INVESTIGATOR INITIATED RESEARCH

203. Knowledge and barriers towards cervical cancer screening among non academic female staff in a public Allied Health Science College
Principal Investigator: Ng Swee Teng, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

204. Malaysian Acromegaly Registry
Principal Investigator: Ijaz Hallaj Rahmatullah, Hospital Raja Permaisuri Bainun, Ipoh

205. Clinical Characteristics of Supernumerary Teeth and Evaluation on the Treatment Outcome
Principal Investigator: Rashima Ali, Klinik Pergigian Taiping

206. Intracameral injection of Ranibizumab - a comparative study of the effectiveness of Ranibizumab in treating patients with rubeosis and neovascular glaucoma
Principal Investigator: Cheong Moon Yee, Hospital Raja Permaisuri Bainun, Ipoh

207. Management and Disposal of Clinical Waste in Government Hospital
Principal Investigator: Nur Assyahiddah Yahya, Hospital Raja Permaisuri Bainun, Ipoh

208. The Impact of Pulmonary Rehabilitation on the quality of life among COPD patients
Principal Investigator: Au Sook May, Nurul Hanna Dzulkifli, Hospital Teluk Intan

209. A Cross Sectional Study on Practices and Attitudes of Breastfeeding Among Mothers in Hospital Raja Permaisuri Bainun,Perak in 2012
Principal Investigator: Nur Liyana Badarudin, Wan Nurfazleen Wan Abd Malek, Hospital Raja Permaisuri Bainun, Ipoh

Principal Investigator: Nazmila Johari, Pejabat Kesihatan Daerah, Kinta

211. Faktor penyumbang peningkatan kelahiran bayi pramatang dalam kalangan ibu pre-existing DM dan GDM
Principal Investigator: Norhasimah Ismail, Hospital Raja Permaisuri Bainun, Ipoh

212. A Descriptive Study On Prevalence Of Opportunistic Infection Among HIV/AIDS Patients In Hospital Raja Permaisuri Bainun,Ipoh
Principal Investigator: Farah Farzana Ansari, Hospital Raja Permaisuri Bainun, Ipoh

213. Faktor-faktor yang mempengaruh ibu multigravida memilih kaedah kekahiran LSCS sebagai opsyen Utama di Klinik Kesihatan Ibu dan Anak Greentown
Principal Investigator: Rina Bakeri, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

Principal Investigator: Sarasuphadi Munusamy, Hospital Batu Gajah

215. A Study Of Knowledge And Attitude Of Pregnant Women At Hospital Raja Permaisuri Bainun (HRPB) Regarding Stem Cell, 2012
Principal Investigator: Siti Marliana Zakaria, Hospital Raja Permaisuri Bainun, Ipoh

216. Anti-NMDA Receptor Encephalitis: A Differential Diagnosis in a Young Patient Presenting with Neuropsychiatric Symptoms
Principal Investigator: Thilagavathi Thanusia Viswanathan, Hospital Raja Permaisuri Bainun, Ipoh

Principal Investigator: Mohd Fitri Abdul Razak, Hospital Raja Permaisuri Bainun, Ipoh

218. Tahap Pengetahuan Terhadap Jagaan Luka TAHBSO Sebelum Pesakit Discaj Dari Wad Ginekologi Hospital Raja Permaisuri Bainun Ipoh
Principal Investigator: Fatimah Tun Mohd Saad, Hospital Raja Permaisuri Bainun, Ipoh

219. Tahap kepuasan kerja di kalangan kakitangan di Unit Fisioterapi, Hospital Raja Permaisuri Bainun, Ipoh Perak.
Principal Investigator: Nur Sunarti Pauzi, Hospital Raja Permaisuri Bainun, Ipoh

220. The small numbers of nurses in Hospital Raja Permaisuri Bainun are participating in professional education.
Principal Investigator: Chitrani Subramaniam, Hospital Raja Permaisuri Bainun, Ipoh
221. Kaedah pelupusan ubat-ubatan yang tidak digunakan di kalangan pesakit-pesakit Hospital Slim River, Perak. 
Principal Investigator: Adlina Othman, Hospital Slim River

222. Faktor-Faktor Mempengaruhi Motivasi Bekerja Dan Penyumbang Stres Di Kalangan Kakitangan Hospital Teluk Intan
Principal Investigator: Kamaliyah Ramli, Hospital Teluk Intan

Principal Investigator: Eunice Beh Li Cher, Kinta Medical Centre Hospital, Ipoh

224. Neurological Outcomes After ACDF Surgery
Principal Investigator: Hasmizashawalna Azmi, Hospital Raja Permaisuri Bainun, Ipoh

225. Effectiveness Closure Of Small Tympanic Membrane Perforations With Autologous Fat
Principal Investigator: Ruszailan Darus, Hospital Raja Permaisuri Bainun, Ipoh

226. Perioperative Nutrition In Abdominal Surgery; Recommandation And Reality
Principal Investigator: Maizura Ahmad, Hospital Raja Permaisuri Bainun, Ipoh

227. Benefits Of Using Stapler For Patients Undergoing Haemorrhoidectomy
Principal Investigator: Norshahaby Abdul Wahab, Hospital Raja Permaisuri Bainun, Ipoh

228. “Inhalation Injury Due To Surgical Smoke In Operation Theatre”
Principal Investigator: Suria Ibrahim, Hospital Raja Permaisuri Bainun, Ipoh

229. The Effectiveness Of Laser Surgery For Severe Twin To Twin Transfusion Syndrom
Principal Investigator: Zulriati Abdul Deraman, Hospital Raja Permaisuri Bainun, Ipoh

230. Increased Rate Of Caesarean Section On Maternal Request Without Any Medical Indication To Mother And Fetus
Principal Investigator: Yusnifa Haizan Emran, Hospital Raja Permaisuri Bainun, Ipoh

231. Plate Breakage Post Long Bone Plating
Principal Investigator: Rina Hasnidar Abdul Rahman, Hospital Raja Permaisuri Bainun, Ipoh

232. Symptom Outcome After Functional Endoscopic Sinus Surgery
Principal Investigator: Hairunizam Aziz, Hospital Raja Permaisuri Bainun, Ipoh

233. Infant Hospitalization And Breastfeeding Post Caesarean Section
Principal Investigator: Norlia Omar, Hospital Raja Permaisuri Bainun, Ipoh

234. Wound Healing Of Surgical Patient Who Are Obese
Principal Investigator: Zariani Ashari, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

235. Knowledge Of Breast Reconstruction For Patient Diagnosed With Breast Cancer Post Mastectomy
Principal Investigator: Sharihan Husin, Hospital Raja Permaisuri Bainun, Ipoh

236. Effectiveness Of Concurrent Cleaning In Operating Room
Principal Investigator: Carolin Lily Rengasamy, Hospital Raja Permaisuri Bainun, Ipoh

237. Outcome Of Suprapubic Catheter Among Benign Prostate Hypertrophy Patient
Principal Investigator: Norhasimah Ismail, Hospital Raja Permaisuri Bainun, Ipoh

238. Benefit Of Phacoemulsification For Patient Undergoing Cataract Surgery
Principal Investigator: Norliza Mohd Razali, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

239. A Retrospective Study of Advance Aged Pregnancy Outcome
Principal Investigator: Nadiah Mahmood, Hospital Raja Permaisuri Bainun, Ipoh

240. Penggunaan Perubatan Alternatif Di Kalangan Pesakit Di Hospital Raja Permaisuri Bainun,Ipoh
Principal Investigator: Nor Fazilah Mat Nasib, Hospital Raja Permaisuri Bainun, Ipoh
241. Evaluation on reasons in changing and/or addition of inhalers in patients with AEBA/AECOAD
   Principal Investigator: Ng Chew Beng, Hospital Taiping

242. Defisit Pengetahuan Di Kalangan Ibu Antenatal Dan Postnatal Mengenai Senaman Kegel
   Principal Investigator: Fazilah Ibrahim, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

243. Tahap Pengetahuan Jururawat Terhadap Pemeriksaan Pap Smear Di Hospital Sungai Siput
   Principal Investigator: Zainiyah, Hospital Sungai Siput

244. Kurang efektifnya rawatan fisioterapi di kalangan pesakit di Unit Fisioterapi Hospital Parit Buntar
   Principal Investigator: Nurul Huda Reduiong, Hospital Parit Buntar

245. Stress di kalangan kakitangan Hospital Parit Buntar
   Principal Investigator: Noriza Mohamed, Hospital Parit Buntar

246. Prevalence of subclinical hypothyroidism among patients with coronary heart disease attending Hospital Raja Permaisuri Ipoh
   Principal Investigator: Hla Myint, UniKL- RCMP

   Principal Investigator: Noraziana Yen, Klinik Kesihatan Jelapang

248. Tahap Pengetahuan Pengamalan Perancang Keluarga Dikalangan Ibu-Ibu Postnatal Yang Berisiko Tinggi
   Principal Investigator: Malah Vellu, Klinik Kesihatan Menglembu

249. Kemahiran Interpretasi ABG dikalangan paramedic
   Principal Investigator: Noor Faridah Zainal Abidin, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

250. Malaysian Radiographers Administering Intravenous Contrast Media Injections: Radiographers and Other Healthcare Practitioners Perspectives
   Principal Investigator: Lee Geik Peng, Hospital Raja Permaisuri Bainun, Ipoh

251. Group Exercises Improves Functional Mobility In Patients With Knee Osteoarthritis
   Principal Investigator: Nurul Liyana Teong, Hospital Teluk Intan

252. The Study Of Attitude And Knowledge Of Post Operative Diet And Lifestyle Among Post Operative Patient In HRPB Ipoh, 2012
   Principal Investigator: Nurul Syafinaz Ahmad Nazan, Hospital Raja Permaisuri Bainun, Ipoh

253. Pediatric Malignant Germ Cell Tumour Of The Ovary
   Principal Investigator: Ding Sook Ling, Hospital Raja Permaisuri Bainun, Ipoh

254. Tahap Kesediaan Berhenti Merokok Di Kalangan Pembantu Perawatan Kesihatan HRPB, Ipoh
   Principal Investigator: Azaharin Abdul Rahman, Hospital Raja Permaisuri Bainun, Ipoh

255. A Study On Knowledge, Attitude And Acceptability Of The Intrauterine Device Among Antenatal Clinic Attenders In Greentown Maternal And Child Health Clinic, Ipoh From 3rd Dec 2011 to 4th Jan 2012
   Principal Investigator: Nur Syamimi Ismail, UniKL- RCMP

256. Comparison Of Methods For Estimating Glomerular Filtration Rate In Critically Ill Patients With Unstable Renal Function From Local Population - A Retrospective Study
   Principal Investigator: Ng Yen Ping, Universiti Sains Malaysia

257. Epidemiology On Hymenoptera Stings In Children In A Suburban Setting
   Principal Investigator: Oh Hoey Hoey, Hospital Teluk Intan

258. Overweight Among Student Nurses (KPSL) In Allied Health Science College Sultan Azlan Shah
   Principal Investigator: Tian Swee Horng, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

