Annual Scientific Meeting
of the
Malaysian Society of
Gastroenterology & Hepatology

GUT 2018

20 CPD Points will be awarded

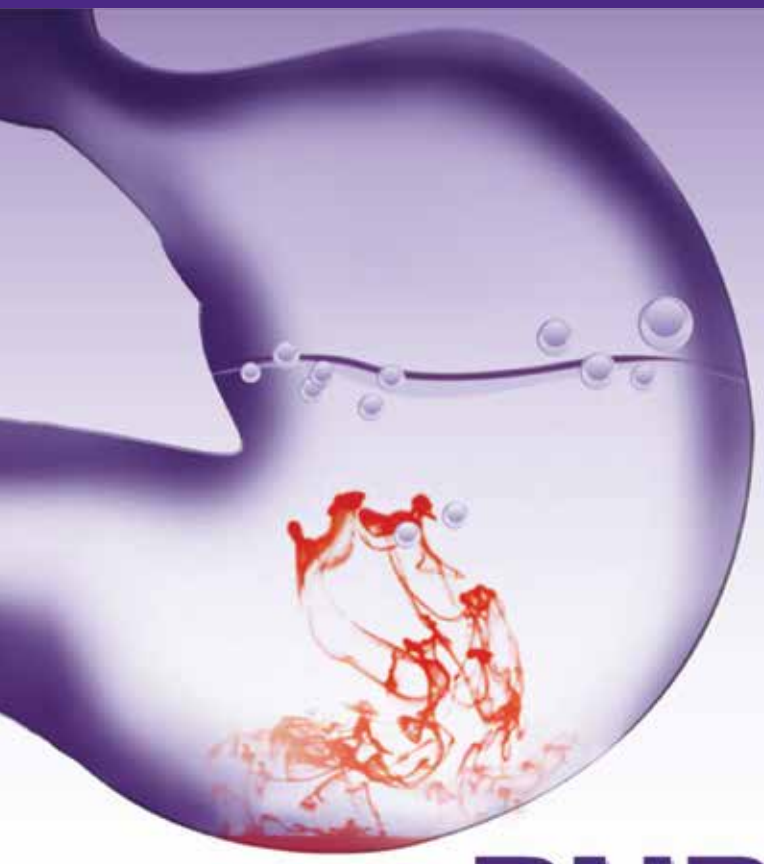
13th to 15th July 2018

G Hotel Gurney
Penang, Malaysia

Souvenir Programme & Abstract Book

The PPI approved for Prevention of Peptic Ulcer re-Bleeding[1]

Nexium® esomeprazole



- Significant reduction of re-bleeding within 3 days, sustained up to 30 days[2]
- Achieves pH>4 faster than pantoprazole iv[3]
- Maintains pH>6 for 12.6 hours[4]

PUB 30

3 days[2] + 27 days[2]

80 mg iv bolus
8 mg/h iv infusion

40 mg
MUPS tablets

References

1. Nexium® Prescribing Information. 2. sung JJY et al. Ann Intern Med 2009;150(7):455-64. 3. Clive H. Wilder Smith et al. Alimentary Pharmacology & Therapeutics 2004; 20:1099-104. 4. K Rohss et al. Int. J of Clin. Pharma & Therapeu, vol45-No5/2007 (345-354).

Abbreviated prescribing Information:

Nexium® (Esomeprazole). Film-coated tab (MUPS) 20 mg x 14's. 40 mg x 14's. **Indications:** listed in dosage. **Dosage:** *Adults and adolescents from the age of 12.* Treatment of erosive reflux oesophagitis: 40 mg once daily for 4-8 weeks. Long-term management of patients with healed oesophagitis to prevent relapse: 20 mg once daily. Symptomatic treatment of GERD: 20 mg once daily in patients without oesophagitis untill symptom control is achieved. If control has not benn achieved after 4 week, the patient should be further investigated. Once symptoms have resolved, subsequent symptom control can be achieved using 20 mg once daily. In adults, an on demand regimen taking 20 mg once daily, when needed, can be used. On demand regimen not recommended in NSAID treated patient at risk of gastric cancer and duodenal ulcer. Eradication of *H. pylori,* healing of *H. pylori* associated duodenal ulcer and prevention of relapse of peptic ulcers in patients with *H. pylori* associated ulcers: 20 mg Nexium with 1 g amoxicillin and 500 mg clarithromycin, all b.i.d for 7 days. Healing of gastric ulcers associated with NSAID therapy: 20 mg once daily for 4-8 weeks. Prevention of gastric and duodenal ulcers associated with NSAID therapy in patients at risk. 20 mg once daily. Prolonged treatment after I.V induced prevention of rebleeding of peptic ulcers: 40 mg once daily for 4 weeks after IV induced prevention of rebleeding of peptic ulcers. Treatment of Zollinger Ellison Syndrome: 40 mg b.i.d. The dosage should then be individually adjusted and treatment continued as long as clinically indicated. Majprity of patients van be controlled on doses between 80 mg to 160 mg daily. With doses above 80 mg daily, the dose should be divided and given b.i.d **Contraindications:** Known hypersensitivity to esomeprazole, substituted benzimidazoles or any other consituents of the formulation, nelfinavir. **Precautions:** Exclude gastric malignancy prior to treatment Fructose intolerance, glucose-galactose malabsorption or surcase-isomaltase insufficiency. Co-administration of esomeprazole with atazanavir is not recommended. If unavoidable, close clinical monitoring is recommended in combination with an increase in the dose of atazanavir to 400 mg with 100 mg of ritonavir; esomeprazole 20 mg should not be exceeded. **Undesirable effects:** Headache, abdominal pain, constipation, diarrhea, flatulence, nausea/vomiting.

Nexium® (Esomeprazole) 40 mg injection/Infusion. **Indications:** When oral route is not possible or appropriate; treatment of gastroesophageal reflux disease in patients with esophagitis and/or severe symptoms of reflux, healing of gastric ulcer associated with NSAID therapy and prevention of gastric and duodenal ulcer associated with NSAID therapy. Prevention of rebleeding following therapeutic enddoscopy for acute bleeding gastric or duodenal ulcers. **Dosege:** reflux oesophagitis: 40 mg once daily. Reflux disease (symptomatic treatment): 20mg once daily. Healing of gastric ulcer and prevention of gastric and duodenal ulcer associated with NSAID therapy: 20mg once daily. Treatment with Nexium IV can be given for up to 10 days as part of a full treatment period for the specified indications. Prevention of rebleeding of gastric and duodenal ulcers: following therapeutic endoscopy for acute bleeding gastric or duodenal ulcers, 80 mg should be administered as a bolus infusion over 30 minutes, followed by a continuous intravenous infusion of 8 mg/h given over 3 days (72 hours). The parenteral treatment period should be followed by oral acid suppression therapy. **Contraindications:** Hypersensitivity to the active substance esomeprazole or to other substituted benzimidazoles or to any of the excipients, nelfinavir. **Precautions:** Exclude gastric malignancy prior to treatment Co-administation of esomeprazole with atazanavir is not recommended. If unavoidable, close clinical monitoring is recommended in combination with an increase in the dose of atazanavir to 400 mg with 100 mg of ritonavir. esomeprazole 20 mg should not be exceeded. **Undesirable effects:** Headache, abdominal pain, constipation, diarrhea, flatulence, nauswa/vomiting.
Further information available on request
Please consult local full prescribing information before prescribing.

For healthcare professional only

AstraZeneca

AstraZeneca Sdn Bhd (69730-X)
Level 12, Surian Tower
1 Jalan PJU 7/3, Mutiara Damansara
47810 Petaling Jaya, Malaysia
Tel: 603 7723 8000
Fax: 603 7723 8001

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Scientific Committee	Professor Dr Lee Yeong Yeh Associate Professor Dr Chan Wah Kheong Associate Professor Dr Alex Leow Hwong Ruey Associate Professor Dr Raja Affendi Raja Ali Dr Tee Hoi Poh Professor Dato' Dr Goh Khean Lee Professor Dr Sanjiv Mahadeva Dato' Dr Tan Huck Joo
Committee Members	Dr Akhtar Qureshi Dr Nazri Mustaffa Datuk Dr Raman Muthukaruppan

MESSAGE

Welcome to GUT 2018.

Warm greetings to all delegates, speakers, chairpersons and sponsors from the Organising Committee of GUT 2018. We would like to welcome you to our Annual Scientific Meeting.

The Scientific Chairman, Professor Dr Lee Yeong Yeh, has put together an impressive programme packed with current liver/GI topics having taken into account your feedback from the last meeting. GUT 2018 retains some of its usual popular sessions in addition to new features like research symposium; we would like our members to engage actively in research and be key opinion leaders in this region. There will also be an expert forum on *Colorectal Cancer Screening in Malaysia & Beyond*.

This year we have invited eminent speakers with tremendous contribution in the field of gastroenterology and hepatology. The named lectures will be delivered by Professor Dr Rakesh Aggarwal (18th MSGH Oration) and Professor Dr Peter Gibson (15th Panir Chelvam Memorial Lecture).

We also have incorporated a public forum for our patients and the public as part of MSGH's collaboration with the World Gastroenterology Organization (WGO) in celebrating the World Digestive Health Day (WDHD) 2018. MSGH is one of WGO global partners in advocacy and awareness campaign on viral hepatitis. The WDHD 2018 campaign is titled "Viral Hepatitis, B and C: Lift The Global Burden". Together we will take action and celebrate WDHD 2018 at this year's GUT.

Please take note we will be launching the APDW2020 on Sunday, 15th July 2018, I cordially invite everyone to join us to kick start this momentous event of our Society.

Lastly we would like to thank everyone for your kind effort and commitment to GUT 2018 and we wish everyone a stimulating conference. We have also introduced a few exciting goodies, please check them out!

I sincerely look forward to meeting you at the conference.

Tan Soek Siam
President, Malaysian Society of Gastroenterology and Hepatology &
Chairperson, Organising Committee

18TH MSGH ORATION
PROFESSOR DR RAKESH AGGARWAL
Citation by Associate Professor Dr Chan Wah Kheong

"Hepatitis E In Asia"

Professor Dr Aggarwal was born in 1961. He obtained his MBBS degree in 1983, and his MD (Medicine) in 1986 from All India Institute of Medical Sciences, New Delhi, India. He then obtained his DM (Gastroenterology) from the Postgraduate Institute of Education and Research, Chandigarh, India and MSc (Epidemiology), with distinction, from the London School of Hygiene and Tropical Medicine. He is currently Professor at the Department of Gastroenterology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India. He is a Fellow of the American Association for Study of Liver Disease, Indian College of Physicians, Indian Academy of Sciences, National Academy of Sciences (India), Indian National Science Academy and National Academy of Medical Sciences (India).

To say that Professor Dr Aggarwal is a man of many talents is an understatement. His research work is highly impressive and has spanned over multiple disciplines, including epidemiology, clinical medicine, laboratory work, health economic studies, mathematical modelling and health policy. Importantly, his research has focused on his country's needs, and in particular on viral hepatitis. He and his colleagues were the first to directly demonstrate hepatitis E virus (HEV) as the cause of an epidemic during investigation of a large epidemic of acute hepatitis that affected nearly 80,000 persons in Kanpur, India in 1991. Between 1996 and 1998, he worked at the Centre for Disease Control and Prevention, Atlanta, USA, where he developed a more sensitive method to detect HEV RNA in clinical specimens, studied the genetic epidemiology of HEV isolates from three epidemics in India and developed an animal model of subclinical HEV infection. This was followed by several seminal studies on HEV epidemiology and cellular immunology, which have made him one of the most influential researchers on HEV. In addition, he has worked on hepatitis B and hepatitis B immunization, childhood diarrhoea and other infectious diseases of the liver and gastrointestinal tract.

To date, he has published over 240 journal articles, many of them in top journals. He has also written 6 books and over 30 book chapters in some of the most reputed textbooks of gastroenterology and hepatology. He is Editor for the Journal of Gastroenterology and Hepatology since 2010, Editor Emeritus for the Indian Journal of Gastroenterology, and Associate Editor for Hepatology, Medicine and Policy. In addition, he is on the Editorial Board of several journals, and a member of the ethics committee of the World Association of Medical Editors.

He contributes to global health policy by serving on several WHO expert groups, including, Scientific and Technical Advisory Committee on Viral Hepatitis, Strategic Advisory Group of Experts on Immunization, Viral Hepatitis Strategic Information and Modelling Reference Group, and Hepatitis C Treatment and Care Guidelines Working Group, to name a few. He also teaches diverse areas related to biomedical research, and has conducted more than 75 workshops on research methodology, biostatistics, epidemiology, and scientific writing, including those supported by the South-East Asia Regional Office of the WHO and the National Institute of Health, USA.

Professor Dr Aggarwal's wife, Professor Dr Amita Aggarwal, is a Professor of Clinical Immunology and Rheumatology at the same institution as him. They are blessed with a beautiful daughter who is a computer engineer in Seattle. When asked for his advice on how to lead a fulfilling career and life, his answer was "Follow your heart".

It is my great pleasure and honour to invite Professor Dr Rakesh Aggarwal to deliver the 18th MSGH Oration, entitled Hepatitis E in Asia.

15TH PANIR CHELVAM MEMORIAL LECTURE
PROFESSOR DR PETER GIBSON
Citation by Professor Dr Lee Yeong Yeh

"My Journey in FODMAPs"

In the Malaysian GI circle, Professor Dr Peter Gibson is a household name. He is a great friend of ours and a mentor to many Malaysians. FODMAPs is probably the better known among the many GI innovations associated with Peter. I have always been fascinated of how he brings FODMAPs to the whole world and we hope to learn about it from his lecture. Being someone with a keen interest on his work, I am delighted with the chance to read his citation.

Peter graduated with honours from the Monash University. Before returning to his alma-mater, he worked in Oxford for three years, Australian National University for three years and University of Melbourne / Royal Melbourne Hospital for 14 years after which he stayed on with Monash until now, as the Professor of Gastroenterology. He is also the Director of Gastroenterology of the Alfred Hospital. His research career has developed from a background of laboratory-based research in cell biology using cell lines, colonic tissue ex vivo and animal models examining colonic epithelium and its interaction with the lumen and diet. His active clinical and research interest are mostly focused on improving outcome for patients with inflammatory bowel disease, coeliac disease and functional GI disorders. Over the years, he has built a cohesive multi-disciplinary team including physicians, dietitians, psychologists, pharmacists, nurses, chefs, scientists and software engineers who work together in research and clinical practice, an infrastructure that includes first class laboratory facilities and a commercial kitchen and food delivery system that enables high quality dietary studies to be performed, in addition to highly specialised clinics that deliver cutting edge therapy to his patients.

He has contributed significantly in four key research areas with the most impact on mostly 'non-traditional' diagnostic or therapeutic areas of gastroenterology. Of the four areas, the use of diet as a therapeutic tool has been his major focus, stemming from his early laboratory work. Initially, his group tackled the challenging area of IBS, where there was a paucity of scientifically valid data. His team showed that FODMAPs were important triggers of gut symptoms, and the diet developed on the FODMAPs concept has been evaluated via RCTs. He has since moved on with other challenges in this field including the role of gluten and other dietary approaches through pathogenic mechanisms. The other three areas include psychological, cognitive and behavioural health in chronic intestinal conditions, investigation of gas production in the GI tract as a window into the function of microbiota, and finally optimising therapies in IBD.

He has published more than 215 peer-reviewed papers, more than 123 invited reviews and contributed to 23 books and chapters. He is currently the Editor for Alimentary Pharmacology & Therapeutics and Journal of Gastroenterology & Hepatology. Besides research, Peter is actively engaged with professional societies in Australia being the President of Gastroenterological Society of Australia 2003-2005, Founder & Inaugural Chair of IBD-Australia 2002-2005, and Board member of Crohn's & Colitis Australia 2006-2010; but also within the region including the Council member of Asian Pacific Association of Gastroenterology (APAGE) 2009-2016, Board member of Journal of Gastroenterology & Hepatology Foundation (JGHF) 2015 till now; and of course in the international scene too where he was the Executive Member of International Organisation for the Study of IBD (IOIBD) 2003-2006 & 2013-2016. He has won many prizes throughout his career, among them three were won in the year 2016 including Ten of the Best, National Health & Medical Research Council of Australia; Dean's Award in Excellence in Research Impact and Vice Chancellor's Award in Research Impact, both in the category of economic and social impact.

His achievement, passion and pursuit of economic and social innovations in medicine are nothing short of phenomenal. This year 15th Panir Chelvam Oration befits a man who has brought significant contributions to the field of gastroenterology, and we are truly honoured to have Professor Dr Peter Gibson for our Annual Scientific Meeting in 2018.

PROGRAMME SUMMARY

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And World Hepatitis Day 2018</td></tr>
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DAILY PROGRAMME
13th July 2018 (Friday)

0730 - 0830 Registration

0830 - 0950 **SYMPOSIUM 1 | *Treatment Of Hepatitis B In 2018*** *Grand Ballroom*
Chairpersons: *Tan Soek Siam / Chan Wah Kheong*

Antiviral Therapy - What's Available And When To Start?
Rakesh Aggarwal

Stopping Rules - When And What Are The Rules?
Jia Jidong

Can We Eradicate Hepatitis B Virus - Challenges And What's In Store?
Chow Wan Cheng

0950 - 1030 **LECTURE 1** *Grand Ballroom*
18th MSGH Oration
Hepatitis E In Asia
Rakesh Aggarwal
Citation by Chan Wah Kheong

1030 - 1100 Tea

1100 - 1230 **Best Paper Award Presentation** *Grand Ballroom*

1230 - 1330 **Lunch Satellite Symposium *(MSD)*** *Grand Ballroom*
Chairpersons: *Alex Leow Hwong Ruey / Tan Soek Siam*

HCV Treatment With EBR/GZR: From Evidence To Clinical Practice
Steven Flamm

1330 - 1430 Friday Prayers / Lunch

1430 - 1550 **EXPERT FORUM | *Colorectal Cancer Screening In Malaysia & Beyond: Debate On Methods Of Screening & Sharing Of Experiences*** *Grand Ballroom*
Chairpersons: *Raja Affendi Raja Ali / Tee Hoi Poh / Akhtar Qureshi*

Stool-Based CRC Screening Is Superior (With Malaysian Data On CRC Screening)
Muhammad Radzi Abu Hassan / April Camilla Roslani

Endoscopy-Based CRC Screening Is Way To Go (Incorporating Singaporean And Australian Experiences)
Ooi Choon Jin / Rupert Leong

1550 - 1630 **LECTURE 2 *(DKSH)*** *Grand Ballroom*
Chairpersons: *Sanjiv Mahadeva / Andrew Chua Seng Boon*

Management Of Patients With Functional Heartburn
Lee Yeong Yeh

1630 - 1730 **Tea Satellite Symposium *(Ferring)*** *Grand Ballroom*
Chairpersons: *Nazri Mustaffa / Tee Hoi Poh*

Hepatorenal Syndrome: New Understanding And Management
James Fung

Hepatorenal Syndrome: The Malaysian Perspective
Haniza Omar

DAILY PROGRAMME
13th July 2018 (Friday)

1730 - 1900 **Research Symposium** *Grand Ballroom*
Chairpersons: *Lee Yeong Yeh / Raja Affendi Raja Ali*
Fundamentals Of Clinical Research: An Overview
Goh Khean Lee

Writing For Journals
Henry L Y Chan

Roadblocks To Research - Local Perspectives
Chan Wah Kheong / Sanjiv Mahadeva / Raja Affendi Raja Ali / Lee Yeong Yeh / Tan Soek Siam

2000 **PRESIDENTIAL DINNER** *(By Invitation Only)* *The Library, Seven Terraces Hotel*

DAILY PROGRAMME
14th July 2018 (Saturday)

0730 - 0830 **Meet-The-Expert Breakfast Sessions** (Concurrent)

1. Using Double Balloon Enteroscopy In The Clinical Practice Of Crohn's Disease *Salon III*
Keijiro Sunada
Moderators: *Mazlam Mohd Zawawi / Raja Affendi Raja Ali*

2. Who Do I Refer For Liver Transplantation In 2018? *Salon IV*
James Fung / Alfred Kow Wei Chieh
Moderators: *Jayaram Menon / Rosaida Md Said*

0830 - 0950 **SYMPOSIUM 2 | *Colorectal Cancer*** *Grand Ballroom*
Chairpersons: *April Camilla Roslani / Akhtar Qureshi / Raja Affendi Raja Ali*
Molecular Characterisation Of Colorectal Cancer: A New Update
Norfilza Mohd Mokhtar

Colorectal Cancer Screening: Can We Do Better Or More?
Ooi Choon Jin

IBD And Colorectal Cancer
Rupert Leong

Optimizing Outcome Of Colorectal Cancer - Oncologist Perspective
John Low Seng Hooi

0950 - 1030 **LECTURE 3** *Grand Ballroom*
15th Panir Chelvam Memorial Lecture
My Journey In FODMAPs
Peter Gibson
Citation by Lee Yeong Yeh

1030 - 1100 Tea

DAILY PROGRAMME
14th July 2018 (Saturday)

1100 - 1230	**SYMPOSIUM 3 | *Eradicating Hepatitis C***	*Grand Ballroom*
	Chairpersons: *Alex Leow Hwong Ruey / Tan Soek Siam*	
	What Therapies Are Available Out There? An Overview *Chow Wan Cheng*	
	Treatment Options For Complicated Hepatitis C *Jia Jidong*	
	Need We Worry About Resistant-Associated Substitutions? *Steven Flamm*	
1230 - 1330	**Lunch Satellite Symposium *(Takeda)***	*Grand Ballroom*
	Chairpersons: *Goh Khean Lee / Tan Huck Joo*	
	The Evolving Landscape Of *Helicobacter-pylori* In Asia *Hidekazu Suzuki*	
1330 - 1430	Poster Round / Lunch	
1430 - 1550	**SYMPOSIUM 4 | *Liver Cancer***	*Grand Ballroom*
	Chairpersons: *Jayaram Menon / Alex Leow Hwong Ruey*	
	Small Liver Cancers: Ablate Or Cut? *Razman Jarmin*	
	HCC: Do You TACE Or TARE? *Norshazriman Sulaiman*	
	Current State Of Liver Transplantation In Hepatocellular Carcinoma *Alfred Kow Wei Chieh*	
1550 - 1630	**LECTURE 4 *(FujiFilm)***	*Grand Ballroom*
	Chairpersons: *Tan Huck Joo / Raman Muthukaruppan*	
	Innovations In Endoscopy Screening For Colorectal Cancer *Keijiro Sunada*	
1630 - 1730	**Tea Satellite Symposium *(Mylan)***	*Grand Ballroom*
	Chairpersons: *Robert Ding Pooi Huat / Chan Wah Kheong*	
	My Approach To Chronic Hepatitis B In 2018 And Beyond *Henry L Y Chan*	
1730 - 1900	**MSGH Annual General Meeting**	*Grand Ballroom*
2000	**FREE NIGHT**	