259. A Review of Daycare Tonsillectomies at a Tertiary Medical Center
   Principal Investigator: Zabrina Marnel Samarakkody, Hospital Raja Permaisuri Bainun, Ipoh
<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Principal Investigator</th>
<th>Hospital NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>260</td>
<td>Tahap Pengetahuan Ahli Keluarga Mengenai Rawatan Terapi Elektro Konvulsi Untuk Pesakit Psikatri</td>
<td>Norhisham Ngatino</td>
<td>Hospital Bahagia Ulu Kinta</td>
</tr>
<tr>
<td>261</td>
<td>Gaya Pengajaran Grasha Dalam Kelangan Pengajar Anggota Sains Kesihatan Bersekutu (ASKB)</td>
<td>Amir Hafizd Mohd Mokhtar, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
<td></td>
</tr>
<tr>
<td>262</td>
<td>Tahap Pengetahuan Ahli Keluarga Mengenai Penjagaan Pesakit Schizophrenia Di Rumah Di Hospital Bahagia Ulu Kinta.</td>
<td>Kalaivani Vennu, Hospital Bahagia Ulu Kinta</td>
<td></td>
</tr>
<tr>
<td>263</td>
<td>Kefahaman Mengenai Penyakit Mental Di Kelangan Keluarga Pesakit Hospital Bahagia Ulu Kinta</td>
<td>Mohd Hurizal Husain, Hospital Bahagia Ulu Kinta</td>
<td></td>
</tr>
<tr>
<td>264</td>
<td>Faktor-Faktor yang Menyumbang Kepada Peningkatan Kemasukan Kes Ulangan Skizofrenia Di Wad WKH Hospital Bahagia Ulu Kinta Perak</td>
<td>Shurizai Mohd Sakri, Hospital Bahagia Ulu Kinta</td>
<td></td>
</tr>
<tr>
<td>265</td>
<td>Faktor-faktor yang mempengaruhi kes relaps dikalangan pesakit skizofrenia di Hospital Bahagia Ulu Kinta Perak</td>
<td>Rohana Mohamed Ali Piah, Hospital Bahagia Ulu Kinta</td>
<td></td>
</tr>
<tr>
<td>266</td>
<td>Kajian Bebanan Penjaga Dalam Menjaga Pesakit Mental Di Komuniti</td>
<td>Emillia Saha, Hospital Bahagia Ulu Kinta</td>
<td></td>
</tr>
<tr>
<td>267</td>
<td>Faktor-faktor peningkatan kemasukan warga emas ke rumah Seri Kenangan</td>
<td>Tuan Normayazi Tuan Mat, Hospital Bahagia Ulu Kinta</td>
<td></td>
</tr>
<tr>
<td>268</td>
<td>Keinginan Membunuh Diri Dikalangan Pesakit Mental Di Hospital Bahagia Ulu Kinta</td>
<td>Salina Ali, Hospital Bahagia Ulu Kinta</td>
<td></td>
</tr>
<tr>
<td>269</td>
<td>Faktor - faktor yang menyebabkan kemasukan skizofrenia di Hospital Bahagia.</td>
<td>Junaidah Mat Noor, Hospital Bahagia Ulu Kinta</td>
<td></td>
</tr>
<tr>
<td>270</td>
<td>Menilai Tahap Pengetahuan Tentang Obesiti Di Kelangan Paramedik Di Hospital Bahagia Ulu Kinta</td>
<td>Noorida Brahim, Hospital Bahagia Ulu Kinta</td>
<td></td>
</tr>
<tr>
<td>271</td>
<td>Faktor - faktor yang menyebabkan rasa tidak selamat bekerja di unit forensik wad 23 HBUK</td>
<td>Yusamiza Nyan, Hospital Bahagia Ulu Kinta</td>
<td></td>
</tr>
<tr>
<td>272</td>
<td>Faktor- faktor Penyumbang Keciciran Rawatan Susulan Di Klinik Psikiatrik, Hospital Raja Permaisuri Bainun, Ipoh, Perak.</td>
<td>Rohaida Awang Kechik, Hospital Raja Permaisuri Bainun, Ipoh</td>
<td></td>
</tr>
<tr>
<td>273</td>
<td>Factors that Affect the Underreporting of ADR and The Effect of ADR Promotion Towards the number of ADR reports received in HPJ</td>
<td>Aina Yazrin Ali Nasiruddin, Hospital Putrajaya</td>
<td></td>
</tr>
<tr>
<td>274</td>
<td>Kefahaman Ibubapa Yang Bekerja Di Hbuk Tentang Masalah Merokok Di Kelangan Remaja</td>
<td>Sadri Saidi, Hospital Bahagia Ulu Kinta</td>
<td></td>
</tr>
<tr>
<td>275</td>
<td>An international registry to study the current causes, treatment, barriers to care, and outcome of heart failure in Africa, Asia and South America</td>
<td>Letchuman Ramanathan G. R., Hospital Taiping</td>
<td></td>
</tr>
<tr>
<td>276</td>
<td>Cross Sectional Study Of Seronegative Spondarthritides In Hospital Raja Permaisuri Bainun</td>
<td>Siti Nor Raudzah Bunari, Hospital Raja Permaisuri Bainun, Ipoh</td>
<td></td>
</tr>
<tr>
<td>277</td>
<td>Metformin: A Differential Diagnosis for Weight Loss, Altered Bowel Habits and B12 Deficiency Anemia in an Elderly Diabetic</td>
<td>Brian Cheong Mun Keong, Hospital Raja Permaisuri Bainun, Ipoh</td>
<td></td>
</tr>
<tr>
<td>278</td>
<td>Mengkaji Program Rawatan Terapi Gantian Methadone Dalam Pemulihan Di Kelangan Penagih Di Klinik Methadone Di Hospital Permaisuri Bainun</td>
<td>Tuan Azmi Tuan Ibrahim, Hospital Raja Permaisuri Bainun, Ipoh</td>
<td></td>
</tr>
</tbody>
</table>
279. **Faktor-faktor penyumbang keciciran rawatan susulan di Klinik Psikiatrik, Hospital Raja Permaisuri Bainun, Ipoh, Perak.**

*Principal Investigator: Rohaida Awang Kechik, Hospital Raja Permaisuri Bainun, Ipoh*

**RESEARCH IN YEAR 2013**

1. **Knowledge of Nurses towards the Cold Chain Monitoring (CCM) at a Health Clinic**
   *Principal Investigator: Foong Chiew Ha, KK Hutan Melintang*

2. **Internet Addiction Among Malaysian Adolescents: Prevalence and Association with ADHD Symptoms**
   *Principal Investigator: Saramah Mohd Isa, Hospital Bahagia Ulu Kinta*

3. **Evaluation of the vancomycin dosage guideline in neonates and infants**
   *Principal Investigator: Tan Sing Chian, Hospital Taiping*

4. **A 4-year Multicentre Audit of Complications Following ORIF Treatment of Mandibular Fractures**
   *Principal Investigator: Sathesh Balasundram, Sultanah Nora Ismail Hospital*

5. **Exploration of artificial disc replacement prostheses for degenerative disc disease patient in Malaysia**
   *Principal Investigator: Dr Mohd Juzaila Abd Latif, Universiti Teknikal Malaysia Melaka (UTeM)*

6. **Multidisciplinary Approach in Improving Health Outcomes of Psoriasis Patients**
   *Principal Investigator: Hazimah Hashim, Pharmaceutical Services Division, Ministry of Health*

7. **Tahap Pengetahuana Keluarga Tentang Penyakit Mental di Hospital Bahagia Ulu Kinta**
   *Principal Investigator: Ahmad Nazri Ariffin, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta*

8. **Persepsi Masyarakat Setempat terhadap Pesakit mental di Hospital Bahagia Ulu Kinta**
   *Principal Investigator: Khairul Harizal Abu Kasim, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta*

9. **Kefahaman Ibu-bapa terhadap penderaan seksual dalam kolongan kanak-**
    *Principal Investigator: Enne Farhana Hassan, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta*

10. **Keganasan dikalangan pesakit mental di Hospital Bahagia Ulu Kinta, Perak**
    *Principal investigator: Nasrul Nizam Bin Othman, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta*

    *Principal Investigator: Semran Kaur@ Semran Kaur Badeshae, Hospital Bahagia Ulu Kinta, Perak*

12. **Identification of Optimal Physical Health, Behaviours and Dietary Pattern associated with Neuroprotection for Development of Health Information System**
    *Principal Investigators: Suzana Shahar, Universiti Kebangsaan Malaysia (UKM), Faculty of Allied Health Sciences*

13. **Kurang Kesedaran tentang Kepentingan Pap Smear**
    *Principal Investigator: Normazni Zakaria*

14. **Knowledge and perception on breast cancer among woman staff at Pharmacy department Hospital Raja Permaisuri Bainun (HRPB).**
    *Principal Investigators: Diyana Sakinah Mohd Soder, Universiti Teknologi MARA (UiTM) Pulau Pinang*

15. **A rare case of arthrographis Kalrae Keratomycosis in a non-contact lens wearer**
    *Principal Investigators: Chow Rhuene Chiu, Hospital Seri Manjung*

16. **A Study on the usage of drugs given to Bronchial Asthma patients in Klinik Kesihatan Greentown in the year 2011**
    *Principal Investigator: Elleasha Mustafa Kamal, UniKL – RCMP*

17. **Usage Pattern of Subcutaneous Filgrastim and Therapeutic Outcome for Patients with Haematological Malignancies in Malaysia.**
    *Principal Investigator: Dang Chee Chean, Hospital Melaka*
   **Principal Investigator:** Syed Mohamed Aljunid Syed Junid, Faculty of Medicine, UKM

19. Virgin coconut oil and treatment of mild to moderate Alzheimer's disease dementia: A Randomized non-placebo interventional study
   **Principal Investigator:** Norazam Harun, CRC, Raja Perempuan Zainab II Hospital

20. A study on knowledge, awareness and motives about HPV infection and vaccination among pregnant women in two MCHC, Ipoh
   **Principal Investigator:** A'tifah Khalin, UniKL – RCMP

21. Prevalence Of Hepatitis B, C And Hiv Infection Among Blood Donors In Hospital Raja Permaisuri Bainun In Year 2012
   **Principal Investigator:** Nursyida Mohd Fikirudin, UniKL-RCMP

22. A Retrospective Study of Anaemia during Pregnancy in Klinik Kesihatan Kampung Simee
   **Principal Investigator:** Nurulnajwa Jamalldin, UniKL-RCMP

23. A cross-sectional study evaluating the Knowledge and Perceptions of Generic Medicines among Prescribers Practising in Private Hospitals in Perak
   **Principal Investigator:** Chan Wai Seong Christopher, Hospital Raja Permaisuri Bainun, Ipoh

24. Parental knowledge, attitude, and practice on child injury and prevention
   **Principal Investigator:** Iffah Ismail, UniKL-RCMP

25. The application of Biotechnology in Handling Tuberculosis Disease (TB)
   **Principal Investigator:** Nurul Laylatul Nabilah Mazlan, Hospital Slim River

26. A Case Report : Stevens Johnson Syndrome In A Paediatric Patient
   **Principal Investigator:** Ngai Wen Jing, Hospital Seri Manjung

27. A retrospective study on the pattern of injuries in motorcycle fatalities reported in the forensic department, Hospital Raja Permaisuri Bainun, Ipoh, Perak: 2012
   **Principal Investigator:** Nurfaizah Yaacub, UniKL-RCMP

28. A retrospective study on characteristic of suicidal act in Hospital Raja Permaisuri Bainun,Ipoh, Perak from January 2009 until December 2012.
   **Principal Investigator:** Asilah Abd Rahim, UniKL-RCMP

29. Prospective randomized controlled trial on primary closure versus delayed primary closure for wound management in cases of perforated appendix
   **Principal Investigator:** Ashok Kannan, Hospital Raja Permaisuri Bainun, Ipoh

30. A Retrospective Study On Relationship Between Symptoms Of Paranoid Delusions And Auditory Hallucinations To Murder Offense Among Patient With Schizophrenia At Female Forensic Ward Of Hospital Bahagia Ulu Kinta.
   **Principal Investigator:** Mohd Izzuddin Abu Bakar, UniKL-RCMP

31. The Effectiveness Of Electroacupuncture In Reducing Postoperative Pain, Analgesic Requirement And Prevention Of Postoperative Nausea And Vomiting
   **Principal Investigator:** Praveena Seevaunnamtum, Hospital Raja Permaisuri Bainun, Ipoh

32. Acupressure as adjuvant treatment for patient with hyperemesis gravidarum
   **Principal Investigator:** Chooi Kar Yoke, Hospital Raja Permaisuri Bainun, Ipoh

33. Validation of the Malay version of the Strengths and Difficulties Questionnaire (SDQ) for the Malaysian Population
   **Principal Investigator:** Eni Rahaiza Muhamed Ramli, Hospital Taiping

34. A case of HIV false positive or seroconversion to cure?
   **Principal Investigator:** Vengadasalam Paranthaman, Klinik Kesihatan Greentown
35. Prevalence and characteristics of pregnant teenagers attending government health care centres in Perak: A cross-sectional study  
Principal Investigator: Subashini Ambigapathy, KK Taiping

36. Effect of Occupational Stress and Burnout Factors than can Effect the Job Performance Among Nurses: Role of Working Condition and Work Environment  
Principal Investigator: Wan Nor Asilah Mohd Shahini, Universiti Malaysia Sarawak (UNIMAS)

37. Myself Multi Source Feedback Programme For Evaluation Of Provisionally Registered Pharmacist In Public Hospitals In Malaysia  
Principal Investigator: Doris George Visuvasam, Hospital Raja Permaisuri Bainun, Ipoh

38. Keperluan Pekerja Sosial Dalam Bidang Kesihatan Mental Di Perak Dan Kedah  
Principal Investigator: Norfarahin Mohd Noor, Hospital Bahagia Ulu Kinta, Perak

39. Perspective and knowledge towards generic medicine use among prescriber and patient attending a public hospital in Perak  
Principal Investigator: Wong Zhi Yen, Hospital Teluk Intan

40. Current status of Drug Information Centres in Malaysia  
Principal Investigator: Noor Salihah Yahaya, University Malaya

41. Reported Needle Stick Injuries Among Nurses In HRPB  
Principal Investigator: Neelavani Appalasamy, Hospital Raja Permaisuri Bainun, Ipoh

42. Nurses Knowledge And Attitude On Post Operative Pain Management Among Pediatric Ward  
Principal Investigator: Murjiana Abdul Rauf, Hospital Raja Permaisuri Bainun, Ipoh

43. Case Series Of Neovascular Glaucoma (Nvg) Secondary To Proliferative Diabetic Retinopathy(PDR) In Seri Manjung Hospital  
Principal Investigator: Chong Soh Yee, Hospital Seri Manjung

44. Penyalahgunaan tembakau dikalangan remaja sekolah  
Principal Investigator: Yusamiza Nyan, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

45. Multicentre Feasibility Study Comparing Agitated Normal Saline - Air Method and Chest Radiograph to Confirm Central Venous Catheter (CVC) Placement in Emergency Department  
Principal Investigator: Chung Wai Mun, Hospital Raja Permaisuri Bainun, Ipoh

46. Perception Of Control And Childbirth Satisfaction Among Mothers Who Attend Maternal And Child Health Clinic at Klinik Kesihatan Karai, Kuala Kangsar, Perak  
Principal Investigator: Zaid Abd Rahman, International Islamic University Malaysia (IIUM)

47. The Moderating Role Of Spirituality On Job Satisfaction And Intention To Leave: A Study Among Nurses In Malaysia  
Principal Investigator: Narainan Krishnasamy, Universiti Sains Malaysia (USM)

48. Collection of Cases With Unusual Foreign Bodies of the Head and Neck  
Principal Investigator: Aidayanti Mohamed Daud, Hospital Raja Permaisuri Bainun, Ipoh

49. Assessment on knowledge of insulin and injection techniques among staff nurses in Hospital Taiping  
Principal Investigator: Beh Xin Yi, Hospital Taiping

50. Cost comparison between metoprolol and bisoprolol in heart failure patient  
Principal Investigator: Chua Wern Lin, Hospital Taiping