DAILY PROGRAMME

15th July 2018 (Sunday)

0730 - 0830 **Meet-The-Expert Breakfast Sessions** (Concurrent)

3. Enhancing Patient Care With Fibroscan — *Salon III*
   Dan Yock Young / Chan Wah Kheong
   Moderators: *Muhammad Radzi Abu Hassan / Tee Hoi Poh*

4. How Do I Use Probiotics In My Practice? — *Salon IV*
   Gwee Kok Ann
   Moderators: *Robert Ding Pooi Huat / Nazri Mustaffa*

0830 - 0950 **SYMPOSIUM 5 | *Functional GI Disorder*** — *Grand Ballroom*
Chairpersons: *S Mahendra Raj / Lee Yeong Yeh*

Diet And The Gut: Pearls From WGO Guideline
Peter Gibson

Neuromodulators In Functional Bowel Disorders
Gwee Kok Ann

Reflux Hypersensitivity: A New Entity?
Hidekazu Suzuki

Launch Of APDW2020 KL
Coordinator: *Alex Leow Hwong Ruey*

- Introduction By Organising Chairperson
  Raja Affendi Raja Ali
- Speech By APDWF President
  Goh Khean Lee
- Video Presentation

0950 - 1030 **LECTURE 5 *(GI Innovations)*** — *Grand Ballroom*
Chairpersons: *Nazri Mustaffa / Akhtar Qureshi*

From Rockets To Robots: Learning From Disasters When Embracing New Technologies
Michael Larvin

1030 - 1100 Tea

1100 - 1230 **SYMPOSIUM 6 | *Obesity And Liver*** — *Grand Ballroom*
Chairpersons: *Sanjiv Mahadeva / Raman Muthukaruppan*

The Science Behind Obesity - The Role Of Liver
Dan Yock Young

Non-Alcoholic Fatty Liver Disease - A Rapidly Emerging Disease In The Asia Pacific
Henry L Y Chan

Current Therapies - What Has Promise? What Does Not?
Chan Wah Kheong

1230 - 1330 Lunch

MALAYSIA HEPATITIS DAY 2018

Viral Hepatitis, B and C: Lift The Global Burden

COMMEMORATING

WORLD DIGESTIVE HEALTH DAY AND WORLD HEPATITIS DAY 2018

15th July 2018 (Sunday)

Atrium, Concourse Area, Ground Floor, Gurney Paragon Penang, Malaysia

Chairman: *Robert Ding Pooi Huat*
Co-Chairman: *Alex Leow Hwong Ruey*

1100 **Free Screening For Hepatitis B & C**

1130 **Arrival Of Invited Guests**

1200 **Arrival Of Chief Minister Of Penang**
YAB Tuan Chow Kon Yeow

1210 **Welcome Address**
Robert Ding Pooi Huat
Organising Chairman, Malaysia Hepatitis Day 2018

1220 **Speech**
Tan Soek Siam
President, Malaysian Society Of Gastroenterology And Hepatology

1240 **Speech & Launching Of Events**
YAB Tuan Chow Kon Yeow
Chief Minister Of Penang

1300 **Tour Of Exhibition Area**

1400 **PUBLIC FORUM**

Treat Hepatitis B, Reduce Liver Cancer Risk
Henry L Y Chan
Assistant Dean, Director, Center For Liver Health
Faculty Of Medicine, The Chinese University Of Hong Kong, Hong Kong

Cure For Hepatitis C
Tan Soek Siam
Senior Consultant Hepatologist
Selayang Hospital, Malaysia

1500 **Public Quiz And Games**

1600 **Closing**

MODERATORS / CHAIRPERSONS

Akhtar Qureshi
Sunway Medical Centre
Selangor

April Camilla Roslani
University Malaya Medical Centre
Kuala Lumpur

Chan Wah Kheong
University Malaya Medical Centre
Kuala Lumpur

Andrew Chua Seng Boon
Pusat Gastro Ipoh
Perak

Robert Ding Pooi Huat
Island Hospital
Pulau Pinang

Goh Khean Lee
University Malaya Specialist Centre
Kuala Lumpur

Jayaram Menon
Pantai Hospital Ayer Keroh
Melaka

Lee Yeong Yeh
Hospital Universiti Sains Malaysia
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Kelantan

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Mazlam Mohd Zawawi
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Muhammad Radzi Abu Hassan
Hospital Sultanah Bahiyah
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Kuala Lumpur

Raman Muthukaruppan
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Kota Kinabalu
Sabah

Rosaida Md Said
Hospital Ampang
Selangor

S Mahendra Raj
Pantai Hospital Kuala Lumpur
Kuala Lumpur

Sanjiv Mahadeva
University Malaya Medical Centre
Kuala Lumpur

Tan Huck Joo
Cengild G.I. Medical Centre
Kuala Lumpur

Tan Soek Siam
Hospital Selayang
Selangor

Tee Hoi Poh
KPJ Pahang Specialist Hospital
Pahang

FACULTY BIODATA

Rakesh Aggarwal

Dr Rakesh Aggarwal is Professor at the Department of Gastroenterology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India. His research work spans over multiple disciplines, including epidemiology, clinical medicine, laboratory work, health economic studies, mathematical modelling and health policy. He has published over 240 journal articles, and written 6 books and over 30 book chapters. He is Editor for the Journal of Gastroenterology and Hepatology, Editor Emeritus for the Indian Journal of Gastroenterology, Associate Editor for Hepatology, Medicine and Policy, and is on the Editorial Board for several other journals. He is a member of the ethics committee of the World Association of Medical Editors. He contributes to global health policy by serving on several WHO expert groups. He has also conducted more than 75 workshops on research methodology, biostatistics, epidemiology, and scientific writing, including those supported by the South-East Asia Regional Office of the WHO and the National Institute of Health, USA. He is recipient of the 18th MSGH oration this year.

April Camilla Roslani

Dr April Roslani graduated with honours from the University of Wales in 1995, completed her MMED Surgery at University of Malaya followed by colorectal training at National University Singapore in 2007. She is currently Professor, Head of General and Colorectal Surgery. Her areas of expertise include general and colorectal surgery, in particular, surgery for cancer, hemorrhaidal surgery and fistula surgery. She is well-published, invited to speak frequently and won a number of international awards. She currently holds numerous positions in societies and academy and through these roles she works towards advancing colorectal surgical standards within Malaysia.

Henry L Y Chan

Dr Henry Chan is currently Professor and Director of Center for Liver Health and Assistant Dean of Faculty of Medicine, The Chinese University of Hong Kong. He is the course director of Master of Science in Gastroenterology of the same university. Professor Chan is an associate editor of Journal of Hepatology, Hepatology International and Seminars in Liver Disease. He is the co-chairman of the Strategic and Technical Advisory Committee on Viral Hepatitis for the Western Pacific Regional Office of World Health Organization.

Chan Wah Kheong

Dr Chan is Associate Professor of Medicine at the University of Malaya and Consultant Gastroenterologist and Hepatologist at the University Malaya Medical Centre and the University Malaya Specialist Centre. He completed his PhD on non-alcoholic fatty liver disease at the University of Malaya, and is a member of the Asia-Pacific Working Party on Non-Alcoholic Fatty Liver Disease and the Gut and Obesity in Asia (GO ASIA) Workgroup. He has published numerous papers in peer-reviewed journals and presented in both local and international conferences. He is Editor for In this Section for the Journal of Gastroenterology and Hepatology, and is a reviewer for several international journals. His areas of interest are diagnostic and therapeutic endoscopy, viral hepatitis B and C, hepatocellular carcinoma and non-alcoholic fatty liver disease.

Chow Wan Cheng

Dr Chow graduated from the Faculty of Medicine, National University of Singapore in 1985. She was further trained in Hepatology as a Clinical and Research fellow in Service d'Hepatologie, Hopital Beaujon, Clichy, France from the year 1996 to 1997. Her area of specialty is hepatology, in particular viral hepatitis and liver transplantation. She is currently a Chairman for the Division of Medicine and Senior Consultant in the Department of Gastroenterology and Hepatology, Singapore General Hospital and Clinical Associate Professor of the NUS Yong Loo Lin School of Medicine as well as Adjunct Associate Professor of Duke-NUS Medical School.

FACULTY BIODATA

Dan Yock Young

Dr Dan Yock Young obtained his medical degree (MBBS) from the National University of Singapore in 1994. He was awarded the A*STAR International Fellowship in 2003 and spent 2 years at University of Washington studying liver stem cells under the mentorship of Prof Nelson Fausto. This led to his PhD from NUS in 2010. He is a clinician-scientist and his current research interests include liver progenitor cells, their mechanistic roles and potential for therapeutic applications in liver failure, cancer and non-alcoholic fatty liver disease.

Steven Flamm

Dr Flamm is Professor of Medicine and Surgery with the Division of Hepatology at Northwestern University Feinberg School of Medicine in Chicago. He serves as the Chief of Transplantation Hepatology and Medical Director of Liver Transplantation. He received his MD degree from the University of Pennsylvania, completed both a clinical and research fellowship at Beth Israel Hospital, Harvard Medical School and clinical fellowship in hepatology and liver transplantation at The Deaconess Hospital, Harvard Medical School. Dr Flamm has published widely in liver diseases and has spoken both nationally and internationally on liver-related topics including viral hepatitis, autoimmune hepatitis, hepatic encephalopathy, and liver transplantation. He has an active clinical research program including chronic viral hepatitis (HBV and HCV), hepatic encephalopathy, acute liver failure and non-alcoholic fatty liver disease.

James Fung

Dr James Fung is consultant at the Department of Medicine, and a Transplant Hepatologist at the Liver Transplant Centre, Queen Mary Hospital, Hong Kong. He was awarded the Fellow of the Royal Australasian College of Physician in 2005, and Fellow of the Hong Kong College of Physicians in 2008. In 2011 he attained his Doctor of Medicine. He has published widely with research interests including viral hepatitis, liver fibrosis, advanced liver disease, hepatocellular carcinoma, and liver transplantation.

Peter Gibson

Dr Gibson is Professor of Gastroenterology and the Director of Gastroenterology of the Alfred Hospital. He graduated with honours from the Monash University. He worked in Oxford for 3 years, Australian National University for 3 years and University of Melbourne / Royal Melbourne Hospital for 14 years before returning to Monash. His active clinical and research interest are mostly focused on improving outcome for patients with inflammatory bowel disease, coeliac disease and FGIDs. He has published widely and is currently editor for Alimentary Pharmacology & Therapeutics and Journal of Gastroenterology & Hepatology. He is recipient of the 15th Panir Chelvam oration in GUT this year.

Goh Khean Lee

Dr Goh is widely recognised as a leading expert in gastrointestinal and liver diseases in Malaysia and internationally. He started the Gastroenterology and Hepatology unit at UMMC and has trained numerous GI specialists both from Malaysia and from overseas in his center. He is a top ranked academic in the country and was awarded the highly prestigious Merdeka Award for Outstanding Scholastic Achievement in 2011. In recognition of his leadership qualities he has held positions including President of the APAGE, President of the APDWF as well as Vice President of the WGO. He is also Editor Emeritus of the Journal of Gastroenterology and Hepatology.

FACULTY BIODATA

Gwee Kok Ann

Dr Gwee is Adjunct Associate Professor of Medicine at the National University of Singapore. After his medical degree in 1985, he went on to train in gastroenterology & completed his PhD in 1998 from the University of Sheffield. His thesis on post-infectious irritable bowel syndrome is one of the early seminal works in this field. His areas of research include the role of melatonin and sleep disturbance in FGIDs, epidemiology of FGIDs in Asia, pelvic organ dysfunction in FGID and non-celiac gluten sensitivity. He was past president of the Asian Neurogastroenterology & Motility Association (ANMA) and currently serves several roles in the Rome foundation. He has authored many peer-reviewed journals and is editor of several international journals including Journal of Gastroenterology & Hepatology & Journal Neurogastroenterology & Motility.

Haniza Omar

Dr Haniza Omar graduated from the Royal College of Surgeons in Ireland in 1996. She pursued her Masters in Internal Medicine at HUKM and subsequently took Hepatology as a subspeciality in 2006. She completed her training in 2009, which included a year stint at the Transplant Center in St Vincent's University Hospital in Dublin, Ireland. She is currently a Consultant at the Department of Hepatology and Gastroenterology in Hospital Selayang since 2010, a tertiary center for liver diseases in Malaysia. She is now the Head of Department for Hepatology and Gastroenterology there. Dr Haniza is an active member of the Malaysian Conjoint Gastroenterology and Hepatology Training Committee, a member of the Malaysian Clinical Practice Guidelines on Dengue and Hepatitis C, a member of the Malaysian Society of Transplant as well as the Malaysian Society of Gastroenterology and Hepatology. She is also active in the Hepatitis Support Group. Dr Haniza is also active in Clinical Research. She is the Principle Investigator in several clinical trials, mainly in biomarkers for Hepatitis B and DAAs in Hepatitis C. She is the reviewer for several medical journals and MIMS. She has publications in areas of Hepatology and Gastroenterology. Her areas of interest include Viral Hepatitis and Liver Transplantation.

Jia Jidong

Dr Jia is Professor of Medicine & Director, Liver Research Center, Beijing Friendship Hospital. He received his medical degree from the Capital Medical University, Beijing and completed his postdoctoral training at Klinikum Benjamin Franklin, Berlin. His clinical interests include chronic viral hepatitis, autoimmune and cholestatic liver diseases. His main research work includes the pathogenesis and treatment of liver fibrosis. He is the President-Elect of IAS, Past President of APASL (2009-2010) and Immediate Past President of the Chinese Society of Hepatology. He currently serves at the China Foundation of Viral Hepatitis Prevention and Control as Vice President, and CEVHAP as Executive Council Member. He also serves as associate editor for Journal of Gastroenterology & Hepatology and Hepatology International.

Alfred Kow Wei Chieh

Dr Alfred Kow is a practising HPB and Liver Transplant surgeon at the National University Hospital Singapore. His main area of interest is liver transplantation and minimally invasive HPB surgery. After completing his FRCS in Hong Kong in 2009, Dr Kow spent a year in Seoul to master the skill of living donor liver transplantation and HPB surgical oncology. Besides clinical works, he spends his time planning medical school curriculum as the Assistant Dean of Education at the Deanery. He has received many teaching awards for teaching excellence. He is also actively involved in postgraduate surgical training. Dr Kow has keen interest in research activities involving development of surgical techniques in HPB. He is also actively developing research to help improve surgical education and training for both undergraduate and postgraduate setting.

FACULTY BIODATA

Michael Larvin

Dr Larvin is Dean of the Perdana University - Royal College of Surgeons in Ireland School of Medicine, Malaysia. He is a Senior Consultant Surgeon with special interest in pancreatic diseases, medical and educational technology and the human-technology interface. He has published over a hundred papers in peer-reviewed journals in areas such as acute and chronic pancreatitis, pancreatic cancer, obesity including bariatric surgery, and GI surgery including minimally invasive procedures and flexible endoscopy.

Lee Yeong Yeh

Dr Lee is Professor of Medicine, and Consultant of Gastroenterology, Hepatology and Internal Medicine of Universiti Sains Malaysia. After his gastroenterology fellowship, he completed his PhD in Glasgow, UK and later postdoctoral fellowship in the States. He is currently the Editor of BMC Gastroenterology, Journal of the Royal College of Physicians of Edinburgh and the Malaysian Journal of Medical Sciences. He published widely in high-impact journals including Gastroenterology and Gut, a number of book chapters and numerous conference proceedings. Among his current research interests include gut microbiota, gastroesophageal reflux disease, neurogastroenterology, functional gastrointestinal disorders and obesity.

Rupert Leong

Dr Rupert Leong is a Senior Gastroenterologist, Director of Endoscopy and Head of the IBD Service at Concord Hospital; Clinical Professor of Medicine at University of Sydney and UNSW; and founding director of IBD Sydney. He has an international reputation in management of IBD and has over 150 scientific publications. He holds executive positions on the Research Committee of the Gastroenterological Society of Australia and the Journal of Gastroenterology and Hepatology, and is a member for the Agency for Clinical Innovation of NSW Health (expertise in IBD) and the Cancer Council of Australia Working Party (CPG revision for colorectal cancer).

John Low Seng Hooi

Dr John Low obtained his MBBS from the National University of Singapore in 1996. He was trained in oncology at the National Cancer Centre Singapore and the Royal Marsden Hospital, UK. He is the Frank Doyle Medal recipient for the Clinical Oncology Fellowship examination. He is currently Consultant Clinical Oncologist at Pantai Hospital Kuala Lumpur and Sunway Medical Centre. Dr Low was Consultant Oncologist at the National Cancer Centre Singapore and Visiting Consultant to the KK Women's & Children's Hospital in Singapore. He was also clinical tutor with the Faculty of Medicine, National University of Singapore and the Faculty of Medical Sciences, Singapore Nanyang Polytechnic. Dr John Low is active both in clinical work as well as clinical research.

Muhammad Radzi Abu Hassan

Dr Radzi is a Consultant Physician and Gastroenterologist at Hospital Sultanah Bahiyah in Alor Setar. He also heads the Department of Medicine and CRC at the same hospital. He graduated from the Royal College of Surgeon in Dublin, completed his MMED from USM and MRCP in 1997. His research interest are in colorectal cancer particularly with a focus on screening, fatty liver, viral hepatitis as well as clinical trials in general medicines such as diabetes. He is actively involved in research and has numerous articles published in reputable journals. He is currently principal investigator of many clinical trials and is very active in medical education, presenting at local and international conferences.

FACULTY BIODATA

Norfilza Mohd Mokhtar

Dr Norfilza did her molecular biology training under the mentorship of Professor Stephen Charnock Jones and Professor Stephen Smith from University of Cambridge, UK. Her PhD thesis was on the regulation of macrophage inflammatory protein 2 gamma by steroids in endometrium. She was elected as the Fellow of the Cambridge Commonwealth Trust and life member of Lucy Cavendish College, University of Cambridge. She is an active researcher where she served as principal investigators for numerous national grants. Her research focuses on genomics, epigenomics and transcriptomics aspects of diseases including colorectal cancer, inflammatory bowel disease and colitis-associated cancer. She is currently Professor of Genomic Medicine at the Department of Physiology and also coordinator for the International Twinning Program in the Faculty of Medicine, Universiti Kebangsaan Malaysia.

Norshazriman Sulaiman

Dr Norshazriman graduated from Penang Medical College in 2006. He then worked under the Ministry of Health in University Malaya Medical Centre as well as Hospital Marudi in Sarawak. He then pursued his postgraduate studies in clinical radiology in University of Malaya and graduated with a Masters in Medicine, Radiology (MRad) in 2013. He subsequently worked as a radiologist in University Malaya Medical Centre and started his subspecialty training in interventional radiology. He completed his fellowship at the National Cancer Centre Hospital, Tokyo, Japan in 2016. His areas of interest includes liver imaging and interventional oncology.

Ooi Choon Jin

Dr Ooi obtained his MBBS from National University of Singapore. From 1998 to 2000, he trained at the Center for the Study of IBD at Massachusetts General Hospital and Harvard Medical School. He is currently Adjunct Associate Professor at the Duke-NUS Medical School, Consultant Gastroenterologist at Gleneagles Medical Centre and a Visiting Consultant to the IBD Centre at Singapore General Hospital. He had previously served as Chairman of the Chapter of Gastroenterologists, Academy of Medicine Singapore and President of the Gastroenterological Society of Singapore. He is the Secretary General of the Asian Pacific Association of Gastroenterology (APAGE) and the main lead for the APAGE Working Group on IBD. The IBD group has been pivotal in producing many IBD consensus to help guide clinicians in the diagnosis and management of IBD.

Raja Affendi Raja Ali

Dr Raja Affendi graduated with distinction in primary medical degree, obtained a higher diploma in clinical teaching and Master of Medical Science. He was also conferred with the Doctorate of Medicine for his research on epigenetics in colorectal cancer from the National University of Ireland. He is a fellow of the Royal College of Physicians of Edinburgh, UK and was awarded a research grant from the Ministry of Higher Education in Malaysia for research on the gut microbiome and colorectal cancer. He serves as a President-Elect to the Malaysia Society of Gastroenterology and Hepatology and a council member for the Asia Pacific Association of Gastroenterology. Currently, he is an Associate Professor and Head of Gastroenterology and Hepatology unit, at the Department of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur.

FACULTY BIODATA

Razman Jarmin

Dr Razman Jarmin earned his degrees as the Medical Doctor (MD) at Universiti Kebangsaan Malaysia in 1994. He completed his post graduate training in general surgery at the same university in 2001 and obtained a fellowship in hepatobiliary and transplantation surgery from University of Melbourne in 2006. He was appointed as the Head of Hepatobiliary and Pancreatic Surgery Unit and the Head of Department of Surgery at Universiti Kebangsaan Malaysia Medical Centre since 2008. In January 2016, he was appointed as Deputy Director (Surgical Services) at Hospital Canselor Tuanku Mukhriz, Universiti Kebangsaan Malaysia Medical Centre. His expertise includes Hepato-Pancreatic Biliary Surgery, advanced endoscopic procedured and laparoscopic surgery. He also practices conventional HPB surgery and aggressive surgery as well. His research is mainly focused on Hepatobilairy and Pancreatic Surgery. He was recently appointed as Professor in Hepatibiliary and Pancreatic Surgery by Universiti Kebangsaan Malaysia. He is also active in scientific activities in Malaysia and Asia pacific region.

Sanjiv Mahadeva

Dr Sanjiv Mahadeva is a Consultant Gastroenterologist and Head of the Department of Medicine, University of Malaya. His research areas in Gastroenterology & Hepatology are wide, although he has a particular interest in East-West differences in GI epidemiology. He has approximately 115 peer-reviewed publications in international journals and currently serves on the Editorial Board of Journal of Gastroenterology and Hepatology, PLoS ONE and is Associate Editor of the new Asia-Pacific journal, JGH OPEN.

Keijiro Sunada

Dr Sunada obtained his medical degree from the Jichi Medical University in 1991, and later worked in his alma-mater until his current position as Professor. His major research interests include enteroscopy, endoscopic therapy, ESD and inflammatory bowel disease. He has published in his areas of interests and is currently serving as the editor of Journal of Japanese Society of Gastroenterology. He is a board certified fellow and trainer in gastroenterology.

Hidekazu Suzuki

Dr Suzuki is Professor and Chief of Fellowship Training Center, Keio University School of Medicine, Tokyo. After his medical degree in 1989, he went on to obtain his PhD in 1994 and did his stint as postdoctoral fellow in UCSD, US. He is active member and fellows of many societal organizations including AGA and Rome foundation. He published widely and serves on editorial boards of numerous journals. He has a diverse interests in many areas of gastroenterology but his major interests lie in Helicobacter pylori and FGIDs.

Tan Soek Siam

Dr Tan is Senior Consultant and Hepatologist at the Selayang Hospital. She was the Head of Department and Head of Hepatology Service in MOH up until 2017. Dr Tan earned her medical degree at Trinity College, Dublin. After her postgraduate training in Ireland, she returned to Malaysia and served as clinical specialist in MOH and later trained in hepatology at the Institute of Liver Study at King's College Hospital (UK). Dr Tan is currently the President of MSGH, council member of the College of Physicians, Academy of Medicine of Malaysia and member of the Malaysian Transplant Society. Her research interests include acute liver failure, acute-on-chronic liver failure, chronic hepatitis B and C, autoimmune liver disease, and liver transplantation. She is the principal investigator of numerous viral hepatitis B and C clinical trials. She is a current member of the APASL-ACLF working party.

MSGH ANNUAL SCIENTIFIC MEETINGS & ENDOSCOPY WORKSHOPS

The proud tradition of the

Malaysian Society of Gastroenterology and Hepatology

ANNUAL THERAPEUTIC ENDOSCOPY WORKSHOPS - "ENDOSCOPY"

Organised by the Malaysian Society of Gastroenterology and Hepatology
in collaboration with the University of Malaya

EVENT	FACULTY	DATE
Difficult ERCP - "The Master's Approach"	Kees Huibregtse (Amsterdam, Netherlands)	19th August 1993
Endoscopic Ultrasonography	T L Tio (Washington, USA)	26th July 1994
ERCP - "Basic Skills, Finer Points and New Techniques"	Kees Huibregtse (Amsterdam, Netherlands)	25th August 1994
Practical Points in Therapeutic Endoscopy	Nib Soehendra (Hamburg, Germany)	6th December 1994
Therapeutic Endoscopy Workshop (In collaboration with Island Hospital, Penang, Malaysia)	Nib Soehendra (Hamburg, Germany) Kees Huibregtse (Amsterdam, Netherlands)	22nd July 1997
Lasers in Gastroenterology	R Leicester (London, United Kingdom)	13th August 1997
GI Endoscopy Nurses Workshop - "Setting the Standards for Practice"	Staff Members - Endoscopy Unit, University Hospital, Kuala Lumpur, Malaysia	30th April - 2nd May 1999
Endoscopy 2000	Sydney C S Chung (Hong Kong, China), Kenji Yasuda (Kyoto, Japan), Wang Yong-Guang (Beijing, China), Nageshwar Reddy (Hyderabad, India) *GIA Faculty:* Dorothy Wong (Hong Kong, China)	13th - 15th April 2000
Endoscopy 2001 "A Master Class in Therapeutic Endoscopy"	Nib Soehendra (Hamburg, Germany) *GIA Faculty:* Adriana Cargin (Melbourne, Australia)	14th - 15th April 2001
Endoscopy 2002 "Enhancing Basic Skills and Developing Expertise"	Christopher Williams (London, United Kingdom), Naotaka Fujita (Sendai, Japan), Joseph Leung (Sacramento, USA), Kees Huibregtse (Amsterdam, Netherlands) *GIA Faculty:* Diana Jones (Sydney, Australia)	5th - 7th April 2002
Endoscopy 2003 "The Cutting Edge of GI Endoscopy"	Douglas Howell (Portland, USA), Haruhiro Inoue (Tokyo, Japan) Simon K Lo (Los Angeles, USA), Nageshwar Reddy (Hyderabad, India)	28th February - 2nd March 2003
Endoscopy 2004 "Appreciating the Art of GI Endoscopy"	Firas Al Kawas (Washington, USA), Yoshihiro Sakai (Tokyo, Japan), Stefan Seewald (Hamburg, Germany), Joseph Sung (Hong Kong, China)	5th - 7th March 2004
Endoscopy 2005 "Defining the Scope of Excellence"	Guido Costamagna (Rome, Italy), Shim Chan-Sup (Seoul, South Korea), K Yasuda (Kyoto, Japan), B Rembacken (Leeds, United Kingdom)	1st - 3rd April 2005
Endoscopy 2006 "Frontiers of Therapeutic Endoscopy"	A T R Axon (Leeds, United Kingdom), James Lau (Hong Kong, China), Seo Dong-Wan (Seoul, Korea), Irving Waxman (Chicago, USA), Naohisa Yahagi (Tokyo, Japan)	14th - 16th April 2006
Endoscopy 2007 "The Best Endoscopic Practices"	Nageshwar Reddy (Hyderabad, India), Reza Shaker (Milwaukee, USA), Yusuke Saitoh (Sapporo, Japan), Stefan Seewald (Hamburg, Germany), Song Si-Young (Seoul, Korea), Mary Bong (Sydney, Australia)	13th - 15th April 2007
Endoscopy 2008 "Seeing Better, Doing Better"	Peter B Cotton (Charleston, USA), G Ginsberg (Philadelphia, USA), H Isayama (Tokyo, Japan), S Ryozawa, (Yamaguchi, Japan), J S Byeon (Seoul, Korea), Syed Shah, (West Yorkshire, United Kingdom)	29th February - 2nd March 2008

ANNUAL THERAPEUTIC ENDOSCOPY WORKSHOPS - "ENDOSCOPY"

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EVENT	FACULTY	DATE
Endoscopy 2009 "Exploring the Limits of Endoscopy"	Jerome D Waye (New York, USA), Kulwinder Dua (Milwaukee, USA), Amit Maydeo (Mumbai, India), H Kawamoto (Okayama,Japan), I Yasuda (Gifu, Japan), Lee Yong-Chan (Seoul, Korea), Y Sano (Kobe, Japan)	20th - 22nd March 2009
Endoscopy 2010 (organised with the APDW 2010) (In conjunction with Selayang Hospital, Kuala Lumpur, Malaysia)	Michael Bourke (Sydney, Australia), David Carr-Locke (New York, USA), Mitsuhiro Fujishiro (Tokyo, Japan), Marc Giovannini (Marseilles-France), Takuji Gotoda (Tokyo, Japan), James Lau (Hong Kong, China), Amit Maydeo (Mumbai, India), Ibrahim Mostafa (Cairo, Egypt), Horst Neuhaus (Düsseldorf, Germany), Nageshwar Reddy (Hyderabad, India), Rungsun Reknimitr (Bangkok, Thailand), Seo Dong-Wan (Seoul, Korea), Naohisa Yahagi (Tokyo, Japan), Hironori Yamamoto (Tokyo, Japan), Kenjiro Yasuda (Kyoto, Japan)	20th - 21st September 2010
Endoscopy 2011 "What's New and What's Good for Our Patients"	Hisao Tajiri (Tokyo, Japan), Chiu Han-Mo (Taipei, Taiwan), Arthur Kaffes (Sydney, Australia), Ho Khek-Yu (Singapore), Hiroo Imazu (Tokyo, Japan), Takao Itoi (Tokyo, Japan), Lee Dong-Ki (Seoul, Korea), Takahisa Matsuda (Tokyo, Japan), Moon Jong-Ho (Seoul, Korea)	14th - 17th April 2011
Endoscopy 2012 "Therapeutic Endoscopy in the Global World"	Robert Hawes (Miami, USA), Hiroshi Kashida (Kinki, Japan), Lee Sang-Hyup (Seoul, Korea), Claudio Navarette (Santiago, Chile), Paulo Sakai (Sao Paulo, Brazil), Rajvinder Singh (Adelaide,Australia), Wang Hsiu-Po (Taipei, Taiwan), Kenshi Yao (Fukuoka, Japan)	30th March - 1st April 2012
Endoscopy 2013 "Advancing the Practice of Endoscopy"	Phillip Chiu (Hong Kong, China), Lawrence Khek-Yu Ho (Singapore), Horst Neuhaus (Dusseldorf, Germany), Krish Ragunath (Nottingham, United Kingdom), Dong-Wan Seo (Seoul, Korea), Yun-Sheng Yang (Beijing, China), Ian Yusoff (Perth, Australia) *Special GIA Faculty:* Wang Ping (Shanghai, China)	12th - 14th April 2013
Endoscopy 2014 "The Best Tips in Therapeutic Endoscopy"	Mitsuhiro Kida (Kanagawa, Japan), Gregory Ginsberg (Philadelphia, USA), Yutaka Saito (Tokyo, Japan), Jin Hong Kim (Suwon, Korea), James Y W Lau (Shatin, Hong Kong) *Special GIA Faculty:* Mary Bong (Sydney, Australia)	28th - 30th March 2014
Endoscopy 2015 "Maintaining Quality in Endoscopy Practice"	Christopher Khor (Singapore), Sundeep Lakhtakia (Hyderabad, India), Hiroyuki Maguchi (Sapporo, Japan), Amit Maydeo (Mumbai, India), Jong-Ho Moon (Bucheon, Korea), Roy Soetikno (Singapore and California, USA), Kenneth Wang (Rochester, Usa)	17th - 19th April 2015
Endoscopy 2016 "Expanding the Horizons of Therapeutic Endoscopy"	Hyun-Jong Choi (Bucheon, Korea), Jacques Deviere (Brussels, Belgium), Manoel Galvao Netto (Sao Paulo, Brazil), Nageshwar Reddy (Hyderabad, India), Rungsun Reknitmitr (Bangkok, Thailand), Brian Saunders (London, UK), Shyam Varadarajulu (Orlando, USA)	8th - 10th April 2016
Endoscopy 2017 "Re-Defining Therapeutic Endoscopy"	Seiichiro Abe (Tokyo, Japan), Vinay Dhir (Mumbai, India), Haruhiro Inoue (Tokyo, Japan), Hiroyuki Isayama (Tokyo, Japan), Martin Keuchel (Hamburg, Germany)	7th - 9th April 2017
Endoscopy 2018 "Therapeutic Endoscopy: Building on Basics"	Hwoon Yong Jung (Seoul, Korea), Arthur Kaffes (Sydney, Australia), Kazuo Ohtsuka (Tokyo, Japan), Nonthalee Pausawasdi (Bangkok, Thailand), Thierry Ponchon (Lyon, France), Noriya Uedo (Osaka, Japan), Reuben Wong (Singapore)	6th - 8th April 2018

DISTINGUISHED ENDOSCOPY LECTURERS

NO	YEAR	ORATOR	TOPIC
1st	1999	**Kees Huibregtse** Amsterdam, Netherlands	The Development and Use of Biliary Endoprosthesis in ERCPs
2nd	2001	**Nib Soehendra** Hamburg, Germany	A Master's Approach to Therapeutic Endoscopy
3rd	2002	**Christopher Williams** London, United Kingdom	Practical Tips and Pitfalls in Colonoscopy
4th	2003	**Guido N J Tytgat** Amsterdam, Netherlands	The Unlimited Horizons of Therapeutic Endoscopy
5th	2004	**Yoshihiro Sakai** Tokyo, Japan	Development and Application of Colonoscopy
6th	2005	**Guido Costamagna** Rome, Italy	Endoscopic Management of Pancreatobiliary Diseases - State-of-the-Art in 2005
7th	2006	**Anthony T R Axon** Leeds, United Kingdom	The Impact of New Technology in GI Endoscopy
8th	2007	**D Nageshwar Reddy** Hyderabad, India	Chronic Pancreatitis - Genes to Bedside
9th	2008	**Peter Cotton** Charleston, USA	Therapeutic Endoscopy - Then, Now and Maybe
10th	2009	**Jerome Waye** New York, USA	Exploring the Limits of Endoscopy
11th	2010	**David L Carr-Locke** New York, USA	Enhancing the Eye - The Future of Endoscopy
12th	2011	**Hisao Tajiri** Tokyo, Japan	Enhanced Imaging of the Gastrointestinal Tract
13th	2012	**Robert Hawes** Orlando, USA	The Current and Future Role of Endoscopic Ultrasonography in GI Practice
14th	2013	**Horst Neuhaus** Dusseldorf, Germany	Viewing the Bile Duct - Recent Developments of Cholangioscopy
15th	2014	**Gregory Ginsberg** Philadelphia, USA	Future Prospects for Gastrointestinal Endoscopy
16th	2015	**Kenneth Wang** Rochester, USA	Diagnosis and Endoscopic Treatment of Barrett's Esophagus
17th	2016	**Jacques Deviere** Brussels, Belgium	Metabolic Endoscopy: Future Horizons in Therapeutic Endoscopy
18th	2017	**Haruhiro Inoue** Tokyo, Japan	Re-defining Therapeutic Endoscopy - 20 years of Innovation
19th	2018	**Thierry Ponchon** Lyon, France	Therapeutic Endoscopy - Building on Basics

ANNUAL SCIENTIFIC MEETINGS - OVERSEAS INVITED FACULTY

THE STOMACH '96

(Co-organised with the College of Surgeons)

3rd - 6th July 1996, Kuala Lumpur

Stephen G Bown	United Kingdom	Kang Jin-Yong	United Kingdom	Henry M Sue-Ling	United Kingdom
Sydney C S Chung	Hong Kong, China	Lam Shiu-Kum	Hong Kong, China	Nicholas J Talley	Australia
Teruyuki Hirota	Japan	Adrian Lee	Australia	Guido N J Tytgat	Netherlands
Richard H Hunt	Canada	Roy E Pounder	United Kingdom	Cornelis J H Van De Velde	Netherlands
David Johnston	United Kingdom	Robert H Riddell	Canada		

PENANG INTERNATIONAL TEACHING COURSE IN GASTROENTEROLOGY

(Co-organised with Penang Medical Practitioners' Society with the participation of the British Society of Gastroenterology)

23rd - 26th July 1997, Penang

Anthony Axon	United Kingdom	Dermot Kelleher	Ireland	J J Misiewicz	United Kingdom
John Dent	Australia	Fumio Konishi	Japan	James Neuberger	United Kingdom
R Hermon Dowling	United Kingdom	John Lambert	Australia	Thierry Poynard	France
Greg Holdstock	United Kingdom	Michael Larvin	United Kingdom	Jonathan Rhodes	United Kingdom
Kees Huibregtse	Netherlands	Christopher Liddle	Australia	Nib Soehendra	Germany
P W N Keeling	Ireland	Lim Seng-Gee	Singapore		

SECOND WESTERN PACIFIC HELICOBACTER CONGRESS

25th - 27th July 1998, Kota Kinabalu, Sabah

Masahiro Asaka	Japan	Richard Hunt	Canada	Pentti Sipponen	Finland
Douglas E Berg	USA	Lam Shiu-Kum	Hong Kong, China	Joseph J Y Sung	Hong Kong, China
Fock Kwong-Ming	Singapore	Adrian Lee	Australia	Rakesh Tandon	India
David Forman	United Kingdom	Peter Malfertheiner	Germany	Guido N J Tytgat	Netherlands
David Y Graham	USA	Kenneth E L McColl	Scotland	Xiao Shu-Dong	China
Stuart L Hazell	Australia	Hazel M Mitchell	Australia		

GASTROENTEROLOGY 1999

23rd - 25th July 1999, Kuala Terengganu, Terengganu

Francis K L Chan	Hong Kong, China	Mohammed Al Karawi	Saudi Arabia	Quak Seng-Hock	Singapore
Sydney S C Chung	Hong Kong, China	Mohammad Sultan Khuroo	Saudi Arabia	Nicholas J Talley	Australia
John Dent	Australia	Peter Malfertheiner	Germany	Neville D Yeomans	Australia
Rikiya Fujita	Japan	Colm O'Morain	Ireland		

GUT 2000

24th - 26th August 2000, Melaka

Anthony Axon	United Kingdom	Lim Seng-Gee	Singapore	Francis Seow-Choen	Singapore
Geoffrey C Farrell	Australia	Anthony I Morris	United Kingdom	Jose D Sollano	Philippines
Vay Liang W Go	USA	David Mutimer	United Kingdom	Guido N J Tytgat	Netherlands
Humphrey J F Hodgson	United Kingdom	Ng Han-Seong	Singapore	Michael Wolfe	USA
Peter Katelaris	Australia	Thierry Poynard	France		

GASTRO 2001

(With the participation of the American Gastroenterological Association)

5th - 8th April 2001, Kota Kinabalu, Sabah

Aziz Rani	Indonesia	Y K Joshi	India	Mahesh P Sharma	India
Chung Owyang	USA	Joseph Kolars	USA	Gurkirpal Singh	USA
Sydney S C Chung	Hong Kong, China	Koo Wen-Hsin	Singapore	Jose D Sollano	Philippines
Andrew Clouston	Australia	Edward Krawitt	USA	J L Sweeney	Australia
John Dent	Australia	Pinit Kullavanijaya	Thailand	Rakesh Tandon	India
Fock Kwong-Ming	Singapore	Lam Shiu-Kum	Hong Kong, China	Benjamin C Y Wong	Hong Kong, China
Robert N Gibson	Australia	Peter Malfertheiner	Germany	Xiao Shu-Dong	PR China
Richard Hunt	Canada	James M Scheiman	USA		

ANNUAL SCIENTIFIC MEETINGS - OVERSEAS INVITED FACULTY

GUT 2002

27th - 30th June 2002, Penang

Chow Wan-Cheng	Singapore	Peter Katelaris	Australia	Ng Han-Seong	Singapore
Anuchit Chutaputti	Thailand	James Y W Lau	Hong Kong, China	C S Pitchumoni	USA
David Forman	United Kingdom	Tore Lind	Sweden	Herbert J Tilg	Austria
Lawrence Ho Khek-Yu	Singapore	Barry James Marshall	Australia	John Wong	Hong Kong, China

GUT 2003

28th - 31st August 2003, Kuching, Sarawak

Francis K L Chan	Hong Kong, China	Humphrey J O'Connor	Ireland	Eamonn M M Quigley	Ireland
Chang Mei-Hwei	Taiwan	Colm O'Morain	Ireland	Jose D Sollano Jr	Philippines
W G E Cooksley	Australia	Teerha Piratvisuth	Thailand	Joseph Sung	Hong Kong, China
Gwee Kok-Ann	Singapore	Roy Pounder	United Kingdom	Yeoh Khay-Guan	Singapore

GUT 2004

24th - 27th June 2004, Penang

Sydney C S Chung	Hong Kong, China	Huang Jia-Qing	China	Mario Rizzetto	Italy
Geoffrey C Farrell	Australia	Lam Shiu-Kum	Hong Kong, China	Russell W Strong	Australia
Ronnie Fass	USA	Peter W R Lee	United Kingdom	Benjamin C Y Wong	Hong Kong, China
David Fleischer	USA	Masao Omata	Japan		
Fock Kwong-Ming	Singapore	Teerha Piratvisuth	Thailand		

GUT 2005

23rd - 25th June 2005, Pulau Langkawi, Kedah

Raymond Chan Tsz-Tong	Hong Kong, China	Gerald Johannes Holtmann	Australia	Graeme Young	Australia
Meinhard Classen	Germany	Peter Malfertheiner	Germany	Yuen Man-Fung	Hong Kong, China
Anthony Goh	Singapore	Kenneth McColl	Ireland		

GUT 2006

20th - 23rd June 2006, Kuala Lumpur

Peter Gibson	Australia	Anthony Morris	United Kingdom	Francis Seow-Choen	Singapore
Lawrence Ho Khek-Yu	Singapore	Nageshwar Reddy	India	Nimish Vakil	USA
Gerald Johannes Holtmann	Germany	Ng Han-Seong	Singapore	John Wong	Hong Kong, China
Lim Seng-Gee	Singapore	Ooi Choon-Jin	Singapore		
Irvin Modlin	USA	Fred Poordad	USA		

GUT 2007

29th August - 1st September 2007, Kota Kinabalu, Sabah

Ronnie Fass	USA	Norman Marcon	USA	Nib Soehendra	Germany
Marc Giovannini	France	Amit Maydeo	India	Daniel Wong	Singapore
Robert Hawes	USA	Charlie Millson	England	Hironori Yamamoto	Japan
Richard Hunt	Canada	G V Rao	India	Yeoh Khay-Guan	Singapore
Finlay Macrae	Australia	Marcelo Silva	Argentina		

GUT 2008

21st - 24th August 2008, Kuala Lumpur

Anuchit Chutaputti	Thailand	Lawrence Ho Khek-Yu	Singapore	Govind K Makharia	India
Peter Bytzer	Sweden	Pali Hungin	United Kingdom	Prateek Sharma	USA
Henry Chan Lik-Yuen	Hong Kong, China	Rupert Leong	Australia	Rajvinder Singh	Australia
Sydney C S Chung	Hong Kong, China	Davide Lomanto	Singapore	Mitchell Shiffman	USA
David Y Graham	USA	Lui Hock-Foong	Singapore	Sundeep Punamiya	Singapore

ANNUAL SCIENTIFIC MEETINGS - OVERSEAS INVITED FACULTY

GUT 2009

14th - 16th August 2009, Pulau Langkawi, Kedah

Geoffrey Farrell	Australia	Lim Seng-Gee	Singapore	Joseph Sung Jao-Yiu	Hong Kong, China
Fock Kwong-Ming	Singapore	Lo Chung-Mau	Hong Kong, China	Daniel Wong Wai-Yan	United Kingdom
Peter R Galle	Germany	Irvin Modlin	USA	Yeoh Khay-Guan	Singapore
Christopher Khor	Singapore	Fabio Pace	Italy		
George K K Lau	Hong Kong, China	Rungsun Rerknimitr	Thailand		

APDW 2010

(Incorporating GUT 2010 & Endoscopy 2010)