51. Study on the Factors Affecting Antibiotic Continuation after 72 hours initiation in Hospital Taiping, Perak.  
Principal Investigator: Nurul Sokinah Mohd Zaini, Hospital Taiping

52. Prospective Study on Investigation of Patients Acceptance to Streptokinase Band in Hospital Taiping.  
Principal Investigator: Khor Ming Pei, Hospital Taiping
53. Knowledge, attitudes and practices of vitamin supplements among inpatients of Hospital Taiping  
   Principal Investigator: Ng Yee Han, Hospital Taiping

54. Maternal mortality review: A case of pulmonary haemorrhage due to ruptured lung haemangioma secondary to Ghon’s focus invasion  
   Principal Investigator: Vengadasalam Paranthaman, Klinik Kesihatan Greentown

55. Antidepressant Compliance among Depression Patient at Hospital Taiping  
   Principal Investigator: Wan Intan Norasyikin Wan Mohamed Esa Azwin, Hospital Taiping

   Principal Investigator: Muthu Chelvan, University Malaya (UM)

57. A Study to Assess the Effectiveness on Three Types of Medication Labeling  
   Principal Investigator: Farah Izyan Mohd Hasrori, Hospital Teluk Intan

58. Routine Management Of Neonatal Jaundice In Term Neonates in Special Care Nurseries (SCNs) in Malaysia  
   Principal Investigator: Normi Mohd Sharif, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

59. Improving Knowledge, Practice, Acceptance and Satisfaction of Kangaroo Mother Care among Parents and Health Care Professionals  
   Principal Investigator: Zanatulain Jamaluddin, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

60. Healthcare Professionals Responsiveness Monitor Alarms at a NICU in a Regional Referral Hospital  
   Principal Investigator: Jagdish Kaur, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

61. Ability of Health Care Professionals to Perform a Heel Prick in Neonates  
   Principal Investigator: Fatimah Jusoh, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

62. The effect of pharmacist intervention on Hypertensive patients  
   Principal Investigator: Kok Le Fei, Hospital Teluk Intan

63. Prevalence Of Polypharmacy For Acute Cases In Primary Care  
   Principal Investigator: Norizati Ismail, Hospital Teluk Intan

64. A Retrospective Study On Adverse Drug Reactions In Hospital Teluk Intan  
   Principal Investigator: Praneeta Ramakrishnan, Hospital Teluk Intan

65. A Retrospective Study On Prevalence Of Pledgers and Factors Affecting Organ Donation Among Patients in Hospital Raja Permaisuri Bainun, Ipoh, in The Year 2012  
   Principal Investigator: Aarvinder Kaur Hari Singh, UniKL-RCMP

66. An Evaluation of Time in Therapeutic Range of INR in Malaysia: A Multicentre Study  
   Principal Investigator: Rose Aniza Rusli, Universiti Teknologi MARA

67. Prevalence of NSAIDS/ Aspirin induced UGIB among patients who are admitted to surgical ward HRPB, Ipoh for UGIB  
   Principal Investigator: Tan Chee Hoong, Hospital Raja Permaisuri Bainun, Ipoh

68. Kajian masalah penjagaan kaki dikalangan pesakit diabetis di Klinik Kesihatan Serkat, Pontian, Johor.  
   Principal Investigator: Aznur Mustapa, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

69. Tahap pengetahuan dan amalan penjagaan luka perineum dikalangan ibu selepas bersalin.  
   Principal Investigator: Azida Arshad, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

70. Public Knowledge and Attitude towards Antibiotic Usage: A Cross-Sectional Study in Hospital Slim River, Malaysia.  
   Principal Investigator: Khairul Fariza Khairudin, Hospital Slim River

71. The Risk Factor Associated With Tuberculosis Infection Among Healthcare Workers In Hospital Slim River  
   Principal Investigator: Nazirul Mubin Mohd Mahmud, Hospital Slim River
72. Factors that can Influence and Increase the rate of Mammography screening among adult women in KPJ Damansara Specialist Hospital  
Principal Investigator: Bavani Vasu, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

73. Kajian Kepentingan Amalan Penjagaan Kaki Di Kalangan Pesakit Diabetis Di Klinik Kesihatan Puchong,Puchong,Selangor  
Principal Investigator: Azrul Hanidzam Mahyudin, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

74. Peningkatan Beban Kerja Mengakibatkan Stres Dikalangan Paramedik yang bertugas Di Pejabat Kesihatan Kinta  
Principal Investigator: Shamsol Lot, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

75. Kajian mengenai kaedah penggunaan inhaler dikalangan pesakit asma yang datang ke Klinik Kesihatan Benta  
Principal Investigator: Mohd MAjezan Che Zahari, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

76. Kajian amalan universal precautions kaktangan Jabatan Kecemasan Hopital Raja Permaisuri Bainun,Ipoh  
Principal Investigator: Muhd Ali Sumery, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

77. Kajian masaalah peningkatan berat badan berlebihan dikalangan warga tentera di Pangkalan TLDM Lumut, Perak  
Principal Investigator: Zaidi Ramli, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

78. Kajian terhadap peningkatan kehadiran pesakit bukan kecemasan di Jabatan Kecemasan Hospital Angkatan Tentera  
Principal Investigator: Zali Nanyan, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

79. Causes of Mortality in patients With Diabetes Mellitus Type 2: A retrospective study in Malaysia  
Principal Investigator: Nurul Afiqah Mohd Yusoff, Allianze College of Medical Sciences (ACMS)

80. Kajian tahap kemahiran Paramedik dalam mengendalikan mesin Defibrillator di Jabatan Kecemasan dan Trauma Hospital Raja Perempuan Zainab II Kota Bharu, Kelantan  
Principal Investigator: Mohd Nor Harmizee Maktar, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

81. Kajian terhadap faktor kegagalan rawatan susulan Hipertensi dikalangan pesakit di Klinik Kesihatan Senawang, Negeri Sembilan.  
Principal Investigator: Mazlan Musi, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

82. Kajian Terhadap Pengetahuan Pembantu Perawatan Kesihatan Hospital Tengku Ampuan Afzan  
Principal Investigator: Muhd Azura Windra, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

83. Kajian Faktor-Faktor Penyebab Obesiti Di Kalangan Jururawat Di Pejabat Kesihatan Daerah Kuala Terengganu  
Principal Investigator: Mohd Shahir Ismail, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

84. miRNA Profiling in Head and Neck Cancer  
Principal Investigator: Yaghma Masood, Universiti Putra Malaysia (UPM)

85. Evaluation of knowledge on Colclean solution and bowel preparation counseling at Hospital Taiping  
Principal Investigator: Choo Shea Jiun, Hospital Taiping

86. Kajian tentang masalah ketidakpatuhan Pesakit Diabetis mengikut Temujanji Di Klinik Kesihatan Bandar Kuantan,Pahang  
Principal Investigator: Roswatina Abdul Wahab, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

87. Keberkesanan pendidikan kesihatan mengawal penyakit diabetes di Klinik Kesihatan Maran Pahang,  
Principal Investigator: Ahmad Hamdani Saari, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

88. miRNA Profiling in Head and Neck Cancer  
Principal Investigator: Yaghma Masood, Universiti Putra Malaysia (UPM)

89. Kajian tentang masalah ketidakpatuhan Pesakit Diabetis mengikut Temujanji Di Klinik Kesihatan Bandar Kuantan,Pahang  
Principal Investigator: Roswatina Abdul Wahab, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

90. Kajian Faktor-Faktor Penyebab Obesiti Di Kalangan Jururawat Di Pejabat Kesihatan Daerah Kuala Terengganu  
Principal Investigator: Ahmad Hamdani Saari, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta
91. Kajian Penjagaan Kesihatan Menerusi Senaman Di Kalangan Warga Emas Di Klinik Kesihatan Sening Kota Tinggi Johor
   Principal Investigator: Khirul Azhar Kamal, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

92. Faktor-Faktor Peningkatan Pesakit Diabetes Mellitus Di Klinik Kesihatan Changkat Jering, Taiping Perak
   Principal Investigator: Mohd Zubir Husain, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

93. Kajian Gejala Merokok Dikalangan Remaja Berumur 15 - 17 Tahun Di Klinik Kesihatan Balok
   Principal Investigator: Mohd Izan Nuswady Ibrahim, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

94. Kajian Tentang Pengetahuan Bahaya Aids di Kalangan Penduduk_Di Klinik Kesihatan Changkat Jering
   Principal Investigator: Izam Refin, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

95. Kajian Mengenai amalan pemberian dicalangan pesakit darah tinggi (Hipertensi) di Klinik Kesihatan Kurnia.
   Principal Investigator: Rizal Shah Abdul Wahab, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

96. Kajian Kesedaran Masyarakat Tentang Saringan Faktor Risiko Penyakit Tidak Berjangkit Di Kawasan Operasi Klinik
   Kesihatan Nenasi
   Principal Investigator: Ahmad Shahrir Awang, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

97. Kajian Pengetahuan Penyakit Tuberculosis Di Kalangan Pesakit Yang Datang Ke Klinik Kesihatan Padang Rengas
   Principal Investigator: Azaha Zamri, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

98. Kajian Mengenai Stress Di Kalangan Anggota-Anggota Di Klinik Kesihatan Durian Tunggal
   Principal Investigator: Jacques Anak Jasan, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

99. Tahap pengetahuan tentang penyakit demam dengh di kawasan perumahan awam Kuala Selangor.
   Principal Investigator: Mohd Azizi Sulaiman, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

100. Faktor - faktor yang menyebabkan tekanan kerja (stress) dikalangan Paramedik yang bertugas di Jabatan Kecemasan
    dan Trauma Hospital Raja Permaisuri Bainun Ipoh.
    Principal Investigator: Muhd Shafeeq Arzami, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

101. ‘Hand Washing’ dalam aspek melakukan tugasan harian dikalangan paramedik di Jabatan kecemasan Hospital Selayang
    Principal Investigator: Nor Elyahansyah Jusoh, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

102. The Pattern of Traditional and Complementary Medicine(T&CM) Use in Hospital Slim River
    Principal Investigator: Nur Ilyana Naziruddin, Hospital Slim River

103. Tahap Pengetahuan Pesakit dan Waris Tentang Penyakit Asma Di Jabatan Kecemasan
    Principal Investigator: Mohd Hanafi Saidin, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

104. Impact of Pharmacist Managed Clinic on Medication Adherence and Glycemic Control of Type 2 Diabetes Patients in
    Malaysia: A randomised controlled study
    Principal Investigator: Nik Nuradlina Nik Adnan, Pharmaceutical Services Division
110. Tahap Pengetahuan Paramedik Jabatan Kecemasan Dan Trauma Hospital Ampang Tentang Penggunaan Mesin Defibrilator
Principal Investigator: Muhd Nor Hazlim Mohd Yusof, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

111. Peningkatan Kes Kecederaan Industri Dikalangan Warga Asing
Principal Investigator: Sariful Rahman Sharihan, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

112. Menilai Tahap Pengetahuan Berkaitan S.O.P Pengurusan Bencana Di Kalangan Penolong Pegawai Perubatan Di Jabatan Kecemasan Hospital Tengku Ampuan Afzan Kuantan
Principal Investigator: Muhd Radhi Jusoh, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

113. Tahap Pengetahuan Waris Pesakit Tentang Perkhidmatan Ambulans Pre-Hospital Care Di Hospital Raja Permaisuri Bainun (HRPB) Ipoh
Principal Investigator: Muhd Rafizal Adham, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

114. Tahap pengetahuan di kalangan waris pesakit jantung di jabatan kecemasan Hospital Raja Perempuan Zainab (2) tentang Kardio Pulmonari Resusitasi (CPR)
Principal Investigator: Hasmawawi Mat Ghazi, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

115. Interpretasi ritma elektrokardiogram (ECG) di kalangan paramedik di Jabatan Kecemasan,Hospital Tengku Ampuan Afzan,Kuantan.
Principal Investigator: Siti Zaleha Saad, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

116. Persepsi paramedik tentang pengetahuan pengendalian mesin defibrillator di unit kecemasan Hospital Kuala Krai Kelantan
Principal Investigator: Fadhli Iznan Jaafar, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

117. Pengetahuan tentang penggunaan mesin portable ventilator dicalangan Jururawat terlatih U29 di Hospital Setiu, Terengganu
Principal Investigator: Nora Zati, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

118. Kajian Tentang Kejadian Penyakit Berjangkit Tangan, Kaki dan Mulut Di Pusat Asuhan Kuala Lumpur
Principal Investigator: Nur Liyana Farhani Mohd Dali, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

119. Pengetahuan tentang kepentingan saringan Talasemia di kalangan masyarakat sebelum berkahwin
Principal Investigator: Asmidar Abdul Rahman, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

120. Parents’ Reactions Towards Child When Febrile Seizure Occur, In Pediatric Ward, Hospital Raja Permaisuri Bainun, Ipoh
Principal Investigator: Loo Chi Hwa, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

121. Menilai tahap kemahiran Penolong Pegawai Perubatan dalam melakukan Primary Triage di Jabatan Kecemasan Dan Trauma Hospital Sultanah Nur Zahirah Kuala Terengganu.
Principal Investigator: Hasanizan Ibrahim, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

122. Faktor- faktor peningkatan penyakit hipertensi di Klinik Kesihatan Paya Besar Kuantan Pahang.
Principal Investigator: Norfirdaus Norudin, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

123. Stress dikalangan paramedik di Jabatan Kecemasan dan Trauma Hospital Sultanah Nur Zahirah Kuala Terengganu
Principal Investigator: Zainudin Mat Salleh, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