19th - 22nd September 2010, Kuala Lumpur Convention Centre, Kuala Lumpur

Subrat Kumar Acharya	India	Hiroyuki Isayama	Japan	Eamonn Quigley	Ireland
Deepak Amarapurkar	India	Takao Itoi	Japan	Shanmugarajah Rajendra	Australia
Ang Tiing-Leong	Singapore	Derek Jewell	United Kingdom	Gurudu Venkat Rao	India
John Atherton	United Kingdom	Jia Ji-Dong	China	Nageshwar Reddy	India
Anthony Axon	United Kingdom	Utom Kachintorn	Thailand	Rungsun Rerknimitr	Thailand
Deepak Bhasin	India	Hiroshi Kashida	Japan	Jean Francois Rey	France
Henry J Binder	USA	Peter Katelaris	Australia	Shomei Ryozawa	Japan
Mary Bong	Australia	Takashi Kawai	Japan	Yutaka Saito	Japan
Michael Bourke	Australia	Christopher Khor Jen-Lock	Singapore	Shiv Sarin	India
Marco Bruno	Netherlands	Nayoung Kim	Korea	Wolff Schmiegel	Germany
David Carr-Locke	USA	Seigo Kitano	Japan	Juergen Schoelmerich	Germany
Ashok Chacko	India	Sriram Krishnan	USA	See Teik-Choon	United Kingdom
Henry Chan Lik-Yuen	Hong Kong, China	Shin-ei Kudo	Japan	Seo Dong-Wan	Korea
Francis Chan Ka-Leung	Hong Kong, China	Ashish Kumar	India	Francis Seow-Choen	Singapore
Adarsh Chaudhary	India	George Lau	Hong Kong, China	Prateek Sharma	USA
Yogesh Chawla	India	James Lau Yun-Wong	Hong Kong, China	Shim Chan-Sup	Korea
Yang Chen	USA	Rupert Leong	Australia	Hiroshi Shimada	Japan
Chen Min-Hu	China	Leung Wai-Keung	Hong Kong, China	Jose Sollano	Philippines
Philip Chiu	Hong Kong, China	Lim Seng-Gee	Singapore	Eduard Stange	Germany
Pierce Chow	Singapore	Lin Jaw-Town	Taiwan	Russell W Strong	Australia
Chow Wan-Cheng	Singapore	Liu Chen-Hua	Taiwan	Kentaro Sugano	Japan
Sylvia Crutchet	Chile	Lo Chung-Mau	Hong Kong, China	Kazuki Sumiyama	Japan
J Enrique Dominguez-Muñoz	Spain	Lo Gin-Ho	Taiwan	Joseph Sung	Hong Kong, China
Greg Dore	Australia	Anna Lok Suk-Fong	USA	Hisao Tajiri	Japan
Christophe DuPont	France	Kaushal Madan	India	Nicholas Joseph Talley	Australia
Anders Ekbom	Sweden	Varocha Mahachai	Thailand	Narci Teoh	Australia
Geoffrey Charles Farrell	Australia	Govind Makharia	India	Judith Tighe-Foster	Australia
Ronnie Fass	USA	Peter Malfertheiner	Germany	Guido Tytgat	Netherlands
Fock Kwong-Ming	Singapore	Takahisa Matsuda	Japan	Noriya Uedo	Japan
Ruggiero Francavilla	Italy	Amit Maydeo	India	James Versalovic	USA
Mitsuhiro Fujishiro	Japan	Kenneth E L McColl	United Kingdom	Wang Hsiu-Po	Taiwan
Peter Galle	Germany	Paul Moayyedi	Canada	William E Whitehead	USA
Edward Gane	New Zealand	Irvin Modlin	USA	Simon Wong Kin-Hung	Hong Kong, China
Uday Ghoshal	India	Moon Jong-Ho	Korea	Benjamin Wong Chun-Yu	Hong Kong, China
Peter Gibson	Australia	Ibrahim Mostafa	Egypt	Justin Wu	Hong Kong, China
Marc Giovannini	France	Horst Neuhaus	Germany	Naohisa Yahagi	Japan
Takuji Gotoda	Japan	Masao Omata	Japan	Hironori Yamamoto	Japan
Gwee Kok-Ann	Singapore	Evan Ong	Philippines	Ichiro Yasuda	Japan
Robert Heading	United Kingdom	Ooi Choon-Jin	Singapore	Kenjiro Yasuda	Japan
Janaki Hewavisenthi	Sri Lanka	Park Hyo-Jin	Korea	Neville Yeomans	Australia
Lawrence Ho Khek-Yu	Singapore	Teerha Piratvisuth	Thailand	Graeme Young	Australia
Bing Hu	China	Ronnie Poon	Hong Kong, China	Yu Ming-Lung	Taiwan
Pali Hungin	United Kingdom	Sundeep Punnamiya	Singapore	Yuen Man-Fung	Hong Kong, China
Richard Hunt	Canada	Qian Jia-Ming	China	Qi Zhu	China

ANNUAL SCIENTIFIC MEETINGS - OVERSEAS INVITED FACULTY

GUT 2011

27th - 29th May 2011, Kuala Lumpur

Ling Khoon-Lin	Singapore	Chan See-Ching	Hong Kong, China	See Teik-Choon	United Kingdom
Luigi Bolondi	Italy	Colm O'Morain	Ireland	Kao Jia-Horng	Taiwan
Lui Hock-Foong	Singapore	Philip Chiu Wai-Yan	Hong Kong, China	Yeoh Khay-Guan	Singapore
Hiroto Miwa	Japan	Ooi Choon-Jin	Singapore	George K K Lau	Hong Kong, China
Sybille Mazurek	Germany	Kang Jin-Yong	United Kingdom		

GUT 2012

29th June - 1st July 2012, Melaka

Henry Chan Lik-Yuen	Hong Kong, China	James Y W Lau	Hong Kong, China	Morris Sherman	Canada
Emad El-Omar	USA	Francesco Marotta	Italy	Shaw Somers	United Kingdom
Han Kwang-Hyub	Korea	Ravi Mohanka	India	Jose Decena Sollano	Philippines
Lawrence Ho Khek-Yu	Singapore	D Nageshwar Reddy	India	Jan Tack	Belgium
Richard Kozarek	USA	Jinsil Seong	Japan	Wong Ka-Tak	Hong Kong, China

GUT 2013

23rd - 25th August 2013, Penang

Alan Barkun	Canada	David Kwon	Korea	Takeshi Sano	Japan
Francis Chan	Hong Kong, China	Kenneth EL McColl	United Kingdom	Francis Seow-Choen	Singapore
Chien Rong-Nan	Taiwan	Ng Siew-Chien	Hong Kong, China	Vijay Shah	USA
Pierce Chow	Singapore	David Peura	USA	Justin Wu Che-Yuen	Hong Kong, China
Michael A Kamm	Australia	Bjorn Rembacken	United Kingdom		

GUT 2014 & ECCO EDUCATIONAL WORKSHOP

22nd - 24th August 2014, Kuala Lumpur

Adarsh Chaudhary	India	Nancy Leung	United Kingdom	Stephan Vavricka	Switzerland
Janaka De Silva	Sri Lanka	Michael Manns	Germany	John A Windsor	New Zealand
Laurence Egan	Ireland	Jong-Ho Moon	Korea	Grace Wong Lai Hung	Hong Kong, China
Alexander Ford	United Kingdom	Nam Quoc Nguyen	Australia		
Patrick Kamath	USA	Nimish Vakil	USA		

GUT 2015

21st - 23rd August 2015, Johor Bahru, Johor

Francis Chan Ka-Leung	Hong Kong, China	Leung Wai Keung	Hong Kong, China	Rajesh Sainani	India
Yogesh Chawla	India	Lim Jit Fong	Singapore	Teik-Choon See	United Kingdom
Uday Ghoshal	India	Lim Seng-Gee	Singapore	Kentaro Sugano	Japan
Ujjala Ghoshal	India	K K Madhavan	Singapore	Simon Travis	United Kingdom
Lawrence Ho Khek-Yu	Singapore	Rajender Reddy	USA	Yeoh Khay Guan	Singapore

GUT 2016

22nd - 24th July 2016, Kuala Lumpur

Anil Arora	India	Peter Katelaris	Australia	Ng Siew Chien	Hong Kong, China
Ashley Brown	United Kingdom	Lai Ching-Lung	Hong Kong, China	London Lucien Ooi Peng-Jin	Singapore
Oksana M Drapkina	Russia	Charlie Millson	Canada	Sombat Treeprasertsuk	Thailand
James Fung Yan Yue	Hong Kong, China	G V Rao	United Kingdom	Vincent Wong Wai Sun	Hong Kong, China
Huang Yi-Hsiang	Taiwan	John Monson	USA	Justin Wu Che Yuan	Hong Kong, China

GUT 2017

11th - 13th August 2018, Penang

Roger Barton	Australia	Leung Wai Keung	Hong Kong, China	Ooi Choon-Jin	Singapore
Ajay Duseja	India	Lim Seng-Gee	Singapore	Gerhard Rogler	Switzerland
Lawrence Ho Khek Yu	Singapore	Govind K Makharia	India	Samir Shah	India
George Hopkins	Australia	Paul Moayyedi	Canada	Reuben Wong	Singapore
Rupert Leong	Australia	Simon Ng	Hong Kong, China		

MSGH ORATORS

NO	YEAR	ORATOR	TOPIC
1st	2001	**P Kandasami** Kuala Lumpur, Malaysia	Gastroenterology in Malaysia
2nd	2002	**Barry J Marshall** Perth, Australia	*Helicobacter pylori*: How It All Came About and Where Do We Go From Here?
3rd	2003	**Guido J Tytgat** Amsterdam, Netherlands	Future Developments in Gastroenterology
4th	2004	**Lam Shiu-Kum** Hong Kong, China	Pathogenesis of Gastric Cancer - A Unifying Concept
5th	2005	**Meinhard Classen** Munich, Germany	GI Cancer - The Global Burden in the New Millennium
6th	2006	**John Wong** Hong Kong, China	Multi-Disciplinary Treatment in Esophageal Cancer: The Price of Failure
7th	2007	**Norman Marcon** Toronto, Canada	New Optical Technologies for Early Detection of Dysplasia
8th	2008	**Sydney Chung** Hong Kong, China	Ulcer Bleeding: What You Really Want to Know
9th	2009	**Geoffrey Farrell** Canberra, Australia	Battling the Bulge in Asia - Implications for Gastroenterologists
10th	2010	**Nicholas J Talley** Newcastle, Australia	New Insights Into Aetiopathogenesis of Functional Dyspepsia
11th	2011	**Colm O'Morain** Dublin, Ireland	Colorectal Cancer - The Emerging Cancer in the 21st Century
12th	2012	**Richard Kozarek** Seattle, USA	Minimally Invasive Therapy in Gastroenterology. Where have We Been? Where are We Now? Where are We Going?
13th	2013	**Goh Khean Lee** Kuala Lumpur, Malaysia	Asia at the Crossroads - Changing Patterns and Emerging Diseases
14th	2014	**Patrick Kamath** Minnesota, USA	Insights Into Optimal Management of End Stage Liver Disease - A Continuing Challenge
15th	2015	**Kentaro Sugano** Tokyo, Japan	*Helicobacter pylori* and Gastric Cancer - A Balanced View
16th	2016	**Kenneth McColl** Glasgow, Scotland	*H. pylori* and the Pathophysiology of Gastroduodenal and Esophageal Disease
17th	2017	**Paul Moayyedi** Ontario, Canada	Population Screening and *H pylori* Eradication to Reduce the Incidence of Gastric Cancer

PANIR CHELVAM MEMORIAL LECTURERS

NO	YEAR	LECTURER	TOPIC
1st	2004	**Mohd Ismail Merican** Kuala Lumpur, Malaysia	Treatment of Chronic Viral Hepatitis in the Asia-Pacific Region: Realities and Practical Solutions
2nd	2005	**Peter Malfertheiner** Magdeburg, Germany	Diagnosis and Management of Pancreatic Cancer
3rd	2006	**Nageshwar Reddy** Hyderabad, India	GI Endoscopy in India - Development and Lessons for the Future
4th	2007	**Richard Hunt** Hamilton, Canada	Evidence-based Medicine in the Real World
5th	2008	**Pali Hungin** Durham, United Kingdom	Plausible Solutions for Impossible Problems
6th	2009	**Fock Kwong-Ming** Singapore	Lower GI Bleeding - Epidemiology and Management
7th	2010	**Joseph J Y Sung** Hong Kong, China	The Future Role of the Gastroenterologist in Digestive Oncology
8th	2011	**Kang Jin-Yong** London, United Kingdom	East-West Difference in Upper Gastrointestinal Disease
9th	2012	**Emad El-Omar** Aberdeen, United Kingdom	Role of Chronic Inflammation in GI Cancer
10th	2013	**Michael Kamm** Melbourne, Australia	Achieving the Balance between Drug Therapy and Surgery in Inflammatory Bowel Disease
11th	2014	**John A Windsor** Auckland, New Zealand	Progress with Acute Pancreatitis - Millstones and Milestones
12th	2015	**Yogesh Chawla** Jabalpur, India	Non Cirrhotic Portal Hypertension
13th	2016	**John Monson** Florida, USA	Colorectal Surgery - Less Invasive, More Effective?
14th	2017	**Lawrence Ho Khek Yu** Singapore	Latest Progress in Endoscopic Robot

CONGRESS INFORMATION

Congress Secretariat

GUT 2018
Unit 1.6, Level 1, Enterprise 3B, Technology Park Malaysia
Jalan Innovasi 1, Bukit Jalil, 57000 Kuala Lumpur, Wilayah Persekutuan
Tel: +603 8996 0700, 8996 1700, 8996 2700 **Fax:** +603 8996 4700
Email: secretariat@msgh.org.my **Website:** www.msgh.org.my

Congress Hotel

G Hotel Gurney, Penang
168A Persiaran Gurney, 10250 Penang, Malaysia
Tel: +604 238 0000 **Fax:** +604 238 0088
Email: rsvn.exec@ghotel.com.my **Website:** www.ghotel.com.my

Registration

The operating times are:

12th July 2018 (Thursday)	1600 to 1830 hrs
13th July 2018 (Friday)	0730 to 1900 hrs
14th July 2018 (Saturday)	0730 to 1900 hrs
15th July 2018 (Sunday)	0730 to 1100 hrs

Identity Badges

Delegates are kindly requested to wear identity badges during all sessions and functions.

Entitlements

Registered delegates will be entitled to the following:

- All Scientific Sessions
- All Satellite Symposia
- Conference Bag and Materials
- Coffee/Tea
- Lunches
- Admission to the Trade Exhibition

Meet-The-Expert Breakfast Sessions

Please obtain the vouchers to attend these sessions from the Congress Secretariat. The charge is RM30 per person per session.

Speakers and Presenters

All speakers and presenters are requested to check into the Speaker Ready Room at Salon II at least two hours prior to their presentation. There will be helpers on duty to assist with your requirements regarding your presentation.

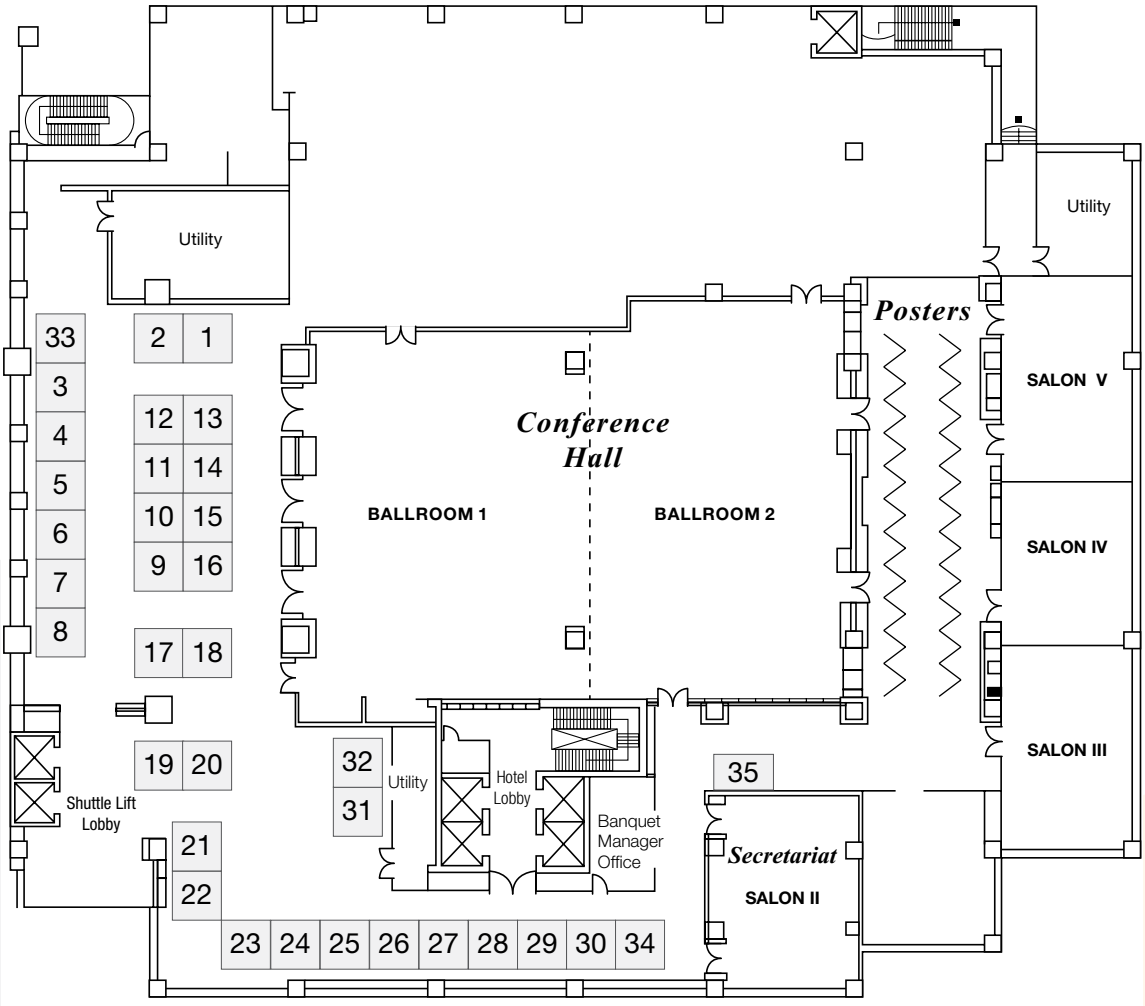
12th July 2018 (Thursday)	1600 to 1830 hrs
13th July 2018 (Friday)	0730 to 1900 hrs
14th July 2018 (Saturday)	0730 to 1900 hrs
15th July 2018 (Sunday)	0730 to 1100 hrs

All presentations will be deleted from the conference computers after the presentations are over.

DISCLAIMER

Whilst every attempt would be made to ensure that all aspects of the Conference as mentioned in this publication will take place as scheduled, the Organising Committee reserves the right to make last minute changes should the need arises.

FLOOR PLAN & TRADE EXHIBITION



BOOTH NO	COMPANY
1	Ranbaxy (Malaysia) Sdn Bhd
2	Digital Diagnostic Asia
3	PENTAX Medical (SYS Healthcare)
4	Clinical Research Malaysia
5 & 6	DKSH Malaysia Sdn Bhd
7	Servier Malaysia Sdn Bhd
8	Medi-Life (M) Sdn Bhd
9	Reckitt Benckiser (Malaysia) Sdn Bhd
10	EP Plus Group Sdn Bhd
11 & 14	Johnson & Johnson Medical Malaysia
12	Meditop Corporation (M) Sdn Bhd
13	Yakult (Malaysia) Sdn Bhd
15	Ferring Sdn Bhd

BOOTH NO	COMPANY
16	Olympus (Malaysia) Sdn Bhd
17 & 18	Takeda Malaysia Sdn Bhd
19 & 20	Meda Healthcare Sdn Bhd
21, 22, 23 & 24	Abbott Laboratories (M) Sdn Bhd
25, 26, & 27	DCH Auriga Sdn Bhd
28	MEDNOVA (Endosurgery Sdn Bhd)
29	Eisai Malaysia Sdn Bhd
30	Medic Pro Healthcare Sdn Bhd
31 & 32	Merck Sharp & Dohme
33	Fujifilm Malaysia Sdn Bhd
34	Jimhans Medical Sdn Bhd
35	Boston Scientific Malaysia Sdn Bhd

ACKNOWLEDGEMENTS

The Organising Committee of the GUT 2018
would like to express its appreciation to the following for their support and contributions:

Abbott Laboratories (M) Sdn Bhd

Boston Scientific Malaysia Sdn Bhd

Clinical Research Malaysia

DCH Auriga Sdn Bhd

DKSH Malaysia Sdn Bhd

Digital Diagnostic Asia

Eisai Malaysia Sdn Bhd

EP Plus Group Sdn Bhd

Ferring Sdn Bhd

Fujifilm Malaysia Sdn Bhd

Jimhans Medical Sdn Bhd

Johnson & Johnson Medical Malaysia

Meda Healthcare Sdn Bhd

Medic Pro Healthcare Sdn Bhd

MEDNOVA (Endosurgery Sdn Bhd)

Medi-Life (M) Sdn Bhd

Meditop Corporation (M) Sdn Bhd

Merck Sharp & Dohme

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Servier Malaysia Sdn Bhd

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STOPPING RULES - WHEN AND WHAT ARE THE RULES?

Jia Jidong
Liver Research Center, Beijing Friendship Hospital, Capital Medical University, Beijing, China

Universal infant vaccination against hepatitis B virus (HBV) has greatly decreased the prevalence of HBsAg in the general population in most part of the world. However, the huge pool of existing chronic HBV infection still poses an enormous disease burden in Asia and the Western Pacific region where inhabits most of the world's population who chronically infected with HBV. The primary goal of treatment is to prevent or halt disease progression to cirrhosis, decompensation and hepatocellular carcinoma by maximal and sustained viral suppression, thereby to improve survival and quality of life.

The preferred first line antiviral therapy for chronic hepatitis B (CHB) recommended by most international clinical practice guidelines include pegylated interferons (PEG-IFNs) or high potent/high genetic barrier nucleos(t)ide analogs (NAs) such as entecavir, tenofovir disoproxil fumarate (TDF) or tenofovir alafenamide (TAF). For both HBeAg-positive and HBeAg-negative CHB, a finite course of PEG-IFNs with fixed duration (usually 12 months) or early termination based on the response-guided therapy (stop the therapy if HBV DNA and/or HBsAg quantification fails to decline to a threshold at month 3 or 6) is recommended. For noncirrhotic patients with HBeAg positive CHB, most guidelines suggest that cessation of NA therapy could be stopped after completion of a 6-18 month consolidation in those who achieved HBeAg conversion. For patients with HBeAg-negative CHB or patients with HBV-related cirrhosis, most guidelines recommend an indefinite, possibly lifelong therapy.

In the past years, studies demonstrated that quantifications of HBsAg, HBcrAg or ant-HBc at the end of therapy could predict the relapse rate after stopping the NA therapy. More recently, measurement of serum HBVRNA which is a surrogate marker of HBV replication in hepatocytes could also predict the sustainability of viral suppression in NA-treated patients. However, well-designed, properly-conducted prospective studies with enough sample size are awaited before these novel markers could be used as stopping rules in day to day clinical practice.