124. Kekerapan Serangan Asthma Di Kalangan Pesakit Di Jabatan Kecemasan Hospital Taiping
Principal Investigator: Suhaida Abdul Khalib, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

125. Kajian mengenai tahap pengetahuan waris pesakit berkaitan dengan bahaya serangan jantung.
Principal Investigator: Zamzulia Halib, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

126. Kajian tentang masalah ponteng kerja dikalangan staff di Jabatan Kecemasan dan Trauma Hospital Serdang.
Principal Investigator: Shahizawati Sapie, Hospital Serdang

127. Kajian penggunaan suntikan insulin yang mendorong kejadian ulangan kes hypoglycemic di Hospital Pantai Klang.
Principal Investigator: Ku Hajar Ku Bahador, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

128. Teknik Pemakaian Cervical Collar Yang Betul Di Kalangan Paramedik Di Unit Kecemasan Hospital Besut Terengganu
Principal Investigator: Marzuki Mohd, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta
<table>
<thead>
<tr>
<th>No.</th>
<th>Titel</th>
<th>Investigator</th>
</tr>
</thead>
<tbody>
<tr>
<td>129</td>
<td>Faktor Peningkatan Obesiti Di Kalangan Kakitangan Hospital Setiu Terengganu</td>
<td>Nik Khairul Nizam Zulkifli, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
<tr>
<td>130</td>
<td>Menilai Tahap Keberkesanan Penggunaan MDI (metered dos inhaler)di Kalangan Pesakit Asma yang Datang Mendapatkan Rawatan Di Jabatan Kecemasan Hospital Sultanah Nur Zahirah,Kuala Terengganu</td>
<td>Rohani Mat, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
<tr>
<td>131</td>
<td>Kajian tentang tahap pengetahuan jururawat dalam mengurus kesakitan dikalangan kanak-kanak berumur 7-12 tahun yang mendapat rawatan di Unit Kecemasan Hospital Besut Terengganu.</td>
<td>Zamariusni Mohamad, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
<tr>
<td>132</td>
<td>Pemakaian glove steril semasa melakukan prosedur sterili di kalangan Paramedik Jabatan Kecemasan Hospital Raja Permaisuri Bainun, Ipoh</td>
<td>Norfarhana Mohd Saidi, Hospital Kuala Lipis</td>
</tr>
<tr>
<td>133</td>
<td>Kajian tentang amalan pemanduan berhemah di kalangan pemandu ambulan di Hospital Raja Permaisuri Bainun, Ipoh.</td>
<td>Komathi Subramaniam, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
<tr>
<td>134</td>
<td>Keberkesanan Pap Smear terhadap penyakit Kanser Serviks di kalangan wanita di Hospital Mawar Renal Medical Centre.</td>
<td>Rosmalina Haji Hashim, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
<tr>
<td>135</td>
<td>The perception of adult diabetic patients on complications of hyperglycemia in Perak Community Specialist Hospital (PCSH).</td>
<td>Kalaiwani Sandran, Perak Community Specialist Hospital</td>
</tr>
<tr>
<td>136</td>
<td>Demographic influence on the incidence of medication error among staff nurses at Emergency Ward Hospital Raja Permaisuri Bainun,Ipoh.</td>
<td>Ghausylia Gowri Tamil Arasan , Assunta Hospital</td>
</tr>
<tr>
<td>137</td>
<td>Mengkaji Respon Time Pre Hospital Care Di Hospital Muadzam Shah</td>
<td>Ezrol Bin Abdul Satar, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
<tr>
<td>138</td>
<td>Kajian Menilai Pengetahuan Dikalangan Paramedik Hospital Ampang Dalam Pengurusan Bencana Diperingkat Hospital</td>
<td>Hidzir Mohamad, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
<tr>
<td>139</td>
<td>Kajian mengenai Respon Time perkhidmatan ambulan di Hospital Taiping</td>
<td>Shahril Nizan Bin Awang Ali, Hospital Taiping</td>
</tr>
<tr>
<td>140</td>
<td>Kemahiran pengendalian defibrilator bagi kes kritikal ekg di kalangan Paramedik Hospital Batu Gajah Perak.</td>
<td>Mohd Azhar Ismail, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
<tr>
<td>141</td>
<td>Peningkatan Kes Ulangan Asma Akut Dikalangan Pesakit Yang Dirawat Di Jabatan Kecemasan Dan Traumahospital Kuala Kubu Bharu</td>
<td>Ismail Abdul Abrahman, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
<tr>
<td>142</td>
<td>Kesedaran tentang polisi Needle Prick di kalangan paramedik di Hospital Kuala Lipis</td>
<td>Muhd Mazmin Mohd Noor, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
<tr>
<td>143</td>
<td>Faktor Penyebab Kegagalan Penggunaan Protokol Pro-Qa Dalam Tugas Seharian Mengandalikan Panggilan Kecemasan 999</td>
<td>Fairuz Zaman Bohari, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
<tr>
<td>144</td>
<td>Perbandingan Kebajaan Penggunaan Laryngeal Mask Airway Berbanding Endo Tracheal Tube Untuk Pasukan Pre Hospital Care Pusat Perubatan UKM</td>
<td>Mohd Rosli Abd Rahim, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
<tr>
<td>145</td>
<td>Kajian tahap keberkesanan penggunaan entonox dalam pengendalian kesakitan ke atas pesakit pra-hospital di pusat perubatan UKM.</td>
<td>Mohd Fadzli Bakri, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
<tr>
<td>No.</td>
<td>Title</td>
<td>Principal Investigator</td>
</tr>
<tr>
<td>-----</td>
<td>----------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>146</td>
<td>Investigator Initiated Research</td>
<td>Muhd Salmizi Mohd Saupi, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
<tr>
<td>147</td>
<td>Tahap Pengetahuan Pengunaan Inhaler Di Kalangan Pesakit Asthma</td>
<td>Mohd Roslan Sulaiman, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
<tr>
<td>148</td>
<td>Kajian Keberkesanan Triage Di Kalangan Jururawat</td>
<td>Mohd Sazuwan Mohamed Saupi, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
<tr>
<td>149</td>
<td>Tahap Pengetahuan Pesakit Hipertensi Tentang Komplikasi Penyakit Hipertensi Di Klinik Kesihatan Tumpat</td>
<td>Mohd Khairu Nurul Munir, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
<tr>
<td>150</td>
<td>The effectiveness of electrical therapy for chronic back pain</td>
<td>Shanthi Chinniah, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
<tr>
<td>151</td>
<td>Kajian Masalah Dalam Mengekalkan Steriliti Cucian Luka</td>
<td>Mohd Sazuwan Mohamed Saupi, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
<tr>
<td>152</td>
<td>A Study on Knowledge about Medicine among Secondary School Students from Rural and Urban Area</td>
<td>Nurul Ain Ahamed Siddeekh, Hospital Seri Manjung</td>
</tr>
<tr>
<td>153</td>
<td>Management Of Over-Anticoagulation In Hospitalized Patients Receiving Warfarin</td>
<td>Azreena Izzaty Abdul Manan, Hospital Seri Manjung</td>
</tr>
<tr>
<td>154</td>
<td>Evaluating 8-Item Morisky Medication Adherence Scale (MMAS-8) and Pill Count as Measures of Medication Adherence Level and Investigating the Feasibility of Routine Medication Return by Patients in a District Specialist Hospital</td>
<td>Hu Yi Jie, Hospital Seri Manjung</td>
</tr>
<tr>
<td>155</td>
<td>The Prevalence of Warfarin Side Effects in Hospital Slim River: A Retrospective Study</td>
<td>Wong Su Yuen, Hospital Slim River</td>
</tr>
<tr>
<td>156</td>
<td>Provisionally Registered Pharmacist’s (PRP) knowledge and ability on counseling of devices</td>
<td>Lai Ee Siew, Hospital Taiping</td>
</tr>
<tr>
<td>157</td>
<td>Presentation And Outcome Of Diabetic Foot Ulcers In A District Hospital In Malaysia</td>
<td>Ong Kean Choo, Hospital Taiping</td>
</tr>
<tr>
<td>158</td>
<td>Radiological comparison of DHS and PFN in stable intertrochanteric fracture of femur</td>
<td>Selvaraja Maniam, Hospital Taiping</td>
</tr>
<tr>
<td>159</td>
<td>Prevalence Of Prescribing Errors Identified In The Mini Pharmacy Of Hospital Slim River</td>
<td>Paula Teoh Suen Suen, Hospital Slim River</td>
</tr>
<tr>
<td>160</td>
<td>Drug Prescribing Pattern In Emergency Department Hospital Taiping- A Descriptive Cross-sectional Study</td>
<td>Beh Wei Yih, Hospital Taiping</td>
</tr>
<tr>
<td>161</td>
<td>Outcomes Of Parotid Gland Surgery : 3 Years Retrospective Study</td>
<td>Suhana Abdul Rahim, Hospital Taiping</td>
</tr>
<tr>
<td>162</td>
<td>The Effectiveness of Online Training for Interpretation of Videofluoroscopy of Swallowing Study Among Speech-Language Therapists in Malaysia.</td>
<td>Ropidah Razali, Universiti Kebangsaan Malaysia</td>
</tr>
<tr>
<td>163</td>
<td>The Incidence of Knee Flexion Contracture Post Transtibial Amputation and Reduction Of Flexion Contracture Via Post Operative Stump Care</td>
<td>Ananthi Krishnamoorthy, Hospital Raja Permaisuri Bainun, Ipoh</td>
</tr>
<tr>
<td>164</td>
<td>Database registry of children with tuberous sclerosis complex</td>
<td>Khoo Tek Beng, Hospital Kuala Lumpur</td>
</tr>
</tbody>
</table>
INVESTIGATOR INITIATED RESEARCH

165. Kajian Pesakit Warga Tua Di Hospital Seberang Jaya, Pulau Pinang.
   Principal Investigator: Saripah Abdul Llah, Universiti Pendidikan Sultan Idris

166. Kepatuhan Ibu Hamil Terhadap Pengambilan Pil Zat Besi Di Klinik Kesihatan Ibu Dan Anak Greentown, Perak
   Principal Investigator: Hamizah Abdul Aziz, Hospital Teluk Intan

167. Tahap Pengetahuan dan Amalan Pemeriksaan Sendiri Payudara Pekerja Kesihatan Wanita Hospital Berpakar, Ipoh
   Principal Investigator: Zaharah Zakaria, Hospital Teluk Intan

168. Tahap Pengetahuan Tentang Kepentingan Amalan Senaman Kegel’s Di Kalangan Ibu Postnatal Di Hospital Raja Permaisuri
   Bainun Ipoh
   Principal Investigator: Annie Jalil, Hospital Sungai Buloh

169. Halangan dalam perlaksanaan penyusuan susu ibu secara eksklusif dikalangan ibu bekerja di Klinik Kesihatan Tanjung
   Rambutan,Ipoh,Perak
   Principal Investigator: Wan Mariah Wan Mohd Rahim, Hospital Raja Permaisuri Bainun, Ipoh

170. Kurang Pengetahuan Wanita Hamil tentang penggunaan epidural analgesia semasa labour di Hospital Raja Permaisuri
   Bainun , Perak.
   Principal Investigator: Ayusfida Mohd Desa, Hospital Tengku Ampuan Rahimah

171. A Review on Psychiatric Admissions in Hospital Raja Permaisuri Bainun, Ipoh in Year 2012
   Principal Investigator: Anis Syazni Ismail, UniKL- RCMP

172. Clinical Presentation of Nasopharyngeal Carcinoma and Association of Symptom Duration with Clinical Staging and
   Patient Outcomes
   Principal Investigator: Rachel Wong Yi Ying, UniKL- RCMP

173. Tahap pengetahuan wanita hamil tentang penggunaan epidural analgesia semasa labour di Hospital Raja Permaisuri
   Bainun Ipoh , Perak.
   Principal Investigator: Ayusfida Mohd Desa, Hospital Tengku Ampuan Rahimah

174. Assessment of Pharmacy Practice for New Provisionally Registered Pharmacist (PRP) in Perak using an Objective Structured
   Clinical Examination (OSCE)
   Principal Investigator: Chew Lan Sim, Hospital Raja Permaisuri Bainun, Ipoh

175. A Study On Endophthalmitis Among Patients Attending Hospital Raja Permaisuri Bainun For A Period Of Five Years
   Principal Investigator: Siti Farhana Abdul Razak, UniKL- RCMP

176. A Study On Knowledge, Attitude & Practice On Diabetic Foot Care Among Diabetic Patients In Hospital Raja Permaisuri
   Bainun, Ipoh from 15th April 2013 To 17th May 2013
   Principal Investigator: Nur Hanisah Mohamad Kani, UniKL- RCMP

177. A Retrospective Study On The Successful Used Of Methadone Replacement Therapy in HRPB, Ipoh
   Principal Investigator: Nurul Izzati Shafie, UniKL- RCMP

178. Awareness, Knowledge, and Practice of Family Planning Methods among Women who are attending Greentown Maternal
   and Child Health Clinic in Ipoh.
   Principal Investigator: Nobilah Najlaa Baharim, UniKL- RCMP

179. A retrospective study of the incidence of Pre-hypertension status among young age group <40 years old in KlinikKesihatan
   Kg Simee, Ipoh from March2012-March 2013.
   Principal Investigator: Nur Amrina Ahmad, UniKL- RCMP

180. A Retrospective Study On The Characteristics Of Palliative Care Patients Admitted To The Palliative Care Unit Of Hospital
   Raja Permaisuri Bainun, Ipoh Beginning From January 2012 To December 2012
   Principal Investigator: Nurfarahn Rusli, UniKL- RCMP