HEPATORENAL SYNDROME: NEW UNDERSTANDING AND MANAGEMENT

James Fung
Queen Mary Hospital, The University of Hong Kong, Hong Kong

Hepatorenal syndrome (HRS) is a major complication of decompensated liver cirrhosis, with associated high mortality without liver transplantation. In recent years, the paradigm of HRS has shifted from that of a solely functional renal impairment secondary to hypoperfusion, to a more direct role involving increases in the levels of pro-inflammatory cytokines. This new theory implicates not only a circulatory component, but also the involvement of an inflammatory component in the pathophysiology of HRS. Acute kidney injury (AKI) is commonly seen in hospitalized cirrhotic patients, and HRS-AKI represents only one of many types of AKI, including pre-renal AKI, intrinsic AKI, and post-renal AKI. The diagnosis of HRS requires the exclusion of these other causes of AKI, which is often difficult in the absence of reliable renal biomarkers. The use of vasoconstrictive drugs together with albumin remains the cornerstone of HRS management to improve renal perfusion and to reverse the splanchnic vasodilatation. The use of renal replacement therapy should be individualized according to the disease severity and whether it fulfills the indication for dialysis treatment. Liver transplantation continues to be the definitive therapeutic option for patients with HRS.

Research Symposium

WRITING FOR JOURNALS

Henry L Y Chan
The Chinese University of Hong Kong, Hong Kong

This talk will focus on various tips of journal paper writing, from title of the paper to discussion. Authorship criteria as recommended by International Committee of Medical Journal Editors (ICMJE) will also be presented.

Meet-The-Expert Breakfast Session

USING DOUBLE BALLOON ENTEROSCOPY IN THE CLINICAL PRACTICE OF CROHN'S DISEASE

Keijiro Sunada
Jichi Medical University, Japan

Double balloon endoscopy (DBE) enables precise observation of small intestine and allows better differential diagnosis between Crohn's disease (CD) and other inflammatory diseases. Nowadays, improvement of mucosal lesions so-called "mucosal healing"(MH) is considered as the major goal for the treatment of CD. Achievement of MH can lead to a better long-term outcome. Crohn's disease activity index (CDAI) as well as biochemistry tests do not necessarily show the real activity of CD. Thus, we highly recommend deciding the treatment strategy depending on the findings of routine DBE observation.

CD associated stricture is a serious complication, which affects patient outcome and may require multiple small intestinal resections, resulting in short bowel syndrome and malnutrition. Using DBE, endoscopic balloon dilation (EBD) can be performed as a minimally invasive therapy for intestinal strictures in patients with CD. In our study, the overall surgery-free rate at 3 years after initial EBD was 78.1% (N=85). Actual methods of EBD with calibrated small-caliber-tip transparent hood will be also described in this lecture.

Before surgery, we can tattoo the stricture or the severely inflamed site using DBE, making it easier for surgeons to recognize the target site. Also, it helps to estimate the remaining length of the small intestine before surgery. The combination of EBD and surgical resection is a highly effective treatment to preserve the length of small intestine.

In sum, DBE is a beneficial and very much applicable approach in the clinical practice of CD.

WHO DO I REFER FOR LIVER TRANSPLANTATION IN 2018?

James Fung
Queen Mary Hospital, The University of Hong Kong, Hong Kong

Liver transplantation (LT) remains a life-saving and curative procedure for those with complications of cirrhosis, including decompensation and hepatocellular carcinoma (HCC). Other indications include congenital, metabolic, and vascular diseases, and acute/fulminant liver failure. Although the indication for LT has been well established for a long time, there have been recent changes in the disease spectrum being transplanted, likely due to the effects of highly effective antiviral therapy for chronic hepatitis B/C. Various different criteria exist to determine the eligibility for LT for different conditions, such as that for acute liver failure and HCC. Although the underlying liver condition may be an indication for LT, not all patients are suitable, and there are a number of absolute and relative contraindications which must be considered. Some of these may be correctable, and therefore should be discussed with the LT center if in doubt. Assessment of potential LT recipient (and donors) is intensive; therefore timely referral to a LT center is essential.

MOLECULAR CHARACTERISATION OF COLORECTAL CANCER: A NEW UPDATE

Norfilza Mohd Mokhtar
Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia

There is a shift in the treatment of colorectal cancer to a more precision-based approach is based on molecular biomarkers. The clinical needs for biomarker ranges from predictive biomarkers to diagnostic to prognostic. Mutational status in *BRAF, KRAS* and p53 were among the earliest genes to classify colorectal cancer. Patients with same clinico-pathological staging may have different gene mutations resulting in diverse clinical outcomes and harder to treat. The practical utilization of molecular markers such as *KRAS* mutation at exon 2 among metastatic colorectal cancer is closely linked with resistance to anti-EGFR therapies. Microsatellite instability, a marker for defective DNA mismatch repair system could classify colorectal cancer patients who will benefit from chemotherapy. Colorectal cancer could be classified based on the promoter DNA methylation profile, which is epigenetic rather than genomics. A high level of cytosine-phosphate-guanine-island-methylator-phenotype was closely related with mucinous type. Using a wide range of cutting-edge omics technologies and the newest era, next generation sequencing has discovered not only the major contributors to tumorigenesis such as *APC, KRAS, TP53, PI3KCA* and *SMAD4* as well as other clinically relevant biomarkers. In addition, comprehensive information from The Cancer Genome Atlas project has suggested the sequential mutations in driver genes as well as passenger genes contribute to the progression of the tumour. In the near future, with current enhancements in genomic medicine, there is a great amount of discovery research including new genomic variants that can be used as part of the standard of care in maximising health benefits while minimising harm to individuals.

COLORECTAL CANCER SCREENING: CAN WE DO BETTER OR MORE?

Ooi Choon Jin
Gleneagles Medical Centre and Duke-NUS Medical School, Singapore

Many barriers exist in our society and health care system that prohinits satisfactory colorectal screening.

These include cost, environment, lack of access to healthcare system, organised or opportunistic screening, provider, psychology as well as inadequate knowledge or awareness of CRC. Negative attitudes towards screening and fear of CRC may alos play a part. Multi-pronged systematic approach need to be undertaken by many stakeholders to address this. Many non invasive screening tests exist. However, colonoscopy represents one of the most important diagnostic modality for screening.

It is, therefore, essential to optimise the quality and effectiveness of colonoscopy. Bowel preparation is important for accurate diagnosis and subsequent treatment of lesions found on colonoscopy. The quality of bowel preparation could be significantly improved by splitting the dose regimens. This has been deemed superior to single-dose regimen. A good endoscopic technique and optimal withdrawal time offering adequate time for inspection. Recently, new devices have been introduced that would further facilitate caecal intubation.

OPTIMIZING OUTCOME OF COLORECTAL CANCER - ONCOLOGIST PERSPECTIVE

John Low Seng Hooi
Sunway Medical Centre, Selangor, Malaysia

Colorectal cancer is the most prevalent cancer in males and the second on the list for females in Malaysia. Lifestyle changes and westernization of our diet are the main contributors to the increasing incidence in this disease. The continued optimization of care and improvement of patients' outcome will require the combined effort of a multidisciplinary team approach from our laboratory colleagues, clinicians from both surgical and medical disciplines and all other supporting allied medical services. The importance of team work cannot be overemphasized.

With further understanding of the molecular basis of Colorectal Cancer give rise to novel targets and new drugs to fight colorectal cancers. Rationale and carefully designed clinical studies with worldwide collaboration allows rapid transition from laboratory breakthroughs to bedside application. Centers with a multidisciplinary team will allow the selection of the optimal care for each individual patient. Early involvement of the palliative care team and other allied medical services in end-stage disease enhance the quality of life and dignity of each patient.

There remain unresolved and difficult issues like increasing healthcare cost and the financial burden for the patient and family especially in the metastatic setting. Patient education and early detection with screening should be actively promoted to allow early detection to increase the chance of cure.

TREATMENT OPTIONS FOR COMPLICATED HEPATITIS C

Jia Jidong
Liver Research Center, Beijing Friendship Hospital, Capital Medical University, Beijing, China

Hepatitis C viral (HCV) infection is a significant public health concern and there is no effective vaccination to prevent the HCV infection. Fortunately, highly efficacious and well tolerated interferon-free regimens of direct acting anti-viral (DAA) therapy have become new standard of care in many part of the world with either originator in generic medications.

Currently, 3 major categories of DAAs including NS3/4 proteinase inhibitors (-previrs), NS5 A inhibitors (-asvirs) and NS5B inhibitors (-buvirs) are available for HCV. In general, nucleoside NS5B inhibitors such as sofosbuvir do not experience extensive hepatic metabolism by cytochrome P450 system and excrete mainly through kidney, whereas proteinase inhibitors are mainly metabolized in the liver by cytochrome P450 system.

Cirrhosis, which was an important unfavorable factors in the era of interferon/ribavirin or the first generation of DAAs, is generally not a big issue today. However, for patients with decompensated cirrhosis, sofosbuvir/velpatasvir or sofobuvir/ledipasvir is preferred, whereas for patients with renal insufficiency glecaprevir/pibrentasvir (GP) or grazoprevir/elbasvir (GE) or ombitasvir paritaprevir/ritonavir/dasabuvir (3D) regimes are preferred. Drug-drug interaction (DDI) between DDAs and other medications should be considered with special cautions to void concurrent use of amiodarone which may result in severe arrhythmia. For patients after liver transplantation, sofosbuvir-based regimens are preferred due to their much less concern of DDI. Finally, when DDAs are used to treat patients co-infected with HBV, HBV DNA should be closing monitored for possible HBV reactivation.

SMALL LIVER CANCERS: ABLATE OR CUT?

Razman Jarmin
Hospital Canselor Tuanku Mukhriz, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

Liver cancers used to be considered a universally fatal disease. Today, however, with the advancements of technology and imaging facilities, more patients who are at risk can be identified early, hence the detection of small liver lesion is made possible. The surveillance strategy of patients with underlying primary cancers lesion could also increase the chances of detecting smaller liver lesions.

The treatment modalities for the liver lesions were also variables and highly effective. These include ablations either by energy based technology or chemically induces. The embolization technology and surgical approaches which included open and laparoscopic surgery has also been enhances in recent years. The availabilities of the treatment modalities have also given new challenges to the care providers particularly in delivering the optimal treatment strategies.

The presentation will discuss the optimal management strategies for small liver lesions based on the current evidence. The options of management should be based on the behavior of the liver cancers, the anatomical locations, the short and long term outcomes and the patients well being. Although the options available hold great promise for the future in the management of small liver lesions, appropriate selection of the treatment modalities should be the best approach in delivering the optimal outcome.

HCC: DO YOU TACE OR TARE?

Norshazriman Sulaiman
University Malaya Medical Centre, Kuala Lumpur, Malaysia

Hepatocellular carcinoma is one of the most common cancers in Malaysia. Traditional risk factors would be HBV and HCV infections. However, risk factors like alcohol induced cirrhosis and NAFLD is becoming more prevalent. Good screening programs have enabled us to detect and treat HCC at its early stages. However, the incidence of intermediate and late stage HCC at presentation is unfortunately not uncommon. These patients presents a management dilemma to the attending physician. A multidisciplinary consensus is now the best approach with international guidelines advocating management beyond conventional drug therapy. For intermediate to advance HCCs, intra-arterial therapies are recommended with trans-arterial chemoembolization (TACE) being the traditional treatment of choice. This treatment involves administering chemotherapy mixed with ethiodized oil or loading chemotherapy onto microbeads. Another emerging treatment is trans-arterial radioembolization (TARE) using Y-90 beads. While initially used in advanced stage HCC, there is increasing evidence that TARE could also benefit intermediate and early HCC patients. However, several factors need to be considered before giving TARE as an option to a patient's management. Understanding both TACE and TARE will give the attending physician a more complete approach in the management of intermediate and advanced HCC.

CURRENT STATE OF LIVER TRANSPLANTATION IN HEPATOCELLULAR CARCINOMA

Alfred Kow Wei Chieh
National University Hospital Singapore, Singapore

Since the beginning when Thomas Starzl successfully experimented on animals and performed liver transplantation on human beings in the 1960s, the techniques of liver transplantation have matured to the current state. While the medical community used to frown upon using liver transplantation as treatment for HCC, LT has been proven to be one of the best treatment modalities for HCC since the 1990s.

Well selected patients with HCC ***MUST*** be offered liver transplantation as an option as it has excellent long term survival, in many occasion, better than liver resection alone. The challenge of offering this ideal to patients in HCC clearly comes from availability of the liver grafts as well as the technical skills and knowledge of the team in managing liver transplantation. In patients with chronic liver disease and HCC, liver transplantation offers the liberation of 'killing two birds with one stone' as it removes the tumour and also the poor quality liver parenchyma and replaces a new one without both problems.

Currently, the two major types of liver transplantation include deceased donor liver transplantation (DDLT) and living donor liver transplantation (LDLT). While the former is more commonly done in the west due to higher brain death organ donotion rate, LDLT is more developed in the Asian centers in Japan, Korea, Hong Kong, Taiwan and Singapore. The consideration of offering LT to patients with HCC in DDLT and LDLT is slightly different due to the utilisation of public organ resource which is based on fairness. In our center at the National University Center for Organ Transplantation (NUCOT) at NUH, 50% of our liver transplant cases are patients with HCC with 60% of our cases being LDLT. The long term outcomes of these patients are very good with the 5 year survival of 73%.

Liver transplantation is clearly a multidisciplinary team management of a complex condition, involving HPB surgeons, hepatologists, anaesthetists, transplant coordinators, social workers, pharmacists and other physicians. Leading a successful liver transplant program requires a concerted effort to ensure that all the parties involved provide the most excellent care for patients with HCC needing LT.

LECTURE 4

INNOVATIONS IN ENDOSCOPY SCREENING FOR COLORECTAL CANCER

Keijiro Sunada
Jichi Medical University, Japan

Recently, image enhanced endoscopy (IEE) technologies have become more important in colorectal tumor detection and characterization.

Fujifilm Corporation (Tokyo, Japan) has developed novel IEE technologies, Linked Color Imaging (LCI) and Blue Laser Imaging (BLI). These endoscopic technologies use narrowband short wavelength light. BLI focuses on the characteristics of short wavelength absorption of hemoglobin (at 410nm) combined with specific white light spectral colors, resulting in improved and accurate contrast imaging. LCI differentiates the red color spectrum more effectively than white light imaging (WLI) thanks to its optimal pre-process composition of light spectrum and advanced signal processing.

Features of the LCI system are brightness and differences in hue, especially in the red color spectrum. These advantages of LCI enable easier detection of small polyps or flat tumors, such as SSA/P and LST-NG compared to WLI.

On the other hand, the BLI mode provides high contrast signals to obtain information regarding capillaries on the mucosal surface, slight mucosal irregularities, and deep blood vessels. Therefore, similar to NBI, BLI with magnification makes it easier to characterize colorectal tumors. The BLI-bright mode has sufficient light with narrowband blue light to obtain a brighter view. These IEE modes can be instantly changed using a button on the endoscope handle.

In this lecture, I will show the actual use of LCI and BLI, and introduce some of the recently published clinical studies related to LCI and BLI.

Tea Satellite Symposium *(Mylan)*

MY APPROACH TO CHRONIC HEPATITIS B IN 2018 AND BEYOND

Henry L Y Chan
The Chinese University of Hong Kong, Hong Kong

To prevent complications of chronic hepatitis B including hepatocellular carcinoma, antiviral treatment should be started when there is evidence of inflammation, viraemia and cirrhosis. In case of need, liver fibrosis should be assessed by either liver biopsy or other non-invasive methods such as Fibroscan. On the other hand, patients in immune tolerance phase and inactive phases should be observed.

Entecavir and tenofovir are the recommended first line antiviral therapies due to their high antiviral potency and low risk of drug resistance. The estimated annual incidence of HCC is significantly reduced among entecavir-treated patients as compared to historic untreated controls in a few studies in Taiwan, Hong Kong and Japan. Most benefit is seen among patients with liver cirrhosis. Complete viral suppression is associated with better HCC prevention. Approximately 20% of entecavir treated patients cannot have complete viral suppression at 3 years. There is no evidence that combination therapy can improve viral suppression among incomplete responders.

As antiviral therapy cannot clear cccDNA inside the liver, most patients require long-term antiviral therapy. This poses a challenge to drug adherence and safety, particularly renal and bone safety for tenofovir disoproxil fumarate. The introduction of tenofovir alafenamide is a solution. HBsAg seroclearance is an acceptable timing to stop antiviral therapy, but it rarely develops in Asian patients. HBV DNA suppression alone is an insufficient condition to avoid viral relapse after stopping treatment. Approximately 90% of HBeAg negative patients will have viral relapse and 50% have clinical relapse after stopping antiviral treatment according to the APASL criteria.

DIET AND THE GUT: PEARLS FROM WGO GUIDELINE

Peter Gibson
Monash University and Alfred Health, Melbourne, Australia

Despite the influence the food we choose to eat has on the function of the gut and its microbiota, and the almost intense interest by patients in using food choice to manipulate their gut symptoms, understanding food and diet receives relative little attention in medical training or clinical practice. The WGO recognised this deficiency and commissioned the writing of guidelines on selective topics where diet has established causative or therapeutic role in adults. A multidisciplinary team worked on gaining consensus regarding clinical practice recommendations regarding the use of gluten-free diet and manipulation of carbohydrates mainly in the setting of chronic gastrointestinal symptoms.

Some of the key points were:

- Dietary fibre is one of the most manipulated dietary components, yet it is the most misunderstood and poorly studied. The major reason is that little account has been taken of the heterogeneity of fibre. Even the definition of fibre across the world is heterogeneous. Understanding the different functional capabilities of specific fibre types is essential in the use of fibre manipulation therapeutically.
- The low FODMAP diet is a dietitian-delivered diet with a moderate degree of evidence for efficacy in patients with IBS. Its efficacy when taught via written material only, as might be applicable in countries where dietetic expertise is not readily available, has not been evaluated.
- Specific carbohydrate intolerances sit within the FODMAP spectrum and remain controversial topics, full of issues around definition, interpretation of investigations and therapeutic intervention. Lactose malabsorption is common across the world and associated intolerance has clear therapeutic approaches. Fructose malabsorption is likewise a normal phenomenon, not a 'diagnosis', and there is limited value in breath testing. It should be viewed within the framework of the low FODMAP diet. A role for sucrase-isomaltase deficiency in the genesis of symptoms in a very small proportion of adult patients with IBS (rendering sucrose and starch oligosaccharides as FODMAPs in some) has been suggested, but methods of diagnosis and therapeutic approaches are currently under evaluation.
- Gluten-free diet has little in the way of quality evidence for or against its value in patients with IBS, but is commonly applied. Syndromes such as non-coeliac gluten sensitivity remain controversial with emotive thoughts and circular arguments being commonplace.
- Other dietary approaches purported to identify food intolerances, often via poorly validated laboratory tests of bodily fluids, are characterised by commercial hype and a minimum of science, and cannot be recommended.

Thus, the guidelines are designed to provide not only guidance, but also insight into some of the controversies and uncertainties.

THE SCIENCE BEHIND OBESITY - THE ROLE OF LIVER

Dan Yock Young
University Medicine Cluster, National University of Singapore, Singapore

Obesity has become a global epidemic with an estimated 30% of adults and 47% of children worldwide being overweight. It is characterized by high body mass index and together with increased abdominal circumference, is part of the metabolic manifestation which defines a subset of patients with high risk of developing metabolic complications.

Advances in the field in the last 20 years have changed the way we imagined obesity as a simple thermodynamic over-nutrition problem in those genetically predisposed.. While the underlying insulin resistance is still hotly debated as a cause or effect phenomena, what is now accepted is that obesity is a low grade chronic inflammatory condition of the adipose tissue and liver. Understanding of the gut-liver axis has also highlighted the complex regulation between the microbiome in the gut, innate immunity system and the metabolic dysregulation in the adipose tissue and liver. Dysregulation of this complex interacting system is central to the development of insulin resistance and is closely associated with manifestation of obesity and fatty liver disease.

Microbiome dysbiosis in obese patients drive short chain fatty acids such as butyrate which play an important role in mitochondria ATP production in colonocytes as well as fatty acid oxidation in the liver. Besides sheer increase in calories intake, gut dysbiosis result in disruption of gastrointestinal tight junction with resultant increased in gut permeability to bacterial lipopolysaccharide. This “endotoxaemia” in turn triggers the innate immune system via TLR4 in the liver and fat with upregulation of pro-inflammatory cytokines resulting in persistent low grade chronic inflammation. This inflammation is now believed to drive obesity, insulin resistance and account for the complication of large and small vessels as well as the liver, accounting for the higher incidence of cardiovascular and cerebrovascular disease as well as non-alcoholic steatohepatitis.

NON-ALCOHOLIC FATTY LIVER DISEASE - A RAPIDLY EMERGING DISEASE IN THE ASIA PACIFIC

Henry L Y Chan
The Chinese University of Hong Kong, Hong Kong

Approximately 25% of the world population is suffering from non-alcoholic fatty liver disease (NAFLD), which is an increasingly important etiology for hepatocellular carcinoma (HCC) in the western world. Liver fibrosis has been identified as the single most important risk factor for NAFLD-related mortality, but only a small proportion of NAFLD have advanced fibrosis. A few Asian cohorts have shown that NAFLD-related HCC developed in approximately 0.25% - 0.65% in 4-5 years. One peculiar feature of NAFLD-related HCC is that >30% of patients do not have liver cirrhosis at the time of presentation.

As fatty liver is too common and HCC is rare, identification of high risk patients for surveillance is needed. Older age, high AST, low platelet and diabetes have been found to be risk factors associated with NAFLD-associated HCC. Among diabetic patients, the risk of advanced fibrosis is higher among patients with higher body mass index. At present, diabetes and advanced liver fibrosis can be factors used to stratify patient risk for HCC surveillance. More research on risk stratification and HCC biomarkers is needed in the future.

CURRENT THERAPIES - WHAT HAS PROMISE? WHAT DOES NOT?

Chan Wah Kheong
University Malaya Medical Centre, Kuala Lumpur, Malaysia

Non-alcoholic fatty liver disease (NAFLD) is considered the liver manifestation of the metabolic syndrome. Patients with NAFLD are at increased risk of cardiovascular disease, which is the leading cause of mortality. Non-alcoholic steatohepatitis (NASH), the more severe form of NAFLD, can progress to cirrhosis, and is associated with an increased mortality from liver-related complications. Treatment should target not only the liver but also the metabolic syndrome, and should be safe, affordable and acceptable. Weight loss ≥10% through lifestyle modification can lead to NASH resolution and fibrosis improvement but is not achievable in the majority of patients. Vitamin E and pioglitazone have been shown to reduce steatosis, inflammation and ballooning, but not fibrosis, and safety concerns have limited their use. In a small study on overweight patients with NASH, the glucagon-like peptide-1 analogue, liraglutide, led to greater resolution of NASH and less fibrosis progression compared with placebo. Empagliflozin, a sodium-glucose co-transporter-2 inhibitor, showed promising results in a single-arm, open-label pilot study, and has the advantage of proven metabolic benefits. Silymarin, derived from the milk thistle plant *Silybum marianum*, resulted in a significantly higher percentage of fibrosis improvement in patients with biopsy-proven NASH compared with placebo, and appeared to be safe and well-tolerated. Bariatric surgery has been shown to result in NASH resolution and fibrosis improvement in morbidly obese biopsy-proven NASH patients but the procedure carries risk of complications and is not an option for many. Endoscopic sleeve gastroplasty is a safe and effective procedure for the treatment of obese patients with the metabolic syndrome who do not respond optimally to medical therapy but at the same time do not fulfil the criteria for more invasive bariatric surgery. More studies are needed to optimize the treatment of NAFLD patients.

Best Paper Award Presentations

1 COMPARING SHEAR WAVE ELASTOGRAPHY AND TRANSIENT ELASTOGRAPHY FOR THE DIAGNOSIS OF FIBROSIS STAGE IN PATIENTS WITH NON-ALCOHOLIC FATTY LIVER DISEASE USING LIVER BIOPSY AS THE REFERENCE STANDARD 43

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[1]Department of Biomedical Imaging, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia
[2]Gastroenterology and Hepatology Unit, Department of Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia
[3]Department of Pathology, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia

2 THE IMPACT OF PATIENT EDUCATION PROGRAMME ON QUALITY OF BOWEL PREPARATION FOR COLONOSCOPY: A RANDOMIZED CONTROL TRIAL 44

Sivakami J[1], Lim W L[1], Tay C Y[1], Lee J M[1], Khiew C H[1], Chew C K[2], Zakry O Y[3], Irina I[3], Razali I[3]

[1]Department of Pharmacy, Hospital Kuala Lumpur, Kuala Lumpur, Malaysia
[2]National Clinical Research Centre, Hospital Kuala Lumpur, Kuala Lumpur, Malaysia
[3]Department of Surgery, Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

3 DIET AND OBESITY RATHER THAN ETHNICITY ARE THE DETERMINANTS OF GUT MICROBIOTA COMPOSITION OF PRIMARY SCHOOL CHILDREN IN KOTA BHARU 45

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[1]School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia
[2]School of Industrial Technology, Universiti Sains Malaysia, Penang, Malaysia
[3]Gastroenterology Unit, Faculty of Medicine, Universiti Teknologi MARA, Sungai Buloh, Selangor, Malaysia
[4]Department of Microbiology & Immunology, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

4 EFFECT OF LACTOBACILLUS-CONTAINING MILK DRINK ON INTESTINAL DYSBIOSIS OF PATIENTS WITH CONSTIPATION-PREDOMINANT IRRITABLE BOWEL SYNDROME (IBS-C) 46

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[1]Gastroenterology Unit, Department of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia
[2]Department of Physiology, Faculty of Medicine, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia

5 PROBIOTIC EFFECTS ON CLINICAL AND CIRCULATING INFLAMMATORY CYTOKINES STATUS IN PATIENTS WITH COLORECTAL CANCER: A RANDOMISED DOUBLE BLIND CONTROLLED CLINICAL TRIAL 47

Liyana Zaharuddin[1], Norfilza Mohd Mokhtar[1], Raja Affendi Raja Ali[2]

[1]Department of Physiology, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia
[2]Gastroenterology Unit, Department of Medicine, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

COMPARING SHEAR WAVE ELASTOGRAPHY AND TRANSIENT ELASTOGRAPHY FOR THE DIAGNOSIS OF FIBROSIS STAGE IN PATIENTS WITH NON-ALCOHOLIC FATTY LIVER DISEASE USING LIVER BIOPSY AS THE REFERENCE STANDARD

Wai Ling Leong[1], Lee Lee Lai[2], Nik Raihan Nik Mustapha[3], Anushya Vijayananthan[1], Kartini Rahmat[1], Sanjiv Mahadeva[2], Wah-Kheong Chan[2]

[1]Department of Biomedical Imaging, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia
[2]Gastroenterology and Hepatology Unit, Department of Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia
[3]Department of Pathology, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia

BACKGROUND AND AIM

Shear wave elastography (SWE) and transient elastography (TE) using Fibroscan are non-invasive methods to diagnose fibrosis stage in patients with chronic liver disease. We aimed to compare the accuracy of the two methods for the diagnosis of fibrosis stage in patients with non-alcoholic fatty liver disease (NAFLD).

METHODS

Consecutive NAFLD patients who underwent liver biopsy were enrolled in this study. The patients had SWE and TE on the same day. Histopathological examination of the liver biopsy specimen was performed by a single expert pathologist who was blinded to clinical data and reported according to the Non-alcoholic Steatohepatitis Clinical Research Network scoring system. Area under receiver operating characteristic curve (AUROC) was used to evaluate the diagnostic accuracy of SWE and TE.

RESULTS

103 NAFLD patients (mean age 57.1±10.1 years, male 44.2%, 91.3% obese, 95.2% centrally obese) underwent liver biopsy during the study period giving a total of 412 SWE and TE examinations. The distribution of fibrosis stages was as follows: F0, 16.3%; F1, 41.7%; F2, 9.0%; F3, 28.9%; F4, 4.0 %. The median (IQR) of SWE for F0, F1, F2, F3 and F4 was 5.5 (3.9-6.8) kPa, 7.0 (5.6-8.8) kPa, 8.9 (6.9-10.9) kPa, 8.2 (6.6-10.4) kPa and 11.8 (7.7-17.4) kPa respectively. The median (IQR) of TE for F0, F1, F2, F3 and F4 was 6.0 (5.3-7.5) kPa, 9.1 (7.1-11.4) kPa, 10.6 (8.7-18.5) kPa, 12.8 (10.3-17.1) kPa and 18.5 (14.4-22.3) kPa, respectively. The AUROC of SWE and TE for the diagnosis of fibrosis stages ≥F1, ≥F2, ≥F3 and F4 are shown in Table 1.

CONCLUSION

TE was good for the diagnosis of all fibrosis stages while SWE was fair for diagnosis of ≥F1, ≥F2 and F4, but poor for diagnosis of ≥F3. TE was significantly better compared with SWE for diagnosis of ≥F1, ≥F2 and ≥F3.

	≥F1	≥F2	≥F3	F4
TE AUROC (95% CI)	0.88 (0.85 - 0.91)	0.81 (0.77 - 0.85)	0.81 (0.77 - 0.85)	0.87 (0.83 - 0.90)
SWE AUROC (95% CI)	0.78 (0.73 - 0.82)	0.70 (0.65 - 0.75)	0.67 (0.62 - 0.71)	0.75 (0.71 - 0.80)
p for comparison of AUROC of TE and SWE	0.0013	<0.0001	<0.0001	0.1681

THE IMPACT OF PATIENT EDUCATION PROGRAMME ON QUALITY OF BOWEL PREPARATION FOR COLONOSCOPY: A RANDOMIZED CONTROL TRIAL

Sivakami J[1], Lim W L[1], Tay C Y[1], Lee J M[1], Khiew C H[1], Chew C K[2], Zakry O Y[3], Irina I[3], Razali I[3]

[1]Department of Pharmacy, Hospital Kuala Lumpur, Kuala Lumpur, Malaysia
[2]National Clinical Research Centre, Hospital Kuala Lumpur, Kuala Lumpur, Malaysia
[3]Department of Surgery, Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

INTRODUCTION

Inadequate bowel preparation prior to colonoscopy leads to poor quality of visualization. It can be improvised by patient education programme.

OBJECTIVE

The main objective was to evaluate the impact of patient education programme on quality of bowel preparation. Secondary endpoint was to assess patient's compliance, acceptability and tolerability towards the preparation.

METHODS

An analysis of observer-blinded, prospective, randomized, controlled trial was conducted in an out-patient surgical clinic of a tertiary referral center. 312 subjects were randomly assigned to a standard written and verbal instructions for colonoscopy or an intensive, structured and comprehensive education programme group, which includes provision of a validated booklet on drug regimen, clear illustration on dietary modification and drug therapy interruption. Concealed randomization were performed using opaque envelope. Subjects completed a questionnaire after the intervention to evaluate their compliance, acceptability and tolerability towards bowel preparation.

RESULTS

Data on 300 patients was analyzed. Demographic characteristics were similar between both groups. The proportion of good bowel preparation quality in interventional group (98.7%) was significantly ($p<0.001$) higher than control arm (52.3%). The median total BBPS score for interventional group (8) was significantly greater than the control group (5) with p-value=0.001. Subjects in the interventional group demonstrated significantly higher compliance (96.6% vs 85.4%, $p<0.001$), acceptability (89.3% vs 33.1%, $p<0.001$), tolerability (85.9% vs 19.2%, $p<0.001$) to bowel preparation regime as compared to the control group. Multivariable analysis revealed that variable of intervention group (OR: 22.8, $p<0.001$, 95% CI: 4.22-122.85), compliance to medication (OR: 25.0, p=0.002, 95% CI: 3.12-199.71), acceptability of preparation, very difficult (OR: 0.11, $p<0.001$, 95% CI 0.03-0.38) and tolerability (OR: 4.98, p=0.011, 95% CI: 1.44-17.20) were significantly related to good quality of bowel preparation.

CONCLUSION

Our study showed the superior effect of educational intervention to a standard intervention on quality of bowel preparation.

KEYWORDS

bowel preparation, patient education, colonoscopy

DIET AND OBESITY RATHER THAN ETHNICITY ARE THE DETERMINANTS OF GUT MICROBIOTA COMPOSITION OF PRIMARY SCHOOL CHILDREN IN KOTA BHARU

Nur Amalina Muhammad[1], Noorizan Hj Abd Majid[1], Mung Seong Wong[1], Nazri Mustaffa[1], Yeong Yeh Lee[1], Min Tze Liong[2], Thevaraajan Jayaraman[3], Wei Wei Thwe Khine[4], Yuan Kun Lee[4]

[1]School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia
[2]School of Industrial Technology, Universiti Sains Malaysia, Penang, Malaysia
[3]Gastroenterology Unit, Faculty of Medicine, Universiti Teknologi MARA, Sungai Buloh, Selangor, Malaysia
[4]Department of Microbiology & Immunology, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

BACKGROUND

Little is known about dominant gut enterotypes in Asia especially among primary school children in Malaysia. It is also of interest to investigate the influence of ethnicity, obesity and diet as determinants of gut enterotypes of this population.

METHODS

The composition of gut microbial community among primary school children in Kota Bharu was examined for association with ethnicity, diet and body mass index (BMI). In addition to food frequency questionnaire and measurement of BMI, fecal samples from this population were subjected to meta-genomic sequencing analysis.

RESULTS

The 16S Ribosomal Ribonucleic Acid (rRNA) sequencing of fecal samples from children aged 7-11 years old (n=81, Malays 44.4%, males 54.3%) revealed that the most abundant gut microbiota were the two enterotypes, Bacteroides (B-type) 23% and Prevotella (P-type) 22%. Both enterotypes were significantly associated with being overweight and obesity (all $P<0.01$) but not with ethnicity (all $P=0.5$). B-type enterotype was associated with increased intake of chicken and fish (all $P<0.04$ respectively), whereas P-type enterotype was associated with increased intake of fruit, milk product, seafood, seasoning/flavourings and beverages (all $P<0.03$).

CONCLUSION

Rather than ethnicity (genetic ancestry), obesity and diet are the more important determinants of gut microbiota composition of a population.

EFFECT OF LACTOBACILLUS-CONTAINING MILK DRINK ON INTESTINAL DYSBIOSIS OF PATIENTS WITH CONSTIPATION-PREDOMINANT IRRITABLE BOWEL SYNDROME (IBS-C)

Norhayati Md Jaafar[1], Wong Zhiqin[1], Ngiu Chai Soon[1], Norshafila Diana Mohd Rathi[2], Norfilza Mohd Mokhtar[2], Raja Affendi Raja Ali[1]

[1]Gastroenterology Unit, Department of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

[2]Department of Physiology, Faculty of Medicine, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia

BACKGROUND

Disequilibrium in bacterial diversity and composition has been directed to play a role in the pathophysiology of irritable bowel syndrome (IBS). Therapeutic modulation of intestinal microbiota using probiotic showed promising result based on a few of previous studies. This study aimed to investigate the effects of *Lactobacillus*-containing milk drink on clinical symptoms, fecal pH, intestinal transit time (ITT) and circulating cytokines in constipation predominant irritable bowel syndrome (IBS-C) as compared to non-IBS-C participants.

METHODS

IBS-C was diagnosed based on Rome III criteria. Both IBS-C and non-IBS-C participants were each given 125 mL cultured milk drink containing 10^9 cfu *Lactobacillus acidophilus* and *Lactobacillus paracasei* to be consumed daily for 30 days. Fecal pH, ITT, clinical symptoms and serum IL-6, IL-8, TNF-α were assessed at pre and post 30-day consumption.

RESULTS

165 participants were enrolled, in which 77 IBS-C with 88 non IBS-C with median age of 29.71±8.79 and 29.27±7.64 years old respectively. Post 30-day consumption, 97.4% of IBS-C participants experienced improvement in constipation-related symptoms, fecal pH was significantly reduced from 6.13±0.57 to 5.94±0.37 ($p<0.05$). ITT showed significant improvement in IBS-C and non IBS-C from 45.82±28.89 to 30.64±20.07 hours and 15.73±9.28 to 10.82±5.34 hours respectively ($p<0.05$). The level of IL-6 was significantly lower in post as compared to pre-consumption of cultured milk drink in IBS-C group ($p<0.05$). For IL-8 and TNF-α, the levels were reduced post-consumption as compared to the pre-consumption in both IBS-C and non IBS-C groups ($p<0.05$).

CONCLUSIONS

Modulation of intestinal microbiota by daily consumption of cultured milk drink improved constipation-related symptoms, reduced fecal pH, intestinal transit time and pro-inflammatory cytokines among IBS-C patients. This could be a treatment option for individuals with constipation predominant irritable bowel syndrome.

PROBIOTIC EFFECTS ON CLINICAL AND CIRCULATING INFLAMMATORY CYTOKINES STATUS IN PATIENTS WITH COLORECTAL CANCER: A RANDOMISED DOUBLE BLIND CONTROLLED CLINICAL TRIAL

Liyana Zaharuddin[1], Norfilza Mohd Mokhtar[1], Raja Affendi Raja Ali[2]

[1]Department of Physiology, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

[2]Gastroenterology Unit, Department of Medicine, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

OBJECTIVE

The link between inflammation and colorectal cancer (CRC) is well established. The level of circulating inflammatory cytokines could predict post-surgical recurrence in CRC patients. However, the role of probiotic to reduce the post-surgical complications and circulating inflammatory cytokines is still limited. The aim of this study was to investigate the effects of probiotic consumption containing *Lactobacillus* and *Bifidobacterium* strains on circulating inflammatory cytokines and complications in post-resected CRC patients.

METHOD

A randomised, double blind clinical trial was carried out in 42 patients who underwent colorectal resection for cancer. Patients were assigned to receive twice daily of either placebo or 3g x 10^{10} probiotic containing six viable microorganisms of *Lactobacillus* and *Bifidobacterium* strains for six months. CRC-related circulating inflammatory cytokines (TNFα, IFNγ, IL-6, IL-10, IL-12, IL-17A, IL-17C and IL-22) were measured using RnD system multiplex immunoassay pre and post intervention.

RESULTS

As compared to placebo, patients who consumed probiotic for 6 months showed significant reduction of serum TNFα (6.74±7.43 versus 2.77±2.72 pg/mL), IL-6 (77.95±148.04 versus 64.04±93.07 pg/mL), IL-12 (9.00±24.37pg/mL versus not detectable), IL-17A (3.23±13.6 versus 0.43±0.66 pg/mL), IL-17C (2.43±6.89 versus 1.45±5.52 pg/mL) and IL-22 (4.25±13.18 pg/mL versus not detectable). While patients who consumed placebo showed significant increased of serum TNFα (5.73±5.49 versus 15.34±21.31 pg/mL), IL-12 (10.01±41.76 versus 40.59±77.83 pg/mL), IL-17A (1.52±1.82 versus 4.24±10.73 pg/mL), IL-17C (12.56±32.49 versus 23.45±50.46 pg/mL) and IL-22 (5.86±12.34 versus 11.55±18.84 pg/mL). There were no significant differences in term of infection, hospitalisation and post-surgical complications within 6 months between the two groups. There were no adverse effects related to the usage of both probiotic and placebo.

CONCLUSION

Consumption of probiotic containing six viable microorganisms of *Lactobacillus* and *Bifidobacterium* strains in CRC patients was considered to be safe. Moreover, probiotic could improve the prognosis of colorectal cancer patients by significantly reduced circulatory inflammatory cytokines.

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[1]Gastroenterology and Hepatology Unit, Department of Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia
[2]Endocrine Unit, Department of Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia
[3]Department of Pathology, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia

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[1]Gastroenterology and Hepatology Unit, Department of Medicine, University of Malaya, Kuala Lumpur, Malaysia
[2]Endocrinology Unit, Department of Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia
[3]Department of Pathology, Hospital Sultanah Bahiyah, Alor Star, Kedah, Malaysia

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[1]Gastroenterology Unit, National University of Malaysia, Kuala Lumpur, Malaysia
[2]Infectious Disease Unit, National University of Malaysia, Kuala Lumpur, Malaysia
[3]Gastroenterology Unit, University of Science Malaysia, Kubang Kerian, Kelantan, Malaysia

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[2]Gastroenterology Unit, Faculty of Medicine, Universiti Teknologi MARA, Sungai Buloh, Selangor, Malaysia

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[2]Gastroenterology Unit, Department of Medicine, Faculty of Medicine, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia

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[1]School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia
[2]Unit of Gastroenterology, Department of Medicine, The National University of Malaysia, Kuala Lumpur, Malaysia
[3]Faculty of Medicine, Universiti Teknologi MARA, Sungai Buloh, Selangor, Malaysia
[4]De La Salle Health Sciences Institute, Dasmarinas, Cavite, Philippines

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[1]Department of General Surgery, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia
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[4]Hospital Kuala Lumpur, Kuala Lumpur, Malaysia
[5]KPJ Pahang Specialist Hospital, Kuantan, Pahang, Malaysia

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[1]Department of Hepatology, Hospital Selayang, Selangor, Malaysia
[2]Gastroenterology and Hepatology Unit, Department of Medicine Gastroenterology, Faculty of Medicine, University Malaya Medical Center, Kuala Lumpur, Malaysia
[3]Gastroenterology Unit, Gleneagles Hospital, Kuala Lumpur, Malaysia
[4]Gastroenterology Unit, Hospital Pulau Pinang, Pulau Pinang, Malaysia
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[3]Department of Pathology, Hospital Selayang, Selangor, Malaysia

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[2]Histopathological Unit, Pathology Department, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia

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[1]School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia
[2]Gastrenterology Unit, Faculty of Medicine, Universiti Teknologi MARA, Sungai Buloh, Selangor, Malaysia
[3]Nephrology Department, Hospital Raja Perempuan Zainab II, Kota Bharu, Kelantan, Malaysia
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[1]Department of Physiology, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia
[2]Gastroenterology Unit, Department of Medicine, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia
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[2]Department of Pathology, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, Selangor, Malaysia

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[1]Hospital Ampang, Ampang, Selangor, Malaysia
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[1]Hospital Ampang, Ampang, Selangor, Malaysia
[2]Faculty of Medicine and Health Sciences, Universiti Sains Islam Malaysia, Kuala Lumpur, Malaysia

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[1]Gastroenterology Unit, Hospital Ampang, Selangor, Malaysia
[2]Department of Hematology, Hospital Ampang, Selangor, Malaysia
[3]Faculty of Medicine and Health Sciences, Universiti Sains Islam Malaysia, Kuala Lumpur, Malaysia

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[1]Universiti Teknologi MARA, Shah Alam, Selangor, Malaysia
[2]Gastroenterology Unit, Hospital Ampang, Selangor, Malaysia
[3]Universiti Sains Islam Malaysia, Nilai, Negeri Sembilan, Malaysia

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[1]Gastroenterology Unit, Faculty of Medicine, Universiti Teknologi MARA, Selangor, Malaysia
[2]School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia

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H P Tee[1], A Che Aun[2]

[1]KPJ Pahang Specialist Hospital, Tanjung Lumpur, Kuantan, Pahang, Malaysia
[2]Gastroenterology Unit, Medical Outpatient Department, Hospital Tengku Ampuan Afzan, Kuantan, Pahang, Malaysia

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[1]Gastroenterology Unit, Hospital Queen Elizabeth, Kota Kinabalu, Sabah, Malaysia
[2]Medical Department, Hospital Keningau, Sabah, Malaysia

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[1]Gastroenterology Unit, Hospital Queen Elizabeth, Kota Kinabalu, Sabah, Malaysia
[2]Medical Department, Hospital Keningau, Sabah, Malaysia

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EMPAGLIFLOZIN FOR THE TREATMENT OF NON-ALCOHOLIC STEATOHEPATITIS IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

Lee-Lee Lai[1], Shireene Ratna Vethakkan[2], Nik Raihan Nik Mustapha[3], Sanjiv Mahadeva[1], Wah-Kheong Chan[1]

[1]Gastroenterology and Hepatology Unit, Department of Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia
[2]Endocrine Unit, Department of Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia
[3]Department of Pathology, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia

BACKGROUND

Sodium-glucose cotransporter-2 (SGLT2) inhibitors are a novel class of drugs that lower glucose by inducing renal glycosuria.

AIMS

To explore the effect of SGLT2 inhibitor therapy on the histological features of non-alcoholic steatohepatitis (NASH) in patients with type 2 diabetes mellitus (T2DM).

METHODS

In this investigator-initiated, single-arm, open-label study, nine patients with T2DM and biopsy-proven NASH were given empagliflozin 25 mg daily for 24 weeks. A repeat liver biopsy was performed at the end of treatment. The histological outcomes were compared with the placebo group of a 48-week clinical trial previously conducted at the same centre.

RESULTS

There was significant reduction in body mass index (median change, Δ=-0.7kg per m2, p=0.011), waist circumference (Δ=-3cm, p=0.033), systolic blood pressure (Δ=-9mmHg, p=0.024) , diastolic blood pressure (Δ=-6mmHg, p=0.033), fasting blood glucose (Δ=-1.7mmol/L, p=0.008), total cholesterol (Δ=-0.5mmol/L, p=0.011), gamma glutamyl transpeptidase (Δ=-19U/L, p=0.013), VLFF (Δ=-7.8%, p=0.017), steatosis (Δ=-1, p=0.014), hepatocyte ballooning 4 (Δ=-1, p=0.034) and fibrosis (Δ=0, p=0.046). Empagliflozin resulted in significantly greater improvements in steatosis (67% vs. 26%, p=0.025), hepatocyte ballooning (78% vs. 34%, p = 0.024) and fibrosis (44% vs. 6%, p = 0.008) compared with historical placebo.