181. Epidemiology And Outcome Among Capd Patients Requiring Hospital Admissions In HRPB
   Principal Investigator: Sridhar Ramanaidu, Hospital Raja Permaisuri Bainun, Ipoh
182. Severe Symptomatic Hypocalcaemia And Hypokalaemia Caused By Oral Sodium Phosphate Fleet Solution In A Hemodialysis Patient With Tertiary Hyperparathyroidism
   Principal Investigator: Sridhar Ramanaidu, Hospital Raja Permaisuri Bainun, Ipoh

183. A Retrospective Study Of The Incidence Of Pre-Hypertension Status Among Young Age Group <40 Years Old In Klinik Kesihatan Kg Simee, Ipoh From March 2012-March 2013
   Principal Investigator: Shafikah Hanani Suhimi, UniKL-RCMP

184. Kajian Terhadap Kualiti Perkhidmatan Farmasi Berdasarkan Maklumbalas Pesakit Di Klinik Kesihatan Simee
   Principal Investigator: Zainal Zolkefri, Klinik Kesihatan Kampung Simee

185. Reducing Homecare Patients’ Non - Adherence To Oral Medications
   Principal Investigator: Noor Melissa Nor Hadi, Hospital Raja Permaisuri Bainun, Ipoh

186. A Study On Corneal Ulcer Among Patients Admitted to Hospital Raja Permaisuri Bainun For A Period Of Two Years (2011-2012)
   Principal Investigator: Siti Farhana Abdul Razak, UniKL-RCMP

187. Retrospective Study On The Antibiotic Usage & Cost In All The Government Clinics Of The Province Of Manjung And Kampar In Year 2012
   Principal Investigator: Sherdila Baizura Kamarul Zaman, Hospital Putrajaya

188. Increasing Rate In Caesarean Section Related To Refusing Of Vaginal Birth After Caesarean
   Principal Investigator: Noraziera Razak, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

189. Psychological and physical effect on patient undergoing permanent colostomy creation
   Principal Investigator: Suriayakala Karnakaran, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

190. Effectiveness Practise Of Traffic Pattern In The Operating Room To Prevent Surgical Site Infection
   Principal Investigator: Lydiawati Muhamad Ghazali, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

191. Double Bundle Reconstruction Restore Knee Stability Among Patient With Post Anterior Cruciate Ligament Tear
   Principal Investigator: Lili Mastura Mohd Nor, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

192. Inhalation Injury Due To Fumes Of Gluteraldehyde In Operation Theatre
   Principal Investigator: Jamilah Ahmad, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

193. Intramedullary Nailing Versus Plate And Screws In Closed Femoral Shaft Fracture
   Principal Investigator: Tan Mei Ching, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

194. Comparison Post Operative Complication (Sore Throat) Between ETT Intubation and LMA Intubation.
   Principal Investigator: Syurayah Basir, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

195. Advantages Of Undergoing Laparoscopic Assisted Vaginal Hysterectomy For Endometrial Carcinoma
   Principal Investigator: Noor Shuhaida Mohd Shahidi, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

196. Tahap kecekapan jururawat di Dewan Bedah Harian, Hospital Raja Permaisuri Bainun, Ipoh
   Principal Investigator: Aziah Karim, Hospital Raja Permaisuri Bainun, Ipoh

197. Implimentasi Peraturan-Peraturan Kawalan Hasil Tembakau 2004 Di Institusi Pendidikan Daerah Cameron Highlands,Pahang
   Principal Investigator: Chuah Boon Kheang, Pejabat Kesihatan Daerah, Cameron Highlands

198. Prolonged Standing Can Cause Back Pain To Perioperative Nurses
   Principal Investigator: Wan Nor Iliza Ibrahim, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

199. Air Pollution Due To Leakage Of Anaesthetic Gases-Sevoflurane: Hazard To Operating Room Personnel
   Principal Investigator: Chek Mahuza Mat Shafii, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

200. Knowledge & Changes In Activity Daily Living Post Below Knee Amputation
   Principal Investigator: Noor Idayu Shafiee, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta
201. Effectiveness Of Wound Healing In Total Knee Replacement In Patient Using Skin Staple
**Principal Investigator:** Ezana Syuhaiza Ahmad, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

202. Effectiveness Of Thompson Hemiarthroplasty For Patient With Displaced Fracture Neck Of Femur
**Principal Investigator:** Mohd Haniff Mohd Baharuddin, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

203. Comparison Dynamic Hip Screw And Gamma Nail Among Patient With Intertrochanteric Fracture
**Principal Investigator:** Faridah Muhammad, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

204. Interviewing at least two experts in mental health/illness field about how to reduce stigma of mental illness
**Principal Investigator:** Fatimah Hashim, Hospital Slim River

205. Etiology and prevalence of anemia in pregnancy within Kinta District, Perak
**Principal Investigator:** Vengadasalam Paranathamani, Klinik Kesihatan Greentown

206. Kemahiran Penggunaan Informasi Teknologi (IT) Di Kalangan Anggota Unit Pemulihan Carakerja, Hospital Bahagia Ulu Kinta.
**Principal Investigator:** Sarina Abu Ahmad, Hospital Bahagia Ulu Kinta.

207. Tahap Pengetahuan Autoriti Lini Mempengaruhi Amalan Hijau di Hospital Bahagia Ulu Kinta
**Principal Investigator:** Kwong Mei Yee, Hospital Bahagia Ulu Kinta.

208. A Study on Patient’s Perception of Sistem SMS Ubat in Outpatient Pharmacy, Hospital Selama
**Principal Investigator:** Noor Hamizah Sabki, Hospital Selama

209. Gathering Information by interviewing at least 2 experts in mental health/illness field about:
- What is mental illness & stigma
- The effects of negative stigma
- Ways of reducing stigma
- The roles of experts/educators/agencies
**Principal Investigator:** Nor Aini Mat Nasir, Hospital Slim River

210. Phacoemulsification Versus Extracapsular Cataract Extraction
**Principal Investigator:** Junaida Ismail, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

211. A Descriptive Study on the Relation between Doctor-Patient Relationship and Adherence to Treatment in Patient with Diabetes Mellitus in a Government Health Clinic in Ipoh
**Principal Investigator:** Nurul Sakinah Rosli,UniKL-RCMP

212. A Study Of The Oral Health Profile of Adult Dental Patients in the district of Batang Padang, Perak, Malaysia
**Principal Investigator:** Malliga Palanisamy, Klinik Pergigian Komuniti, Tapah

213. Reducing stigma of mental illness
**Principal Investigator:** Nurazyan Mohd Azmi, Universiti Pendidikan Sultan Idris

214. Impact of Pharmacist Intervention on Outpatient’s Nasal Spray Technique in Hospital Slim River
**Principal Investigator:** Nurul Najwa Mohd Ibrahim, Hospital Slim River

215. The Study Of The Birth Weight Of Infants Born To Gestational Diabetes Mellitus Mothers In Hospital Raja Permaisuri Bainun, Ipoh, Perak
**Principal Investigator:** Siti Nor Raha Tuhanian, UniKL-RCMP

216. Tahap kepuasan pelanggan di wad 4 (perubatan lelaki) hospital seri manjung, perak.
**Principal Investigator:** Umikalsum Baharin, Hospital Batu Gajah

217. Reliability and Validity of Translated Malay Version of Past Food Insecurity Tools among Diabetic Patients
**Principal Investigator:** Haliza Mohd Radzi, Universiti Teknologi MARA (UiTM)

218. A Multi-Center, Multi-National, Double-Blind, Randomized, Active-Controlled, Parallel-Group Clinical Study To Assess Safety And Efficacy Of Pda10 (Epoetin-Alfa) Compared To Eprex® In Patients With Anemia Of Chronic Renal Failure
**Principal Investigator:** Loh Chek Loong, Hospital Raja Permaisuri Bainun, Ipoh
INVESTIGATOR INITIATED RESEARCH

219. Level Of Knowledge Of Infection Control And Sterile Technique Principles Among Nurses In The Operating Room Complex At Hospital Raja Permaisuri Bainun Ipoh
   Principal Investigator: Vanitha Sockalingam, Open University Malaysia (OUM)

220. Infective Outcome Of Cuffed Hemodialysis Catheters And Patient Survival In A Single Center
   Principal Investigator: Lee Yee Yan, Hospital Raja Permaisuri Bainun, Ipoh

221. Kajian Kepenggunaan Portal Myhealth Dalam Kalangan Pesakit Hospital Kementerian Kesihatan Malaysia 2013
   Principal Investigator: Kalai Vaaniy Balakrishnan, Institute of Health Behavioural Research

222. Bilateral Visual Loss Due to Lupus Retinitis In A Patient With SLE And Antiphospholipid Syndrome
   Principal Investigator: Lee Yee Yan, Hospital Raja Permaisuri Bainun, Ipoh

223. Utilization of Basic Peridontal Examination (BPE) in Periodontitis Detection : The Malaysian Dentists? Perspective
   Principal Investigator: Khamiza Zainol Abidin, Hospital Taiping

224. Delay in diagnosis and treatment among tuberculosis (TB) patients attending a referral hospital in Malaysia
   Principal Investigator: Umadevi Muthukumaru, Hospital Taiping

225. A Study On Schizophrenia Patients Attending Follow Up In Specialist Psychiatry Clinic In Hospital Raja Permaisuri Bainun, Ipoh In 2012
   Principal Investigator: Nurul Izzah Sulaiman, UniKL- RCMP

226. A Descriptive Study of Spontaneous Intracranial Haemorrhage in Hospital Raja Permaisuri Bainun From 1 January 2013 to 31 March 2013
   Principal Investigator: Nurul Hidayati Zanala Abidin, UniKL- RCMP

   Principal Investigator: Azdayanti Muslim, Universiti Teknologi MARA (UiTM)

228. Acceptance and Practice of Breast Feeding Among First Time Mother
   Principal Investigator: Wilkinson Tan Yoong Jian, Hospital Taiping

229. Retrospective analytical studies on Antidiabetic drug prescriptions
   Principal Investigator: Aravinth Vijay Jesuraj (Allianze College of Medical Sciences)

230. Doctors’ Perception and Expectation of the Role of Clinical Pharmacists in a Regional Referral Hospital
   Principal Investigator: Chow Li Wei, Hospital Raja Permaisuri Bainun, Ipoh

231. Comparative Study On the Compliance of Hematinics and New Obimin Among Non-anemic Antenatal Mothers in Maternal & Child Health Clinics (MCH)
   Principal Investigator: Chong Lai Fong, Klinik Kesihatan Tanjung Tualang

232. Knowledge on hypothermia prevention for newborn babies admitted to special care nursery, in one local public Hospital.
   Principal Investigator: Ong Mei Hong, Hospital Taiping

233. Tahap Pengetahuan, Sikap Dan Amalan Di Kalangan Pesakit Tentang Kanser Serviks Dan Saringan Pap Smear Di Unit Obstetrik Dan Ginekologi Hospital Raja Permaisuri Bainun Ipoh
   Principal Investigator: Zety Athka Che Soh, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

234. Faktor Pengetahuan, Sikap Dan Amalan Pemeriksaan Sendiri Payudara Di Kalangan Wanita Usia Subur Di Klinik Kesihatan Tronoh, Negeri Perak Pada Tahun 2010
   Principal Investigator: Nor Asiah Abdul Karim, Pejabat Kesihatan Daerah, Kinta

235. Amalan Pemeriksaan Sendiri Payudara (PSP) di kalangan Jururawat Masyarakat di Zon 1 Pejabat Kesihatan Daerah Kinta
   Principal Investigator: Maizun Karimuddin, Pejabat Kesihatan Daerah, Kinta

236. Awareness of Association Between Periodontal Disease and Preterm and/or Low Birth Weight Infants Among Healthcare Professionals
   Principal Investigator: Nik Madihah Nik Azis, Klinik Pergigian Seri Manjung
237. Kurang Pengetahuan Ibu Primigravida Terhadap Penggunaan Carta Pergerakan Fetus Di Klinik Antenatal & Wad Antenatal HRPB Ipoh
   Principal Investigator: Ayati Mahmad Nor, Pejabat Kesihatan Daerah Manjung & Suria Maslinda Abd Suaid, Hospital Changkat Melintang & Rozidah Kamarudin, Klinik Kesihatan Gunung Semanggol & Noriah Kassim, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta & Noraiza Zakaria, Seri Manjung Nursing & Health Sciences College

238. To Study Knowledge, Attitude And Practice On Usage Of Effective Family Planning Methods Among High Risk Women Who Attending Antenatal Check Ups At Klinik Kesihatan Gunung Rapat.
   Principal Investigator: Sivakamasundari Ratnam, Pejabat Kesihatan Daerah, Kinta

240. National Audit On Anaesthetic Airway Management, Malaysia
   Principal Investigator: Khoo Eng Lea, Hospital Kuala Lumpur

241. A Retrospective Study On Prevalence Of Poisoning Cases Admitted To Emergency Trauma Department Of Hospital Raja Permaisuri Bainun, Ipoh
   Principal Investigator: Agnes Ađaikalasamy, UniKL- RCMP

242. Tahap Mengambil Suhu Secara Oral Dikalangan Pelajar Kejururawatan Semester Enam
   Principal Investigator: Nor Aini Abu Bakar, Open University Malaysia (OUM)

244. A cross sectional observational study on quality of life after daycare laparoscopic cholecystectomy, looking in to preoperative and post operative GIQLI scores
   Principal Investigator: Sou Jing Kim, Hospital Raja Permaisuri Bainun, Ipoh

245. AUC/MIC ratio as a tool in determining effectiveness of Garasent® for the prevention of early onset sepsis in hospitalized neonates
   Principal Investigator: Nazedah Ain, Hospital Taiping

   Principal Investigator: Joy Anak Palong, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

249. Kajian Pengetahuan Ibubapa Terhadap Penyakit Measles Dikalangan Kanak-Kanak Di Klinik Kesihatan Padang Rengas
   Principal Investigator: Hermon Anak Duing, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

250. Team performance of public hospital nurses: the role of team task, team composition, team context and team trust.
   Principal Investigator: Azlyn Ahmad Zawawi, Universiti Sains Malaysia (USM)

251. Retrospective Study Of Control Of Hypertension Amongst Hypertensive Patients In Simee Heath Clinic
   Principal Investigator: Ong Yean Ken, UniKL-RCMP

252. Seroprevalence and trends of Hepatitis B, Hepatitis C and HIV infections among blood donors: an experience from a Regional Referral Hospital in Malaysia
   Principal Investigator: Kyaw Tay Za, Hospital Raja Permaisuri Bainun, Ipoh
253. Occurrence of Medication Errors from Emergency Department Prescriptions in Hospital Taiping  
Principal Investigator: Beh Wei Yih, Hospital Taiping

254. Cancer Therapeutics Program - Development of metal based complexes as anti-cancer agents  
Principal Investigator: Alan Khoo Soo Beng, Institute for Medical Research (IMR)

255. Appropriate Use Of Filgrastim In Breast Cancer Patients Receiving Intravenous Chemotherapy In Regional Referral Hospital  
Principal Investigator: Lee Pooi Mun, Hospital Raja Permaisuri Bainun, Ipoh

Principal Investigator: Sanisah Ismail, Hospital Batu Gajah

257. Nicotine-dependents and Non-smokers among Male Schizophrenia Patients with Sexual Dysfunction  
Principal Investigator: Ong Kheng Yee, Hospital Duchess of Kent, Sandakan

258. Factors Associated with Under-Five Mortality in Perak, 2012 - A Retrospective Review  
Principal Investigator: Subashini Ambigapathy, Klinik Kesihatan Taiping

259. Are Smokers Who Wants to Quit Appropriately Referred for Vareniciline Treatment?  
Principal Investigator: Hemalathah Paramalingam, Hospital Raja Permaisuri Bainun, Ipoh

260. Intracameral Ranibizumab - a comparative study of the effectiveness of Ranibizumab in treating patients with rubeosis and neovascular glaucoma  
Principal Investigator: Ch'ng Tun Wang, Hospital Raja Permaisuri Bainun, Ipoh

261. A Study on the medication Errors at After Office Hour Hospital Discharge in a Regional Referral Hospital  
Principal Investigator: Nur Azhani Zainol Abidin, Hospital Raja Permaisuri Bainun, Ipoh

262. A Prospective And Cross-Sectional Study On Medication Knowledge And Compliance Among Hypertensive Patients In Hospital Teluk Intan  
Principal Investigator: Shariza Shaari, Hospital Teluk Intan

263. Comparison of Intraocular Pressure (IOP) Measurement using ICARE And Goldmann Applanation Tonometry (GAT) in Gas-filled Eyes of Patients post Vitreoretinal Surgery  
Principal Investigator: Cheong Moon Yee, Hospital Raja Permaisuri Bainun, Ipoh

264. Attendance of Toddlers to Dental Clinics  
Principal Investigator: Nik Madiah Nik Azis, Klinik Pergigian Seri Manjung

265. Ability In Interpreting And Understanding Common Medication Labels Among Patient's In Regional Referral Hospital  
Principal Investigator: Doris George Visuvasam, Hospital Raja Permaisuri Bainun, Ipoh

266. International multicentre prevalence study on sepsis  
Principal Investigator: Tan Cheng Cheng, Hospital Sultan Aminah, Johor Bahru

267. Knowledge, attitudes, and perceptions (KAP) of patients towards atrial fibrillation, anticoagulant therapy for stroke prevention in atrial fibrillation (ACTSPAF) and the barrier of ACTSPAF: A Multicentre study.  
Principal Investigator: Sahimi Mohamed, Hospital Tengku Ampuan Afzan, Kuantan

268. Favourable Clinical Outcome with Weekly Vinblastine in a 6-year-old Girl with Probable Low Grade Brainstem Glioma - A Case Report  
Principal Investigator: Kavetha Ramalingam, Hospital Raja Permaisuri Bainun, Ipoh

269. Prevalence Of Polypharmacy For Acute Cases In Primary Care Setting  
Principal Investigator: Norizati Ismail, Hospital Teluk Intan

270. The evaluation of effectiveness of low dose Gemfibrozil reducing triglyceride  
Principal Investigator: Chin Hui Ng, Hospital Kuala Kangsar
271. Relationship between BMI, Dietary Pattern and Hypertension among Patients in Hospital Teluk Intan  
Principal Investigator: Neshalatha Govarthnapany, Hospital Teluk Intan

272. Compliance of Folic Acid Supplementation among Antenatal Mothers in Regional Referral Hospital  
Principal Investigator: Shanthi Ramanathan, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

273. Tahap Pengetahuan Ibu Multigravida Berkaitan Kaedah Non-Pharmacology Untuk Labour Pain Relief  
Principal Investigator: Rosmieza Kahar, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

274. Tahap Pengetahuan Ibu Primigravida Dan Multigravida Tentang Carta Pergerakan Fetus  
Principal Investigator: Norhazira Ramli, Pejabat Kesihatan Daerah, Hulu Perak

275. Comparison of Oxidative Stress Levels among patients with Primary Open Angle Glaucoma (POAG) and Primary Angle Closure Glaucoma (PACG)  
Principal Investigator: Fhun Lai Chan, Hospital Raja Permaisuri Bainun, Ipoh

276. Late antenatal booking di kalangan ibu multipara di Klinik Kesihatan Tanjung Rambutan.  
Principal Investigator: Gurmeet Kaur Utumber Singh, Hospital Raja Permaisuri Bainun, Ipoh

277. Kesan penggunaan epidural analgesia bagi primigravida di labor room Hospital Raja Pemaisuri Bainun (HRPB).  
Principal Investigator: Nor Asikian Mohamed Ghazali, Hospital Raja Permaisuri Bainun, Ipoh

278. Tahap Pengetahuan Dan Kesedaran Tentang Penjagaan Luka Episiotomi Di Kalangan Ibu Primigravida  
Principal Investigator: Hasmawati Harun, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

279. Amalan dan kepercayaan yang mempengaruhi pengambilan nutrisi ibu semasa puerperium  
Principal Investigator: Siti Azimah Raji, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

280. The use of Complementary and Alternative medicines (CAM) among patients with diabetes at Hospital Taiping  
Principal Investigator: Wan Aziati Wan Omar, Hospital Raja Permaisuri Bainun, Ipoh

281. Improving Home Care Patients’ Adherence To Oral Medications  
Principal Investigator: Noor Melissa Nor Hadi, Hospital Raja Permaisuri Bainun, Ipoh

282. Evaluation Of Pharmacy Department Satisfaction On Implementation Of Clinic Pharmacy System (CPS) & Pharmacy Information System (PhIS)  
Principal Investigator: Ooh Wei Hon, Klinik Kesihatan, Chemor

283. Critical Care Nurses Pain Assessment and Management Practices: A Survey in Hospital Raja Permaisuri Bainun, Ipoh  
Principal Investigator: Devanandhini Krisnan, Hospital Raja Permaisuri Bainun, Ipoh

284. Kajian Tahap Pengetahuan Berkaitan Senaman Dan Amalan Senaman Bagi Kakitangan Wad 9-11 (L), Wad Forensik 23 Dan Wad 14-15 (P)  
Principal Investigator: Rosmawati Abdul Rashid, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

285. Persepsi Terhadap Penyakit Mental Dikalangan Masyarakat Taman Indah, Tanjong Rambutan, Perak  
Principal Investigator: Hemaladevi Palanisamy, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

286. Mengkaji Tahap Stres Kerja Di Kalangan Staf Hospital Bahagia Ulu Kinta (HBUK), Perak  
Principal Investigator: Rosenadiah Muhin, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

287. Persepsi, Masyarakat Tentang Rawatan Tradisional Terhadap Kesihatan Mental  
Principal Investigator: Hemaladevi Palanisamy, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

288. Kajian Stres Di Kalangan Wanita Bekerjaya Di Taman Indah, Ulu Kinta Perak  
Principal Investigator: Noor Azian Yeob, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

289. Blue Micturition...The Silver Bullet- Calcium Channel Blocker Poisoning: Administering Methylene Blue When All Others Failed  
Principal Investigator: Foong Kit Weng, Hospital Raja Permaisuri Bainun, Ipoh
290. Penggunaan Teori Perlindungan Motivasi Dalam Meningkatkan Perlindungan Motivasi Dalam Diri Ibu Untuk Mengurangkan Risiko Kanser Payudara Dikalangan Anak Perempuan
    Principal Investigator: Nur Farina Mohd Ghazali, Universiti Sains Malaysia (USM)

291. Assessment of the Paediatric Appendicitis Scoring (PAS) as a Screening Tool for Acute Appendicitis in Children
    Principal Investigator: Koay Yeang Wee, Hospital Taiping

292. Morbidity Profile Among Pediatric Age Group In Hospital Raja Permaisuri Bainun During 2012 - 2013
    Principal Investigator: Sharifah Nur Syamimi Syed Omar, Hospital Raja Permaisuri Bainun, Ipoh

293. Co-Prescribing of Gastroprotective Agents in Patients Taking NSAIDs in Health Clinics of District Larut Matang & Selama
    Principal Investigator: Ng Kok Yee, Klinik Kesihatan, Kamunting

294. Relationship Between Stress, Family Work Conflict, Burnout, And Leadership With Job Satisfaction Among Nurses Working In Medical Ward In Hospital Taiping
    Principal Investigator: Thelagavathy Ganapathy, Hospital Taiping

295. Kesedaran Tentang Kepentingan Pengambilan Makanan Seimbang Dikalangan Pembantu Perawatan Kesihatan Wanita Di Hospital Bahagia Ulu Kinta
    Principal Investigator: Rozielawati Mohd Ghazali, Hospital Bahagia Ulu Kinta

296. Tahap Pengetahuan Tentang Bahaya Merokok Dalam Kalangan Penduduk Di Pangsapuri Teratai, Taman Sutera, Kajang, Selangor
    Principal Investigator: Izlin Azida Yusoff, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

297. Level of knowledge about mental health among resident in quarter TUDM Jugra, Banting Selangor
    Principal Investigator: Sarina Awang Hamat, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

298. Knowledge of Pediatric Nurses on the Appropriate Management of Fever in Young Children
    Principal Investigator: Hafizah Mohd Radzuan, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

299. Why are Parents Reluctant to Immunise their Child?
    Principal Investigator: Norhabibah Rahmat, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

300. Do calorie intake and physical activity affect the Body Mass Index in primary school-going children?
    Principal Investigator: Nur Liyana Roslan, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

301. Do Paediatric Health Staff Handle Chemotherapeutic Drugs Appropriately?
    Principal Investigator: Nagalatchumi Marathaiveran, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

302. Evaluation of the Perceptions of Consumers on Adverse Drug Reaction In Taiping Hospital
    Principal Investigator: Noorsyamsidar Ahmad Sidi, Hospital Taiping

303. Weight-Based Loading Dose or 1gm stat of Vancomycin In End Stage Renal Failure Patients On Hemodialysis
    Principal Investigator: Arvinder Jeet Kaur Satday Singh, Hospital Raja Permaisuri Bainun, Ipoh

304. Quality Of Life And Family Functioning In Malaysian Children With Epilepsy
    Principal Investigator: Chang Wei Mun, Hospital Raja Permaisuri Bainun, Ipoh

305. Implementation of Reflective Practice in Clinical Setting; A small scale survey on physiotherapists in Perak, Malaysia
    Principal Investigator: Norita Mohd Ibrahim, University of Teeside

306. Low Back Ache Among Operating Theater Nurses In HRPB
    Principal Investigator: Manjula Raja Mogan, Hospital Raja Permaisuri Bainun, Ipoh

307. Comparison between the effects of intrathecal hyperbaric bupivacaine with opioid(Morphine), injected as either a mixture or sequentially, for spinal anaesthesia for caesarean section.
    Principal Investigator: Azoharim Omar, Hospital Taiping