CONCLUSION

This pilot study provides primary histological evidence that empagliflozin may be useful for the treatment of NASH. These promising preliminary findings justify the need for a larger randomized, double-blind, placebo-controlled trial of empagliflozin in NASH for a longer duration in the future.

SCREENING FOR NON-ALCOHOLIC FATTY LIVER DISEASE AND ADVANCED LIVER FIBROSIS IN PATIENTS WITH TYPE 2 DIABETES MELLITUS USING CONTROLLED ATTENUATION PARAMETER AND LIVER STIFFNESS MEASUREMENTS

Lee-Lee Lai[1], Wan Nur Illyana Wan Yusoff[1], Shireene Ratna Vethakkan[2], Nik Raihan Nik Mustapha[3], Wah-Kheong Chan[1]

[1]Gastroenterology and Hepatology Unit, Department of Medicine, University of Malaya, Kuala Lumpur, Malaysia
[2]Endocrinology Unit, Department of Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia
[3]Department of Pathology, Hospital Sultanah Bahiyah, Alor Star, Kedah, Malaysia

BACKGROUND

Despite the high prevalence of non-alcoholic fatty liver disease (NAFLD) in patients with type 2 diabetes mellitus (T2DM), the recommendation in regards to screening for NAFLD among patients with T2DM differs in major guidelines. We aimed to look at the prevalence of NALFD and especially non-alcoholic steatohepatitis (NASH) and advanced fibrosis among patients with T2DM.

METHODS

This is a prospective cross-sectional study of consecutive adult patients with T2DM seen by a senior endocrinologist at the Diabetes Clinic, University of Malaya Medical Centre. A patient was considered to have significant hepatic steatosis and advanced fibrosis based on transient elastography if the controlled attenuation parameter was ≥263 dB/m and the liver stiffness measurement was ≥8 kPa, respectively. Patients who were suitable and who agreed for a percutaneous liver biopsy were scheduled for the procedure.

RESULTS

The data of 557 patients was analysed (mean age 61.4±10.8 years, male 40.6%). The prevalence of NAFLD and advanced fibrosis based on transient elastography was 72.4% (403/557) and 32.3% (180/557), respectively. On multivariate analysis, independent factors associated with NAFLD were obesity (OR 3.113, 95% CI 1.035 - 9.362, p=0.043) and higher serum ALT level (OR 1.081, 95% CI 1.039 - 1.124, p<0.001) while advanced fibrosis was associated with higher serum ALT (OR 1.021, 95% CI 1.006 - 1.037, p=0.006) and GGT levels (OR 1.004, 95% CI 1.004 - 1.008, p=0.034) and lower platelet level (OR 0.996, 95% CI 0.992 - 0.999, p=0.001). Seventy-three patients underwent liver biopsy. The majority of these patients had NASH (83.6%, 61/73) and some degree of liver fibrosis (86.2%, 63/73) while advanced fibrosis was seen in 35.6% (26/73).

CONCLUSION

The high prevalence of NALFD, NASH and advanced fibrosis in patients with T2DM supports the screening of patients with T2DM for NAFLD.

THE IMPACT AND EFFECTIVENESS OF IBS CLINICAL PATHWAY IN OUTPATIENT MANAGEMENT OF IRRITABLE BOWEL SYNDROME IN A TERTIARY CENTRE

D F Muhamad Sarkan[1], C S Ngiu[1], Z Q Wong[1], H C Deborah Chia[1], A Ismail[2], Y Y Lee[3], R A Raja Ali[1]

[1]Gastroenterology Unit, National University of Malaysia, Kuala Lumpur, Malaysia
[2]Infectious Disease Unit, National University of Malaysia, Kuala Lumpur, Malaysia
[3]Gastroenterology Unit, University of Science Malaysia, Kubang Kerian, Kelantan, Malaysia

BACKGROUND

Irritable bowel syndrome (IBS) is a chronic gastrointestinal disorder consisting of abdominal pain and altered bowel habit on which can cause significant impact on patient's quality of life.The IBS Clinical Pathway (CP) consists of an algorithm of standardized care and intervention to IBS patients.We aim to assess the effectiveness of IBS CP in improving of IBS symptoms and quality of life.

METHODOLOGY

This was a non-randomized prospective study in Universiti Kebangsaan Malaysia Medical Centre (UKMMC) from June 2017 to May 2018 that compared IBS outcomes in Clinical Pathway Group (CPG) vs. Non-Clinical Pathway Group (NCPG). We included all patients that fulfilled the diagnosis of IBS based on Rome III criteria. The patients from CPG and NCPG had their baseline IBS severity scoring system (IBS-SSS), Euro quality of life 5-dimension 5-levels (EQ-VAS) and hospital anxiety and depression scale (HADS) score calculated at baseline and at the end of the study. CPG followed a strict algorithm from diagnosis consisting of dietary counseling for low FODMAP diet during each visit, close biopsychosocial assessment and those with moderate to severe HADS scores were referred to psychiatry for appropriate intervention.

RESULT

101 patients were recruited under CPG and 84 patients for NCPF. At the end of the study, the CPG demonstrated a statistically significant improvement in their IBS Severity Score: 20 participants (19.8%) showed significant IBS Severity Score improvement in the CP group whereas only 7 participants (8.3%) in NCPG (p=0.006) demonstrated an improvement. For EQ-VAS score, both groups showed significant improvement in level of health at the end of the study (p value <0.05). Combination of psychiatric referrals and FODMAP diet in CPG showed significant IBS symptoms improvement (p=0.024) compared to NCPG (p=0.564).

CONCLUSION

Management according to CP is associated with improved irritable bowel syndrome symptoms and quality of life.

IMMUNOHISTOCHEMICAL EXPRESSION OF TRANSIENT RECEPTOR VANILLOID 4 (TRPV4), A MARKER OF VISCERAL HYPERSENSITIVITY IN NERD AND CONTROLS

Nazihah binti Azis[1], Mung Seong Wong[1], Faedzahtul Arbaieyah[1], Nazri Mustaffa[1], Thevaraajan Jayaraman[2], Yeong Yeh Lee[1]

[1]School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia
[2]Gastroenterology Unit, Faculty of Medicine, Universiti Teknologi MARA, Sungai Buloh, Selangor, Malaysia

BACKGROUND

NERD is a subcategory of GERD characterized by troublesome symptoms. Visceral hypersensitivity may be the underlying mechanism. TRPV4 is a new biomarker of mechanical hypersensitivity and its role in NERD is yet to be determined. The aim of this study was to determine if TRPV4 was expressed in NERD and in controls and if TRPV4 expression was associated with reflux and manometry parameters in NERD.

METHODS

Consecutive patients who underwent upper endoscopy (Olympus model Evis Exera II) were screened and consented. Those with high likelihood of GERD (GERDQ score>8) and negative endoscopy were deemed to have NERD, and controls were participants with low likelihood of GERD and negative endoscopy. Biopsies at 5 cm and 15 cm above the squamo-columnar junction were obtained for all participants and were subjected for immunohistochemical assessment of TRPV4 expression (intensity and number of cells stained). Those with NERD would further underwent high resolution impedance esophageal manometry and 24-h pH-impedance test (both Medical Measurement System, Amsterdam).

RESULTS

Of 55 participants, 39 had NERD (mean age 46 years, males 41%) and 16 were controls (mean age 50 years, male 56.3%). TRPV4 was expressed in NERD and controls (17.9% vs. 25% respectively, P=0.71). There were no differences between NERD vs. controls seen in intensity (P=0.74) and number of cells stained (P=0.48). No association was found between positive vs. negative TRPV4 expression with either age or gender. Likewise, in those with NERD, no association was found between positive vs. negative TRPV4 expression with all reflux parameters included DeMeester score, % time pH<4 and total number of refluxes (all P>0.24) and manometry parameters included mean lower esophageal pressure, IRP4s, distal contractile integral and distal latency (all P>0.09).

CONCLUSION

TRPV4 is expressed in both NERD and controls and its presence does not correlate with reflux and manometry parameters in NERD.

PROTEIN INDUCED BY VITAMIN K ABSENCE-II (PIVKA-II), ALPHA-FETOPROTEIN AND THEIR COMBINATIONS IN DIAGNOSING HEPATOCELLULAR CARCINOMA

H Hadi, R A Raja Ali, S Z Syed Zakaria, H Othman

Universiti Kebangsaan Malaysia Medical Centre, Hospital Canselor Tunku Muhriz, Kuala Lumpur, Malaysia

OBJECTIVE

We aimed to determine the cut-off values and to compare the diagnostic performance of Protein Induced By Vitamin K Absence-II (PIVKA-II) and alpha-fetoprotein (AFP) in differentiating hepatocellular carcinoma (HCC) and non-malignant high-risk (NMHR) group.

METHODOLOGY

A total of 163 patients which include 40 with HCC, 100 with liver cirrhosis (LC) and 23 with non-cirrhotic high-risk patients were prospectively enrolled. The patients were divided into HCC and NMHR group. The areas under the receiver operating characteristic (AUROC) curves of PIVKA-II, AFP and their combination were calculated and compared.

RESULTS

PIVKA-II and AFP levels were found to be significantly high in the HCC compared to NMHR ($p<0.0001$) and LC ($p<0.0001$) patients. The optimal cut-off values for PIVKA-II and AFP were 36.7mAU/mL (90% sensitivity; 82.1% specificity) and 14.2ng/mL (75% sensitivity; 93.5% specificity), respectively, for the differentiation of HCC from NMHR. The AUROC curve of PIVKA-II (0.905, $p<0.0001$) was higher than that of AFP (0.869, $p<0.0001$) but the combination gave the highest AUROC value (0.911, $p<0.0001$) in differentiating HCC from NMHR. However, their differences were not statistically significant (AFP vs PIVKA; $p=0.4775$, AFP vs Combination; $p=0.3808$, PIVKA vs Combination; $p=0.2268$).

DISCUSSION AND CONCLUSION

Both PIVKA-II and AFP showed similar performance in detecting HCC in high risk patients. From this study, the use of AFP as a screening biomarker for HCC may be adequate and adding PIVKA-II or replacing AFP with PIVKA-II test in current clinical practice could be of little value.

COLITIS-ASSOCIATED CANCER PATHWAYS AND METABOLIC DYSREGULATION IN ULCERATIVE COLITIS PATIENTS: EFFECTS ON DISEASE DURATION

Eden Ngah Den Low[1], Chai Soon Ngiu[2], Zhiqin Wong[2], Norfilza Mohd Mokhtar[1], Raja Affendi Raja Ali[2]

[1]Department of Physiology, Faculty of Medicine, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia
[2]Gastroenterology Unit, Department of Medicine, Faculty of Medicine, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia

OBJECTIVE

Long duration ulcerative colitis (UC) is a contributing factor for the development of colitis-associated cancer and thus the underlying changes during disease progression remain active research areas. The aim of this study was to determine pathways and gene ontologies relevant to different disease duration in UC.

METHODOLOGY

Affymetrix Human Transcriptome Array was performed on a total of 32 UC samples with inflamed colonic biopsies (n=11 long duration; n=21 short duration). Enriched pathways were generated using KOBAS 3.0 from the significant differentially expressed gene list (fold change>1.5; $p<0.05$). Gene ontologies were identified using Database for Annotation, Visualization and Integrated Discovery (DAVID) 6.8.

RESULTS

Seventy-seven Kyoto Encyclopedia of Genes and Genomes (KEGG) pathways showed enrichment ($p<0.01$) and the top ten were metabolic pathways; fatty acid degradation; valine, leucine and isoleucine degradation; PPAR signalling pathway; fatty acid metabolism; bile secretion; propanoate metabolism; tryptophan metabolism; butanoate metabolism; and peroxisome. Of the 77 pathways, 19 were metabolism-related pathways and 14 were signalling pathways. In addition, among the significant signalling pathways were PI3K-AKT and AMPK signalling pathways related to colitis-associated cancer. In gene ontology assessment, the top three significant scores ($p<0.05$) which contained the most number of differentially expressed genes for each domain were listed as follow: signal transduction (50 genes), oxidation-reduction process (27 genes), cell adhesion (26 genes) [biological process]; protein homodimerization activity (35 genes), calcium ion binding (34 genes), receptor binding (18 genes) [molecular function], as well as integral component of membrane (165 genes), plasma membrane (162 genes), extracellular exosome (131) [cellular component].

DISCUSSION AND CONCLUSION

These relevant KEGG pathways and gene ontologies could be used as a foundation to further understand the underlying mechanisms in patients with ulcerative colitis who are at high risk of developing colitis-associated cancer.

NORMATIVE CHICAGO 3.0 METRICS FOR HIGH-RESOLUTION ESOPHAGEAL MANOMETRY (SANDHILL AND MMS SYSTEMS) IN THE MALAY POPULATION AND THE EFFECTS OF BOLUSES TYPES AND POSTURES ON NORMATIVE METRIC

Su Fui Thung[1], Mohd Ridzuan Mohd Said[2], Muhammad Ilham Abdul Hafidz[3], Thevaraajan Jayaraman[3], Mung Seong Wong[1], Rona Marie Lawenko[4], Azliani Abdul Aziz[1], Siti Norhasliza[1], Chai Soon Ngiu[2], Zhiqin Wong[2], Raja Affendi Raja Ali[2], Yeong Yeh Lee[1]

[1]School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia
[2]Unit of Gastroenterology, Department of Medicine, The National University of Malaysia, Kuala Lumpur, Malaysia
[3]Faculty of Medicine, Universiti Teknologi MARA, Sungai Buloh, Selangor, Malaysia
[4]De La Salle Health Sciences Institute, Dasmarinas, Cavite, Philippines

BACKGROUND

We aimed to determine normative metrics using two widely used systems in Malaysia and to evaluate the effects of provocative swallows in different postures.

METHOD

We conducted a cross-sectional study involving 100 healthy Malay adults (50 Medical Measurement System (MMS), Amsterdam and 50 InSIGHT Ultima®, Sandhill/Diversatek, Highlands Ranch). Normative values for four Chicago 3.0 metrics (integrated relaxation pressure or IRP4s, distal contractile integral or DCI, distal latency or DL and peristaltic break or PB) were determined for each system and the combined value of two. HRM protocol consisted of ten liquid, three viscous and three solid boluses in supine and standing postures.

RESULT

The normative metrics (MMS, Sandhill and combined) are shown in Table 1. With liquids in supine posture (standard protocol), there were no correlations in all tested metrics for both system (all $P>0.8$). Bolus types affected combined normative values of DCI, DL and PB but not IRP4s. DCI was lower with liquid vs. solid and viscous vs. solid (both $P<0.001$) in supine but only viscous vs. solid ($P<0.001$) in standing posture. DL was longer with liquid vs. solid and viscous vs. solid in supine and standing postures (all $P \leq 0.003$). Likewise, PB was shorter with liquid vs. solid and viscous vs. solid in supine and standing postures (all $P<0.001$). Similarly, postures affected combined normative values of DCI, DL and PB but not IRP4s. For liquids, lower values were seen in supine vs. standing for DCI ($P=0.012$), DL ($P=0.006$) and PB ($P<0.001$). For viscous bolus, higher value was seen for DCI in supine vs. standing ($P<0.001$) but lower for PB ($P=0.005$). Likewise, for solids, higher value was seen for DCI in supine vs. standing ($P<0.001$) but lower for PB ($P=0.002$).

CONCLUSION

Normative Chicago metrics are different between the two systems. Metrics are affected by boluses types and postures except for IRP4s.

Table 1 Normative Metrics for High-Resolution Manometry

Variables	MMS(N=50)		Sandhill(N=50)		Total(N=100)	
	Mean(SD)	95th percentile	Mean(SD)	95th percentile	Mean (SD)	95th percentile
Supine Posture						
Liquid						
DCI (mmHg-s-cm)	1373.02(1021.26)	4323.70	923.70(715.27)	2343.00	1148.36(905.77)	2865.00
IRP4s (Median) (mmHg)	12.20(8.07,17.48)	24.64	9.75(7.00,12.00)	17.00	10.95(7.58,14.03)	22.64
DL (s)	6.89(1.25)	9.18	6.11(1.60)	8.19	6.50(1.48)	8.30
PB (cm)	1.67(1.98)	6.71	2.09(1.95)	6.00	1.88(1.97)	5.95
Viscous						
DCI (mmHg-s-cm)	1038.28(704.40)	2466.55	1008.48(633.60)	2350.90	1023.38(666.71)	2321.65
IRP4s (Median) (mmHg)	11.85(7.55,18.50)	32.89	9.85(6.00,13.70)	15.29	10.30(7.00,14.08)	24.92
DL (s)	7.91(1.77)	11.70	7.35(2.08)	10.29	8.49(1.95)	10.40
PB (cm)	2.09(2.25)	7.27	2.12(2.88)	7.07	2.11(2.57)	6.49
Solid						
DCI (mmHg-s-cm)	1699.27(1165.98)	3932.00	1264(831.95)	3111.95	1479.88(1029.37)	3338.0
IRP4s (Median) (mmHg)	13.10(8.00,18.83)	33.27	10.30(6.00,12.63)	14.84	11.00(6.60,14.30)	27.90
DL (s)	9.27(2.15)	13.05	7.72(2.85)	12.05	8.49(2.64)	12.10
PB (cm)	1.14(1.81)	5.45	0.74(1.27)	3.32	0.94(1.57)	4.00
Standing Posture						
Liquid						
DCI (mmHg-s-cm)	823.33(499.49)	1926.35	1088.88(697.74)	2568.70	958.77 (620.19)	2297.55
IRP4s (Median) (mmHg)	9.05 (2.78,14.35)	45.00	8.35(5.75,12.00)	17.77	9.00(4.00,13.00)	25.80
DL (s)	6.90(1.28)	9.17	7.20(2.62)	12.17	7.06 (2.07)	9.32
PB (cm)	4.31(3.19)	9.39	1.60(1.50)	4.39	2.93(2.81)	7.52
Viscous						
DCI (mmHg-s-cm)	671.40(565.90)	2063.20	962.39 (668.38)	2368.00	819.93 (634.16)	2161.90
IRP4s (Median) (mmHg)	7.70(3.00,15.30)	62.93	9.00(6.00,13.50)	18.00	8.15(4.00,14.08)	32.08
DL (s)	7.92(1.64)	10.33	7.55(2.12)	11.60	7.73(1.90)	10.60
PB (cm)	4.48(3.53)	14.2	1.69(1.86)	5.85	3.04(3.12)	9.84
Solid						
DCI (mmHg-s-cm)	1120.43(691.00)	2841.95	1143.27(747.62)	2666.50	1132.21(717.03)	2722.40
IRP4s (Median) (mmHg)	8.00(3.25,17.33)	73.70	9.00(5.00,12.25)	16.35	8.85(4.78,12.65)	25.21
DL (s)	8.95(1.78)	12.05	8.49(2.30)	12.70	8.71(2.06)	12.00
PB (cm)	2.22(2.52)	16.6	0.83(1.60)	3.40	1.50(2.20)	6.18

RETROSPECTIVE CROSS SECTIONAL STUDY ON ASSOCIATION OF BODY MASS INDEX AND GASTROESOPHAGEAL REFLUX DISEASE AND ITS COMPLICATIONS

S Sarmukh[1], Z Zaidi[1], Y Y Lee[2]

[1]Department of General Surgery, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia
[2]Department of Internal Medicine, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia

INTRODUCTION

National Health and Morbidity Survey of 2015, obesity in Malaysians make up 17.7 per cent of the population while those who are categorized as overweight make up 30 per cent.

OBJECTIVES

To determine the association between GERDs complications such as hiatus hernia, reflux esophagitis and Barrett's esophagus with body mass index via esophagogastroduodenoscopy (OGDS).

METHODS

GERD patients with GerdQ questionnaire scoring system who had underwent OGDS from January 2014 to May 2017.The patients were divided into 2 groups according to their body mass index based on WHO (ASIAN population classification): Non obese (normal BMI) group (54 patients) with BMI less than 22.9 kg/(m^2) and the Obese group (73 patients) with the BMI more than 23 kg/(m^2). The findings graded based on it severity. Hiatus hernia by using Hill's Grading, reflux esophagitis according to Los Angeles classification and Barrett's esophagus according to Prague Classification (C and M).

RESULTS

A total of 127 patients were included in this study. Male population predominantly conquered with 57.48% compared to female population which is 42.52%. The mean age of the samples were 43.91 years old. Obesity as in BMI >30kg/m^2 were statistically significant association (P=0.028) with Hiatus hernia based on Hill's Grading and statistically significant (P=0.015) with reflux esophagitis based on LA classification. However, obesity there were statistically insignificant association with Barrett's esophagus histologically and endoscopically. Those in obese group have 3.6 times higher Odds to get reflux esophagitis symptoms compared to those in normal BMI group.

CONCLUSION

Obese patient has association with hiatus hernia and reflux esophagitis, but not for the Barrett's esophagus. The risk prediction association between BMI is with reflux esophagitis in obese group have 3.6 times symptoms compared to those in normal BMI group. We suggest that, bariatric procedure such as Laparoscopic Roux En Y Gastric bypass have shown to be more effective procedure for alleviating the symptoms of GERD as it plays a role in significant weight loss.

A CASE OF MIXED CRYOGLOBULINAEMIA COMPLICATED WITH ACUTE KIDNEY INJURY IN HEPATITIS C PATIENT AND TREATMENT IMPLICATIONS

Woh Wei Mak[1], Ee Keng Lim[2], Adrian Mark Masnammany[3], Chui Munn Ang[4], Hoi Poh Tee[5]

[1]Hospital Bentong, Pahang, Malaysia
[2]Hospital Tengku Ampuan Rahimah, Selangor, Malaysia
[3]Hospital Kuala Krai, Kelantan, Malaysia
[4]Hospital Kuala Lumpur, Kuala Lumpur, Malaysia
[5]KPJ Pahang Specialist Hospital, Kuantan, Pahang, Malaysia

OBJECTIVE

Besides chronic liver disease, relevant extrahepatic manifestations of Hepatitis C virus (HCV) infection include cryoglobulinemia, lymphoproliferative disorders, and renal diseases. Renal signs of cryoglobulinemia include proteinuria and microscopic hematuria with mild to moderate renal insufficiency, sometimes associated with thrombotic microangiopathy.