308. Tahap Pengetahuan Tentang Anemia Di Kalangan Ibu Mengandung Di Klinik Kesihatan Pokok Assam, Taiping, Perak
    Principal Investigator: Pushpalatha Muniandy, Klinik Kesihatan Gunung Rapat
<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Principal Investigator</th>
</tr>
</thead>
<tbody>
<tr>
<td>309</td>
<td>Study On The Interruption Of Tuberculosis Treatment Due To Side Effects Of Anti-Tuberculosis Therapy At A Referral Hospital In Malaysia From The Year 2010-2012</td>
<td>Mangayarkarasi Ramanathan, Hospital Taiping</td>
</tr>
<tr>
<td>310</td>
<td>Caridovascular Risk Management Among Primary Care Patients In Malaysia</td>
<td>Harmy Mohamed Yusoff, Universiti Sains Malaysia</td>
</tr>
<tr>
<td>311</td>
<td>Pharmacist-initiated lung function screening using validated COPD-PS questionnaire followed by vitalograph COPD-6 to detect the impaired lung function in people at risk of developing COPD in primary health care setting</td>
<td>Sui Chee Fai, Klinik Kesihatan Luyang</td>
</tr>
<tr>
<td>312</td>
<td>Coping Strategies as the Mediator of Burden of Care and Perceived Stigma in Predicting the Quality of Life among Caregivers of Outpatients with Schizophrenia in Malaysia</td>
<td>Faeza Hasnan, Universiti Kebangsaan Malaysia (UKM)</td>
</tr>
<tr>
<td>313</td>
<td>Breast Cancer Awareness Among A Sub-Urban Group Of Women In Perak, Malaysia - A Pre And Post Awareness Campaign Study</td>
<td>Arvinder Singh Harbaksh Singh, Hospital Raja Permaisuri Bainun, Ipoh</td>
</tr>
<tr>
<td>314</td>
<td>Tahap Pengetahuan Ibubapa Dalam Tindakan Awalan Kes Demam Sawan (Febrile Fits) Di Rumah</td>
<td>Amirudin Ahmad Batawi, Pejabat Kesihatan Daerah, Hilir Perak</td>
</tr>
<tr>
<td>315</td>
<td>Utilization of Sucrose as an Analgesia by Healthcare Professionals before Blood Taking/ Cannula Setting among Neonates and Infants.</td>
<td>Nor Fatihah Harun, UniKL-RCMP</td>
</tr>
<tr>
<td>316</td>
<td>Sociodemographic Profile of Diabetic Patients in Greentown Health Clinic, Ipoh</td>
<td>Aldrin Chong Min Chung, UniKL-RCMP</td>
</tr>
<tr>
<td>317</td>
<td>Challenges, Faced By The Family Members In The Care Of Mentally Ill Patients In Hospital Bahagia Ulu Kinta</td>
<td>Mariamma Vejayan, Hospital Bahagia Ulu Kinta</td>
</tr>
<tr>
<td>318</td>
<td>Tahap Pengetahuan Mengenai Penyakit Mental Di Kalangan Pembantu Perawatan Kesihatan Di Wad Kemasukkan Lelaki Hospital Bahagia Ulu Kinta</td>
<td>Leni Liew, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
<tr>
<td>319</td>
<td>Persepsi Di Kalangan Pembantu Perawatan Kesihatan Terhadap Pesakit Agresif Psikiatri Di Wad Kemasukkan Lelaki Hospital Bahagia Ulu Kinta</td>
<td>Ragina Laus Anak Marsing, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
<tr>
<td>320</td>
<td>Parents Perception On Sex Education In Children</td>
<td>Roselina Anak Noew Ganjin, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
<tr>
<td>322</td>
<td>Persepsi Kalangan Penolong Pegawai Perubatan Yang Bertugas di Hospital Bahagia Ulu Kinta Terhadap Kursus Latihan Dalam Perkhidmatan</td>
<td>Muszafar Shah Ahamad Termizi, Kolej Pembantu Perubatan Ulu Kinta</td>
</tr>
<tr>
<td>323</td>
<td>Knowledge Among Nurses Regarding Pain Control In Neonates At NICU, Hospital Raja Permaisuri Bainun, Ipoh Perak</td>
<td>Diana Sharon Beh, Kolej Kejururawatan Ipoh</td>
</tr>
<tr>
<td>324</td>
<td>Malaysian Methadone Treatment Outcome Study (MyTOS)</td>
<td>Norsiah Ali, Klinik Kesihatan Tampin</td>
</tr>
<tr>
<td>325</td>
<td>Kajian Mengenai Penerimaan Keluarga Terhadap Pesakit Skizofrenia Yang Telah Discaj Dari HBUK</td>
<td>Rohati Abdul Ghani, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta</td>
</tr>
</tbody>
</table>
326. Translation, and Psychometric Validation of Bahasa Malaysia Version of the Saint Louis University Mental Status (SLUMS) Examination
   Principal Investigator: Shahrizal Selamat, Hospital Raja Permaisuri Bainun, Ipoh

327. Descriptive profile of patients and service utilization of a home-based treatment programme in Malaysia- a retrospective 12-month case note study
   Principal Investigator: Cheah Yee Chuang, Hospital Bahagia Ulu Kinta

328. Glyceryl trinitrate management among angina patients at Hospital Raja Permaisuri Bainun Ipoh (HRPB).
   Principal Investigator: Safirah Hanum Sulaiman, Hospital Raja Permaisuri Bainun, Ipoh

329. Patient Compliance with Oral Antibiotic of Broad-spectrum Penicillin among Outpatient in Hospital Raja Permaisuri Bainun, Ipoh
   Principal Investigator: Nur Aqilah Zainul Rashid, Hospital Raja Permaisuri Bainun, Ipoh

330. Kajian Keberkesanan Penggunaan “Advance Airway Laryngeal Mask Airway” Di Kalangan Paramedic Unit Pre-Hospital HRPB Ipoh
   Principal Investigator: Laila Abdul Manaf, Hospital Raja Permaisuri Bainun, Ipoh

331. Tobacco use survey among hospital staffs and their perceptions of smoking cessation products and services
   Principal Investigator: Wan Azuati Wan Omar, Hospital Taiping

332. Tahap Keberkesanan Perlaksanaan Sistem Field Triage Di Kalangan Anggota Paramedik Di Jabatan Kecemasan Di Hospital
   Principal Investigator: Noorliza Yaakop, Kolej Sains Kesihatan Bersekutu Sultan Azlan Shah, Ulu Kinta

333. Stochastic Models For Mosquito-Borne Infectious Disease Mapping In Malaysia
   Principal Investigator: Syafiqah Husna Mohd Imam Ma’arof, Universiti Pendidikan Sultan Idris (UPSI)

334. Pengetahuan ‘advanced cardiac life support (ACLS) di kalangan penolong pegawai perubatan U29 dan jururawat U29 di Jabatan Kecemasan Dan Trauma, Hospital Raja Permaisuri Bainun, Ipoh.
   Principal Investigator: Yogendran Sateaselan, Hospital Raja Permaisuri Bainun, Ipoh

335. Tahap Pengetahuan Interpretasi ECG Dikalangan Paramedik Hospital Batu Gajah
   Principal Investigator: Khairul Hidayat Yahya, Hospital Seri Manjung

336. Tahap Pengetahuan Interpretasi ECG Dikalangan Paramedik Hospital Batu Gajah
   Principal Investigator: Herman Fendy Abdullah, Hospital Batu Gajah
344. A Study on Patient Satisfaction on Emergency Medical Services in Regional Referral Hospital
   *Principal Investigator: Chung Wai Mun, Hospital Raja Permaisuri Bainun, Ipoh*

   *Principal Investigator: Radiah Muslim, Hospital Raja Permaisuri Bainun, Ipoh*

346. Tahap Kesedaran di kalangan wanita usia produktif tentang kanser servik
   *Principal Investigator: Rosliza Mohd Shaharudin, Pejabat Kesihatan Daerah, Kuala Kangsar*

347. Persepsi Masyarakat Tentang Kesedaran Melakukan CPR (Cardiopulmonary Resuscitation) Di Jabatan Kecemasan Dan Trauma Hospital Taiping
   *Principal Investigator: Ahmad Darween Ikhsan Ahmad Kamal, Hospital Sungai Siput*

   *Principal Investigator: Anusha Kalyanasundaram, Hospital Raja Permaisuri Bainun, Ipoh*

349. Tahap Pengetahuan Pemeriksaan Pap Smear Di Kalangan Jururawat Jabatan Obstetrik Dan Ginekologi Hospital Raja Permaisuri Bainun, Ipoh
   *Principal Investigator: Hartini Abdul Rahim, Open Universiti Malaysia (OUM)*
INDUSTRY SPONSORED RESEARCH CONDUCTED IN PERAK
FROM YEAR 2012 – 2013
RESEARCH IN YEAR 2012

1. A Randomized, Double-Blind, Placebo-Controlled Phase 3 Study To Investigate The Efficacy And Safety Of Progesterone In Patients With Severe Traumatic Brain Injury
   Principal Investigator: Cheang Chee Keong, Neurosurgery Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak

2. A Long-Term Multicenter, Randomized, Double-Blind, Placebo Controlled Study To Evaluate The Efficacy, Safety, And Tolerability Of Aripiprazole (Opc 14597) As Maintenance Treatment In Adolescent Patients With Schizophrenia
   Principal Investigator: Esther G. Ebenezer, Psychiatry Department, University Kuala Lumpur - Royal College of Medicine Perak (Unikl - Rcmp)

3. A Long-Term, Multicenter, Open-Label Study To Evaluate The Safety And Tolerability Of Flexible-Dose Oral Aripiprazole (Opc-14597) As Maintenance Treatment In Adolescent Patients With Schizophrenia Or Child And Adolescent Patients With Bipolar I Disorder, Manic Or Mixed Episode With Or Without Psychotic Features
   Principal Investigator: Esther G. Ebenezer, Psychiatry Department, University Kuala Lumpur - Royal College of Medicine Perak (Unikl - Rcmp)

4. A Long-term, Phase 3, Multicenter, Open-label Trial to Evaluate the Safety and Tolerability of Oral OPC-34712 as Maintenance Treatment In Adults with Schizophrenia
   Principal Investigator: Not Available

5. A Phase III, Multicenter, Double-Blind, Randomized, Placebo-Controlled Clinical Trial to Evaluate the Safety and Efficacy of MK-0431A (A Fixed-Dose Combination Tablet of Sitagliptin and Metformin) in Pediatric Patients with Type 2 Diabetes Mellitus
   Principal Investigator: G. R. Letchuman Ramanathan, Medical Department, Taiping Hospital

6. A Phase 2, Randomized, Double-Blind Assessment Of Efficacy And Safety Of Pf-04171327 (1, 5, 10, 15 Mg Dose, Daily) Compared To 5 Mg And 10 Mg Prednisone Daily And Placebo Daily In Subjects With Rheumatoid Arthritis Over An 8 Week Period Followed By A 4 Week Period Of Tapering Of Study Drug
   Principal Investigator: Not Available

7. A 12-Month Open-Label Study To Evaluate The Safety And Tolerability Of Pregabalin As Adjunctive Therapy In Pediatric Subjects 1 Month To 16 Years Of Age With Partial Onset Seizures And Pediatric And Adult Subjects 5 To 65 Years Of Age With Primary Generalized Tonic-Clonic Seizures
   Principal Investigator: Not Available

8. A Randomized, Double-Blind, Placebo-Controlled, Multiple Dose, Parallel,Multiple Dose-Level Study To Evaluate The Safety, Tolerability, Pharmacokinetics,Pharmacodynamics And Clinical Effect Of Amg 557 In Systemic Lupus Erythematosus (Sle) Subjects With Active Lupus Arthritis
   Principal Investigator: Wahinuddin Sulaiman, Medical Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak.

9. A Multicenter, Randomized, Double-Blind, Active-Controlled, Phase 3 Study to Evaluate the Efficacy and Safety of TAK-875 25 mg and 50 mg Compared to Glimepiride When Used in Combination with Metformin in Subjects with Type 2 Diabetes
   Principal Investigator: G.R. Letchuman Ramanathan, Medical Department, Taiping Hospital

10. A 6-Month Safety And Benefit Study Of Inhaled Fluticasone Propionate/ Salmeterol Combination Versus Inhaled Fluticasone Propionate In The Treatment Of 6,200 Pediatric Subjects 4-11 Years Old With Persistent Asthma
    Principal Investigator: Nga Shih Hang, Pediatric Department, Seri Manjung Hospital

11. A Phase 3, Multicenter, Randomized, Double-Blind, Placebo-Controlled Study Of The Efficacy And Safety Of Alks 9072 In Subjects With Acute Exacerbation Of Schizophrenia
    Principal Investigator: Satnam Kaur Harbhajan Singh, Psychiatry Department, Hospital Bahagia Ulu Kinta
12. A 26-Week Randomized, Double-Blinded, Active Controlled Study Comparing the Safety of Mometasone Furoate/Formoterol Fumarate MDI Fixed Dose Combination Versus Mometasone Furoate MDI Monotherapy in Adolescents and Adults With Persistent Asthma (Protocol No. P06241 also known as (P202)
Principal Investigator: Umadevi A. Muthukumaru, Respiratory Department, Taiping Hospital

13. A 24-Week, Randomized, Double-Blind, Active-Controlled, Parallel Group Trial To Assess The Superiority Of Oral Linagliptin And Metformin Compared To Linagliptin Monotherapy In Newly Diagnosed, Treatmentnaive, Uncontrolled Type 2 Diabetes Mellitus Patients
Principal Investigator: V. Paranthaman, Medical Department, Klinik Kesihatan Greentown

Principal Investigator: Umadevi A. Narayanan, Psychiatry Department, Hospital Bahagia Ulu Kinta

15. A Multi-Center, Uncontrolled Extension Study Evaluating Efficacy And Safety Of Sar153191 On Top Of Dmards In Patients With Active Rheumatoid Arthritis (Ra)
Principal Investigator: Not Available

16. Randomized, double-blind, placebo-controlled, multi-center trial to assess the safety and efficacy of rp5063 in subjects with an acute exacerbation of schizophrenia or schizoaffective disorder.
Principal Investigator: Not Available

17. A Multi-centre, Randomised, Double-blind, Placebo-controlled Trial to Determine the Efficacy and Safety of Hepar-P Capsule for the Treatment of Non-Alcoholic Fatty Liver Disease (NAFLD)
Principal Investigator: Fauziah Bt Jaya, Medical Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak

18. An Open-Label Extension Study to Evaluate the Long-Term Safety and Efficacy of Resilizumab (3.0 mg/kg) as Treatment for Patients With Eosinophilic Asthma Who Completed a Prior Cephalon-Sponsored Study in Eosinophilic Asthma
Principal Investigator: Not Available

19. A Phase 2, Randomized, Double-blind, Placebo-controlled Study to Evaluate the Effect of Add-on AMG 747 on Schizophrenia Negative Symptoms
Principal Investigator: Raba’iah Mohd Salleh, Psychiatry (Forensic) Department, Hospital Bahagia Ulu Kinta

20. A Randomized, Double-Blind, Multicenter Study of Denosumab Compared With Zoledronic Acid (Zometa®) in the Treatment of Bone Disease in Subjects with Newly Diagnosed Multiple Myeloma
Principal Investigator: Padmini Menon, Medical Department, Raja Permaisuri Bainun Hospital

21. A Multicenter, Randomized, Double-Blind, Placebo-Controlled, Phase 3 Study to Evaluate Cardiovascular Outcomes of TAK-875, 50 mg in Addition to Standard of Care in Subjects with Type 2 Diabetes and with Cardiovascular Disease or Multiple Risk Factors for Cardiovascular Events
Principal Investigator: Not Available

22. An Open-Label, Prospective, Non-comparative Study to Evaluate the Efficacy and Safety of Paliperidone Palmitate in Subjects with Acute Schizophrenia
Principal Investigator: Raba’iah Mohd Salleh, Psychiatry (Forensic) Department, Hospital Bahagia Ulu Kinta

23. A phase III randomised, double-blind, double-dummy, parallel group study to compare the efficacy and safety of twice daily administration of the fix dose combination of linagliptin 2.5 mg / metformin 500 mg, or of linagliptin 2.5 mg / metformin 1000 mg, with the individual components of metformin (500 mg or 1000 mg, twice daily), and linagliptin (5.0 mg, once daily) over 24 weeks in drug naive type 2 diabetic patients with insufficient glycaemic control
Principal Investigator: V. Paranthaman, Medical Department, Klinik Kesihatan Buntong; Lee Li Yuan, Medical Department, Seri Manjung Hospital

Principal Investigator: Satnam Kaur Harbhajan Singh, Psychiatry Department, Hospital Bahagia Ulu Kinta
25. **A Double-blind, Randomized, Placebo-controlled, Multicenter Study Assessing the Impact of Additional LDL-Cholesterol Reduction on Major Cardiovascular Events When AMG 145 is Used in Combination With Statin Therapy In Patients with Clinically Evident Cardiovascular Disease**  
*Principal Investigator: G.R. Letchuman Ramanathan, Medical Department, Taiping Hospital*

26. **A Multicenter, Randomized, Double-Blind, Placebo-Controlled Study to Determine the Efficacy and Safety of Alogliptin and Metformin Fixed Dose Combination, Alogliptin Alone, or Metformin Alone in Subjects with Type 2 Diabetes Mellitus**  
*Principal Investigator: Sree Kantan Nayar P.K.S.Nayar, Management / Clinical Department, Klinik Kesihatan Greentown*

27. **A Multicenter, Randomized, Double-Blind, Placebo-Controlled Study to Determine the Efficacy and Safety of SYR-322-4833 (Alogliptin and Pioglitazone fixed-dose combination) Alogliptin Alone or Pioglitazone Alone in Subjects with Type 2 Diabetes Mellitus**  
*Principal Investigator: Sree Kantan Nayar P.K.S.Nayar, Management / Clinical Department, Klinik Kesihatan Greentown*

28. **A randomized, double-blind, 12-week treatment, parallel group study to evaluate the efficacy and safety of QMF149 (150 mcg/160 mcg o.d.) compared with salmeterol xinafoate/fluticasone propionate (50 mcg/500 mcg b.i.d.) in patients with chronic obstructive pulmonary disease**  
*Principal Investigator: Umadevi A. Muthukumaru, Respiratory Department, Taiping Hospital*

29. **A 24-week phase III randomized, double-blind, parallel group study to evaluate the efficacy and safety of twice daily oral administration of empagliflozin + metformin compared with the individual components of empagliflozin or metformin in drug naive patients with type 2 diabetes mellitus**  
*Principal Investigator: V. Paranatham, Medical Department, Klinik Kesihatan Greentown*

30. **STUDY ATG115317, a comparison of atorvastatin and glimepiride fixed dose combination and atorvastatin and glimepiride loose combination in the treatment of patients with Type 2 diabetes mellitus**  
*Principal Investigator: See Kantan Nayar P.K.S.Nayar, Management / Clinical Department, Klinik Kesihatan Greentown*

31. **A Phase 3B Study to Evaluate the Potential of Aleglitazar to Reduce Cardiovascular Risk in Patients with Stable Cardiovascular Disease and Glucose Abnormalities**  
*Principal Investigator: G.R. Letchuman Ramanathan, Medical Department, Taiping Hospital*

32. **A Randomized, Double-Blind, Placebo-Controlled, Multicenter Study to Assess Cardiovascular Outcomes Following Treatment with MK-3102 in Subjects with Type 2 Diabetes Mellitus**  
*Principal Investigator: Sree Kantan Nayar P.K.S.Nayar, Management / Clinical Department, Klinik Kesihatan Greentown; Lee Li Yuan, Medical Department, Seri Manjung Hospital*

**RESEARCH IN YEAR 2013**

1. **A Randomized Double Blind Placebo Controlled Parallelgroup Study Of The Efficacy And Safety Of Concomitant Administration Of Celecoxib And Pregabalin Compared With Celecoxib Monotherapy, In Patients With Chronic Low Back Pain Having A Neuropathic Component**  
*Principal Investigator: Kavita M. Bhojwani, Anaesthesiology Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak*

2. **A randomized, controlled study of sarilumab and methotrexate (MTX) versus etanercept and MTX in patients with rheumatoid arthritis (RA) and an inadequate response to 4 months of treatment with adalimumab and MTX**  
*Principal Investigator: Wahinuddin Sulaiman, Medical / Rheumatology Department, Raja Permaisuri Bainun Hospital*

3. **A Double-blind, Placebo-controlled, Parallel-group Study with an Open-label Extension Phase to Evaluate the Efficacy and Safety of Perampanel (E2007) Administered as an Adjunctive Therapy in Subjects with Refractory Partial-onset Seizures**  
*Principal Investigator: Khoo Peng Chuan, Peadiatric Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak*

4. **A Clinical Outcomes Study to compare the effect of Fluticasone Furoate/Vilanterol Inhalation Powder 100/25mcg with placebo on Survival in Subjects with moderate Chronic Obstructive Pulmonary Disease (COPD) and a history of or at increased risk for cardiovascular disease.**  
*Principal Investigator: Umadevi A. Muthukumar, Respiratory Department, Taiping Hospital*

5. **A Randomized, Double- Blind, Placebo-Controlled Phase 3 Study to Evaluate the Efficacy and Safety of Blisibimod Administration in Subjects with Systemic Lupus Erythematosus**  
*Principal Investigator: Wahinuddin Sulaiman, Medical / Rheumatology Department, Raja Permaisuri Bainun Hospital*
6. Phase 2, Randomized, Double-Blind, Placebo-Controlled, Parallel Group, Multi-Center Study To Evaluate The Efficacy And Safety Of Once-Daily Administration Of A Chemokine Ccr2/5 Receptor Antagonist (PF-04634817) In Adults With Type 2 Diabetes And Overt Nephropathy
Principal Investigator: Indralingam Vaithilingam, Nephrology Department, Taiping Hospital

7. A Cross-Sectional Survey to Evaluate Diabetes Management, Control, Complications, Psychosocial Aspects of patients with type 2 diabetes in Malaysia
Principal Investigator: Ijaz Hallaj Rahmatullah, Endokrinology Department, Raja Permaisuri Bainun Hospital

8. A prospective, multi-centre, randomised controlled study of posterior perianal support [colorec HPS) in treatment and prevention of constipation and haemorrhoid in pregnant women.
Principal Investigator: Not Available

9. A Multicenter, Randomized, Double-Blind, Placebocontrolled, Phase Ill Study To Assess The Efficacy, Safety And Tolerability Of Aleglitazar Monotherapy Compared With Placebo In Patients With Type 2 Diabetes Mellitus (T2d) Who Are Drug-Naïve To Antihyperglycemic Therapy
Principal Investigator: Sofiah Zainal Abidin, Klinik Kesihatan Lenggong

10. A Phase III, Multicenter, Double-Blind, Randomized Study to Evaluate the Safety and Efficacy of the Addition of MK-3102 Compared with the Addition of Sitagliptin in Subjects with Type 2 Diabetes Mellitus with Inadequate Glycemic Control on Metformin
Principal Investigator: Lee Li Yuan, Medical Department, Seri Manjung Hospital

11. A Phase III, Multicentre, Double-Blind, Randomized, Placebo- and Metformin-Controlled Clinical Trial to Evaluate the Safety and Efficacy of Sitagliptin in Pediatric Patients with Type 2 Diabetes Mellitus with Inadequate Glycemic Control
Principal Investigator: G.R. Letchuman Ramanathan, Medical Department, Taiping Hospital

12. A Phase 3, Multicenter, Randomized, Double-Blind, Active-Controlled, 24-Week Study to Evaluate the Efficacy and Safety of Daily Oral TAK-875 50 mg Compared With Sitagliptin 100 mg When Used in Combination With Metformin in Subjects With Type 2 Diabetes
Principal Investigator: Yeoh Soo Lin, Management / Clinical Department, Seri Manjung Hospital; G.R. Letchuman Ramanathan, Medical Department, Taiping Hospital

13. A Phase 3, Randomized, Double-Blind, Placebo Controlled Study of the Efficacy and Safety of FG-4592 for the Treatment of Anemia in Chronic Kidney Disease Patients not on Dialysis
Principal Investigator: Indralingam Vaithilingam, Nephrology Department, Taiping Hospital

14. A multicenter, international, randomized, parallel group, double-blind, placebo-controlled CARDiovascular Safety & Renal Microvascular outcome study with LINAgliptin, 5 mg once daily in patients with type 2 diabetes mellitus at high vascular risk
Principal Investigator: Lee Li Yuan, Medical Department, Seri Manjung Hospital; G.R. Letchuman Ramanathan, Medical Department, Taiping Hospital

15. A Randomized, Multicountry, Multicenter, Double-Blind, Parallel, Placebo-Controlled Study of the Effects of Atrasentan on Renal Outcomes in Subjects with Type 2 Diabetes and Nephropathy
Principal Investigator: Indralingam Vaithilingam, Nephrology Department, Taiping Hospital; G.R. Letchuman Ramanathan, Medical Department, Taiping Hospital

16. A Randomized, Double-Blind, Placebo-Controlled, Parallel Group, Multi-Center Trial Of Pregabalin As Adjunctive Therapy In Pediatric And Adult Subjects With Primary Generalized Tonic-Clonic Seizures
Principal Investigator: Khoo Peng Chuan, Peadiatric Department, Raja Permaisuri Bainun Hospital, Ipoh, Perak

17. A multi center, open label, randomized, two-treatment, single dose, crossover, bioequivalence study to compare the pharmacokinetics of marketed product TobraDex® (Tobramycin and Dexamethasone Ophthalmic ointment) to an experimental ophthalmic sterile ointment containing tobramycin 0.3% and dexamethasone 0.1% w/w in aqueous humor in patients undergoing indicated cataract surgery
Principal Investigator: Khaw Keat Ween, Ophthalmology Department, Seri Manjung Hospital
18. Efficacy and safety of liraglutide versus sulphonylurea both in combination with metformin during Ramadan in subjects with type 2 diabetes.
Principal Investigator: Ijaz Hallaj Rahmatullah, Medical Department, Hospital Raja Permaisuri Bainun Hospital, Ipoh, Perak

19. Efficacy and safety of tianeptine oral administration (25 to 50 mg/day) in elderly patients suffering from Major Depressive Disorder, an 8-week, randomized, double-blind, flexible-dose, parallel groups, placebo-controlled, international, multicentre study with escitalopram as active control, followed by an optional double-blind extension treatment period of 16 weeks
Principal Investigator: Esther G. Ebenezer, Psychiatry Department, University Kuala Lumpur - Royal College of Medicine Perak (UniKL - RCMP)

20. Quality Of Adherence To Guideline Recommendations For Life-Saving Treatment In Heart Failure: An International Survey
Principal Investigator: Chandran Krishnan, Medical Department, Raja Permaisuri Bainun Hospital; Chooi Kheng Chiew, Medical Clinical Department, Seri Manjung Hospital; G.R. Letchuman Ramanathan, Medical Department, Taiping Hospital

21. A Phase IIA, Randomized, Double-Blind, Placebo-Controlled, Parallel-Group, Multicenter, Worldwide, Proof-of-Concept Clinical Trial to Evaluate the Safety, Tolerability, and Efficacy of MK-8457 in Subjects with Active Rheumatoid Arthritis and an Inadequate Response or Intolerance to Anti-TNF-Î± Therapy
Principal Investigator: Wahiuddin Sulaiman, Medical / Rheumathology Department, Raja Permaisuri Bainun Hospital

22. Multiple dose trial examining dose range, escalation and efficacy of oral semaglutide in subjects with type 2 diabetes
Principal Investigator: Chooi Kheng Chiew, Medical Clinical Department, Seri Manjung Hospital

23. A Phase 3, Multicenter, Randomized, Open-Label, Active-Controlled Study of the Efficacy and Safety of FG-4592 in the treatment of Anemia in Incident-dialysis Patients
Principal Investigator: Not Available

24. A Randomized, Phase III, Multicenter, Double-Blind, Placebo-Controlled Study Evaluating The Efficacy And Safety Of Onartuzumab (Metmab) In Combination With Erlotinib As Second-Or Third-Line Treatment For Patients With Met-Positive Incurable Stage IIIB/IV Non-Small Cell Lung Cancer (NSCLC)
Principal Investigator: Not Available