CASE SUMMARY

48 years old Indian gentleman with underlying depression and Hepatitis C (genotype 3a, HCV viral load 51200IU/ml) presented with fever, arthralgia, myalgia and non oliguric acute kidney injury (AKIN 3). Clinical examination was unremarkable, hydration was fair and patient was not septic or overloaded. Renal profile was markedly deranged with urea 20.8mmol/L and creatinine 493umol/L (eGRF11.6ml/min). 24 hour urine protein was 1.651gram/24 hours. Serum IgG 23.90g/L (7-16) were markedly raised compared to other immunoglobulins IgA 9.47g/L (0.7-4.0) and IgM 3.52g/L (0.4-2.3) suggestive of mixed cryoglobulinaemia. Ultrasound abdomen shows liver cirrhosis with splenomegaly but no evidence of obstructive uropathy. Patient was not keen for renal biopsy and was planned for 10 cycles of plasma exchange as empirical treatment of cryoglobulinaemia. Conventional therapy with pegylated interferon and ribavirin was not started as patient had underlying depression. Given the likely causal relationship between hepatitis C and acute kidney injury, treatment of the hepatitis was paramount. Treatment with Sofosbuvir 400mg OD and Ribavirin 600mg BD, was prescribed for 24 weeks. Patient's renal profile improved significantly, serum creatinine 99mmol/L (eGFR74.3ml/min) and his 24 hour urine protein improved to 0.08grams/24 hours upon completion of treatment. HCV viral load were undetectable at 12th week and end of treatment.

DISCUSSION AND CONCLUSION

We report a case of mixed cryoglobulinaemia complicated with acute kidney injury in Hepatitis C patient. Cryoglobulinemia is a rare entity typically due to hepatitis C infection whose widely variable presentation can make prompt and accurate diagnosis difficult. Successful treatment of Hepatitis C was associated with complete resolution of cryglobulinemia in this case.

RELAPSING EPISODES OF ALTERED SENSORIUM SECONDARY TO NON-CIRRHOTIC HYPERAMMONAEMIC ENCEPHALOPATHY

Adrian Mark[1], Woh Wei Mak[2], Anila Mat Jelani[3]

[1]Hospital Kuala Krai, Kelantan, Malaysia
[2]Hospital Bentong, Pahang, Malaysia
[3]Hospital Raja Perempuan Zainab II, Kelantan, Malaysia

OBJECTIVE

Hyperammonemia is a recognized cause of encephalopathy which is commonly seen in patients with liver disease. The clinical entity of non-cirrhotic hyperammonemia is now being increasingly recognized. We report a patient who presented with relapsing altered mental status who was later diagnosed as non-cirrhotic hyperammonenia encephalopathy.

CASE SUMMARY

68 years old Malay housewife presented with altered sensorium for 2 days associated with fever and few episodes of vomiting. No associated headache or seizures. There was no history of alcohol consumption or traditional medication and no family history of liver disease. She had multiple similar episodes of profound lethargy and confusion for past 1 year, for which she was admitted for observation and discharged well within few days. 2 prior CT brains were normal. Her GCS was E2V4M5 on arrival, pupils were equal and reactive with no evidence of meningism. CT brain was normal. She was empirically treated as meningoencephalitis with Ceftriaxone and Acyclovir. Lumbar puncture showed normal opening pressure and normal CSF analysis. Her condition deteriorated and was intubated for cerebral protection. In view of no alternative explanation for altered sensorium, ammonia level was sent and returned elevated 208umol/L. Liver function was normal and ultrasound showed fatty liver with no evidence of cirrhosis. Hepatitis B and C were non-reactive. She was extubated well at day 5 of admission. Regular syrup lactulose was given. However, she had drop in GCS again in ward requiring re-intubation, after an episode of lower gastrointestinal bleed, repeated CT brain was normal. Serum ammonia was 182umol/L. Low protein diet and lipid parenteral nutrition was started. Her GCS improved when ammonia came down to 72umol/L. Patient subsequently developed septic shock secondary to nosocomial pneumonia with deterioration in GCS and remained ventilator dependent, serum ammonia was 243umol/L and she succumbed from multi-organ failure. Throughout the admission, her GCS correlated with serum ammonia level.

DISCUSSION AND CONCLUSION

Noncirrhotic hyperammonaemia is a rare and important cause for unexplained encephalopathy in the absence of significant liver pathology.

QUESTIONNAIRE STUDY ASSESSING AWARENESS AND KNOWLEDGE OF HEPATITIS B AMONG STAFF NURSES AT A TERTIARY GOVERNMENT HOSPITAL

J Y Chieng, Yasotha Sugumaran

Department of Medicine, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, Selangor, Malaysia

INTRODUCTION

Hepatitis B virus (HBV) is the most efficiently transmissible of the bloodborne viruses that are important in healthcare settings. Healthcare workers (HCWs) especially staff nurses are at risk for exposure to HBV from infected patients.

OBJECTIVE

To determine the level of knowledge and awareness of Hepatitis B infection among staff nurses at Serdang Hospital.

METHOD

This study was an interviewer administered questionnaire study which the awareness and the basic knowledge of Hepatitis B were assessed among the staff nurses at Serdang Hospital from 1st April till 30th April 2017.

RESULT

A total of 70 staff nurses took part in this survey with mean age of 32 years old. 29 (41%) of them were male and 41 (59%) were female. By ethnicity, Malay 44 (63%), Chinese 7 (10%), Indian 12 (17%) and others 7 (10%). 90% of the respondents were at diploma level, while 10% were with undergraduate level. 10% of the respondent had family history of Hepatitis B. In terms of awareness, most of them have heard about Hepatitis B and the main sources were from friends, media and education. 56 (80%) respondent have had blood test for Hepatitis B before. 50 (71%) of them have heard of vaccine for Hepatitis B but only 64% had been vaccinated. Majority of the respondent had not aware of antiviral medicine for Hepatitis B. About the knowledge, 55 (79%) respondent understood that Hepatitis B is a virus and the liver was the organ affected. Surprisingly, 57 (81%) of them didn't realize that Hepatitis B can lead to cancer. Regarding the mode of transmission, most of the respondent knew that Hepatitis B transmitted through sexual intercourse and childbirth, and about half of them recognised that HBV could be transmitted through tattoos, body piercing, and sharing of toothbrush and razor with others. However, 10 (14%) of the respondents thought Hepatitis B could be spread through cough and sneeze. Most of the respondents admitted that they knew how to protect themselves from HBV infection.

CONCLUSION

The level of awareness and knowledge about Hepatitis B was generally poor among the staff nurses. More efforts should be taken to emphasize the awareness and knowledge of Hepatitis B among the HCW.

EOSINOPHILIC COLITIS - A RARE CAUSE OF CHRONIC DIARRHEA

J Y Chieng[1], Abdul Hanif Khan[1], Lee Bang Rom[2]

[1]Department of Medicine, Faculty of Medicine and Health Science, Putra University of Malaysia, Selangor, Malaysia
[2]Department of Pathology, Faculty of Medicine and Health Science, Putra University of Malaysia, Selangor, Malaysia

Primary eosinophilic gastrointestinal disease (EGID) is a spectrum of disease characterized by eosinophilic infiltration along gastrointestinal tract without other causes of eosinophilia, with Eosinophilic colitis (EC) as the rarest form.[1] There are three hallmarks that characterized EC i.e. presence of peripheral eosinophilia, eosinophilic infiltration of gastrointestinal tract and functional abnormalities.

A 69-year-old gentleman presented to us with chronic diarrhea associated with mild abdominal pain for 6 months. He denied of fever, weight loss or skin rash. He had significant eosinophilia 9.0%. The colonoscopy was of normal looking mucosa, with random colonic biopsy reported as mildly distorted glands with markedly increased eosinophils (>40/high-power field) in the lamina propria. Otherwise, his allergic skin testing was normal. His diarrhea was resolved with a course of prednisolone (0.5mg/kg/day for four weeks, and then tapered over eight weeks), with repeated blood test showing improving eosinophilia of 4.5%.

EC is rarely reported. However, this is probably under diagnosed. No consensus available on guidelines in diagnosing EGID and secondary causes must be carefully sought out. All chronic diarrhea cases should be offered colonoscopy with biopsy to rule out EC.

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DIRECT ACTING ANTI-VIRAL (DAA) IN HEPATITIS C VIRUS (HCV) PATIENTS: EARLY REAL-WORLD DATA FROM MALAYSIA

Y C Chung[1], S S Tan[1], W K Chan[2], K T Chin[3], C H Hoe[4], Y Y Lee[5]

[1]Department of Hepatology, Hospital Selayang, Selangor, Malaysia
[2]Gastroenterology and Hepatology Unit, Department of Medicine Gastroenterology, Faculty of Medicine, University Malaya Medical Center, Kuala Lumpur, Malaysia
[3]Gastroenterology Unit, Gleneagles Hospital, Kuala Lumpur, Malaysia
[4]Gastroenterology Unit, Hospital Pulau Pinang, Pulau Pinang, Malaysia
[5]Department of Gastroenterology, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia

INTRODUCTION AND AIM

To date there is paucity of data on the effectiveness of DAAs used in Malaysia. The aim of this study is to describe the sustained virological response (SVR) rate and the characteristics of patients with HCV treated with oral DAAs in various hospitals.

METHODS

A retrospective analysis of a prospectively maintained multicenter database of all patients with HCV treated with oral DAAs from December 2014 to March 2018. Patients that were lost to follow up or had treatment prematurely interrupted without SVR12 results were considered treatment failure in this intention to treat analysis.

RESULTS

The data for 75 patients was analysed. Mean age was 52 (±13) years; 48% were male. Genotype 1a and 1b were present in 26 (34.7%) and 16 (21.3%) patients respectively; Genotype 3 in 33 (65.3%) patients. Forty-six 46 (61.3%) were cirrhotic and 48 (64%) were treatment naïve. The DAA regimen and durations were: 12 weeks sofosbuvir (SOF)/daclatasvir (DCV) (n=4), 24 weeks SOF/DCV (n=6); 12 weeks SOF/DCV/ribavirin (RBV) (n=4), 24 weeks SOF/DCV.RBV (n=16); 12 weeks SOF/ledipasvir (LDV) (n=5); 24 weeks SOF/LDV (n=6); 24 weeks SOF/LDV/RBV (n=1); 12 weeks paritaprevir/ritonavir + ombitasvir + dasabuvir (PTVr/OBV/DSV) (n=8); 12 weeks PTVr/OBV/DSV/RBV (n=15); 24 weeks PTVr/OBV/DSV/RBV (n=1); 24 weeks SOF/velpatasvir (VEL) (n=4); 12 weeks SOF/VEL/RBV (n=4) and 24 weeks SOF/VEL/RBV (n=1). SVR-12 was achieved in 73/75 (97.3%). The remaining two patients died at home from unknown cause before completion of treatment: both were decompensated cirrhotics at baseline, one treatment experienced, and genotype 1a and 3. No other significant adverse event was reported in other patients.

CONCLUSIONS

Real-world experience with original and generic oral DAAs in Malaysia revealed high SVR rate despite high percentage of cirrhotic and genotype 3 patients.

HEPATIC SARCOIDOSIS PRESENTING AS PORTAL HYPERTENSION AND LIVER CIRRHOSIS: A CASE REPORT

S D Adnan[1], H Ahmad Rosdi[2], A A Kamaruzaman[3]

[1]Department of Hepatology, Hospital Selayang, Selangor, Malaysia
[2]Clinical Research Centre, Hospital Selayang, Selangor, Malaysia
[3]Department of Pathology, Hospital Selayang, Selangor, Malaysia

OBJECTIVE

In this case report we aim to present a case of 38-year-old Indian lady who presented with upper gastrointestinal bleeding and diagnosed to have hepatic sarcoidosis complicated with portal hypertension and liver cirrhosis. We also discussed about the treatment and management for hepatic sarcoidosis.

RESULTS

The patient was started on systemic steroids (i.e. Prednisolone 40mg daily) which were continued and tapered down gradually after 8 weeks. Upon followed up noted that her alkaline phosphatase has improved and she is clinically better without diuretics. She was then maintained with 7.5mg once daily prednisolone.

DISCUSSION AND CONCLUSION

Management of sarcoidosis involves careful baseline approach, assessment of disease distribution and other organ involvement, biochemistry monitoring regularly and appropriate treatment decision is important. Treatment for hepatic sarcoidosis is targeted toward alleviation of symptoms but has no curative potential at this time. Hepatic sarcoidosis is a rare systemic disease. The aetiology is still in dilemma and future randomised controlled trials are really necessary in the management of this disease.

CLINICOPATHOLOGICAL FEATURES AND ABNORMAL MICROSATELLITE INSTABILITY (MSI) CORRELATION IN COLORECTAL CANCER PATIENTS IN NORTHERN MALAYSIA

M F Rahman[1], W K Lee[1], K K Kiew[1], Z Zainuddin[1], M R Hassan[1], N R Nik Mustapha[2], Y S Tan[2]

[1]Gastroenterology & Hepatology Unit, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia
[2]Histopathological Unit, Pathology Department, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia

INTRODUCTION

DNA mismatch repair gene *(MMR)* abnormalities are seen in 95 percent of hereditary nonpolyposis colorectal cancer (HNPCC) and 10-15 percent of sporadic colorectal cancers. There are limited data on MMR abnormalities in Malaysian colorectal cancer patients. Recognized phenotypes include young age (<50 years), proximal colon, abundant lymphocyte infiltration, mucin producing and signet ring morphology and poorly differentiated.

OBJECTIVE

This study was aimed to determine the frequency of abnormal *MMR* gene protein expression in colorectal carcinoma in Northern Peninsular Malaysia using immunohistochemistry test.

METHODS

Clinicopathological information was obtained from 73 patients' records who underwent bowel resection for colorectal cancer (CRC) at tertiary hospital in Kedah from January to December 2017. Immunohistochemistry for MLH1, MSH2, MSH6 and PMS2 proteins were performed on paraffn embedded tissue containing carcinoma for cases presented with listed phenotypes.

RESULTS

A total of 73 cases of colorectal carcinomas of sporadic and hereditary types were assessed. Nine (12.3%) from 28 subjects (38.3%) of which immunohistochemistry testing performed; had absent immunohistochemical expression of any one of the *MMR* gene proteins. This comprised absent MLH1 and PSM2-4, absent MSH2 and MSh6-3, absent PSM2-2. There were 24 right sided tumors, 5 mucins producing, 3 poorly differentiated tumors. 2 had marked lymphocytes infiltration. 7 were aged below 50 years. 3 had extra-colonic tumor with 2 had first degree relative with CRC.

INTERPRETATION & CONCLUSIONS

Cancers with abnormal *MMR* gene expression were associated with microsatellite instability-high (MSI-H) phenotype. About 12.6 percent demonstrated absent MSH2, MSH6 and PMS2 protein expression in isolation or in combination with other *MMR* genes, which often predicts a germline mutation, synonymous with a diagnosis of HNPCC. This appears to be comparable frequency compared to reported data previously.

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AN ELDERLY LADY WITH RECURRENT GI BLEEDING AND EPISTAXIS: COMMON PRESENTATION OF UNCOMMON DISEASE

M F Rahman, W K Lee, Z Zainuddin, K K Kiew, M R Hassan

Gastroenterology & Hepatology Unit, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia

Hereditary hemorrhagic telangiectasia (HHT) or Osler-Weber-Rendu disease is a rare fibrovascular dysplasia that makes vascular walls vulnerable to trauma and rupture causing skin and mucosal bleeding. It is of autosomal dominant inheritance characterized by recurrent epistaxis and telangiectasia on the face, hands and oral cavity; visceral arteriovenous malformations (AVMs) and positive family history. Epistaxis is often the foremost manifestation. It is associated with AVMs in several organs. There are possible hematologic, neurologic, pulmonary, dermatologic and gastrointestinal complications. Treatment is supportive and helps prevent complications. We report herein an elderly patient with this syndrome who came to our Gastroenterology Unit for recurrent anemia and GI bleeding of which endoscopic interventions were performed regularly in her.

Keywords

hemorrhagic telangiectasia, arteriovenous malformations, epistaxis

PRIMARY SCLEROSING CHOLANGITIS AND ULCERATIVE COLITIS : A RARE DISEASE WITH A COMMON ASSOCIATION

J L Choe, Philip Pang, Maylene Kok

Gastroenterology Unit, Department of Medicine, Hospital Sultanah Aminah, Johor Bahru, Johor, Malaysia

INTRODUCTION

Primary Sclerosing Cholangitis (PSC) is a chronic progressive cholestatic liver disease, characterized by inflammation and fibrosis of the intrahepatic and/or extrahepatic bile ducts, resulting in diffuse, multifocal stricture formation. PSC is commonly associated with inflammatory bowel disease (IBD), mainly ulcerative colitis (UC).

CASE

A 54 years old lady diagnosed with UC in 2012 was admitted in October 2017 for hematochezia and jaundice. An urgent colonoscopy performed showed rectal sparing pancolitis with backwash ileitis. Random colonic biopsies have confirmed an active UC and excluded superimposed infections. Liver function test showed cholestatic picture with a positive cytoplasmic antineutrophil cytoplasmic antibodies (c-ANCA). Magnetic resonance cholangiopancreatography (MRCP) showed multiple oval shaped biliary dilatation with areas of stenosis. The patient showed biochemical improvement after treatment with ursodeoxycholic acid (UDCA).

CONCLUSION

We report a case of PSC associated with UC. Recognition of this distinct disease phenotype is important as they are at higher risk of developing colonic neoplasia. Therefore, patients with PSC-IBD should undergo an annual colonoscopic surveillance.

CASE REPORT: A CASE OF WILSON'S DISEASE (WD) PRESENTING WITH CAECAL ADENOCARCINOMA

James Emmanuel, Tan Yu Peng, Noor Aliza Mutalib, Haniza Omar
Department of Hepatology, Selayang Hospital, Selangor, Malaysia

INTRODUCTION

Wilson's disease is a rare autosomal recessive disorder, characterized by inborn error of copper metabolism in individuals with two mutant ATP7B genes.

Most malignancies associated with Wilson's disease are hepatocellularcarcinoma and cholangiocarcinoma. Other intra-abdominal malignancies have been only rarely reported.

CASE REPORT

A 30 year old Indian gentleman underwent a bidirectional endoscopy as part of the workup for iron deficiency anemia. Colonoscopy revealed a fungating mass at the caecum. Histopathology of the mass was consistent with carcinoma of the caecum (PT4N2M0). CT imaging revealed an ileo caecal mass involving the distal small bowel, appendix and proximal ascending colon.with surrounding mesenteric lymphadenopathy and no distant metastases. He underwent laparoscopic assisted right hemicolectomy in October 2017.

A year prior to this, the patient was diagnosed with WD following a referral to hepatology for incidental finding of liver cirrhosis on Ultrasound and panctopenia. There was no family history of liver disease.

WD diagnosis was based on a positive urine penicillamine test, rhodanine staining which clearly depicted copper deposition on liver biopsy and pathognomonic MRI findings of symetrical T1W hyperintensities involving both lentifrom nucleus.

The MRI findings were complemented with symptoms of dysarthria which the patient had developed since childhood. Interestingly the serum caeruloplasmin was within the normal range (0.45) and there were no KF rings detected on slit examination. He was started on Penicillamine therapy accordingly.

DISCUSSION

Catalytic copper, due to its mobilization and redox activity, is believed to play a central role in the formation of reactive oxygen species, that rapidly bind to DNA and produce damage by breaking the DNA strands or modifying the bases and deoxyribose, leading to carcinogenesis.

CONCLUSION

Patients with Wilson's disease appear to be vulnerable to the formation of aggressive malignant intra-abdominal tumours during long-term follow-up, irrespective of treatment.

CASE SERIES OF CHOLANGIOSCOPY IN BILE DUCT DISEASE: A SINGLE CENTRE EXPERIENCE

James Emmanuel, Yu Peng Tan, Lee Tiong See, Norhaniza Bahar, Haniza Omar
Department of Hepatology, Selayang Hospital, Selangor, Malaysia

INTRODUCTION

Peroral cholangioscopy (POC) enables direct visual examination of bile ducts, tissue sampling and therapeutic interventions.

OBJECTIVES

To evaluate the diagnostic utility of Spyglass POC for indeterminate biliary lesions and its usefulness in electrohydraulic lithotripsy (EHL) of bile duct stones not amenable to conventional endoscopic therapy.

METHODOLOGY

We report a case series of 38 patients in whom SpyGlass cholangioscopy was used with diagnostic and therapeutic intention between January 2016 - December 2017. Results are analysed using SPSS version 16.0.

RESULTS

There were 38 subjects in this study. The average age was 52.4±15.6 years old (ranging from 23 to 77). Most patients were female 21 (55.3%). CBD stricture was the most common indication (23/38). The remaining patients underwent Spyglass cholangioscopy for choledocholithiasis (15/38). A total of 12 patients underwent EHL out of which, 10 (83.3%) were successful. In cases of undefined etiology of biliary strictures, it was possible to exclude malignancy due to direct visualization in 4 patients. Adequate tissue for histological examination was secured in 84% of the patients (16/19) where 10 were malignant and 6 were benign strictures. The only complication encountered in this study was post ERCP cholangitis reported in 2 patients.

DISCUSSION

The main benefits of spyglass cholangioscopy are evaluation of strictures and the treatment of large CBD stones in which EHL is the major therapeutic application. This modality allows direct visual evaluation of the bile duct, thus allowing guided tissue sampling.The most commonly reported complication in Spyglass cholangioscopy is acute cholangitis (3.1% of cases).

CONCLUSION

Single operator cholangioscopy has become an integral part of the ERCP armamentarium. Evaluation of bile duct disease and biliary stone therapy can be safely performed with a high success rate by using this modality.

A RARE CASE OF GASTRIC MUCOSAL CALCINOSIS

Logaruban Aravan[1], Razana binti Mohd Ali[2], J Y Chieng[3]

[1]Department of Medicine, Serdang Hospital, Selangor, Malaysia
[2]Department of Pathology, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, Selangor, Malaysia
[3]Department of Medicine, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, Selangor, Malaysia

A 50-year-old male was referred to our Gastroenterology unit for pre- renal transplant Oesophagogastroduodenoscopy (OGDS) screening, He has underlying end stage renal disease (ESRD) secondary to Polycystic Kidney Disease on regular haemodialysis, complicated with hyperparathyroidism which parathyroidectomy was performed last year. Furthermore, he was diagnosed with hepatitis C, hypertension, and ischemic heart disease with patent foramen ovale, mitral regurgitation and atrial septal defect. He denied of any dyspeptic symptom. Further questioning, his father was passed away due to gastric cancer. He was on calcium supplementation, but denied of taking long term antacids. He had a normal serum calcium level. OGDS showed irregular gastric antral mucosa with light blue crest appearance under narrow band imaging (NBI), and few whitish plauqes of calcium deposit noted more obvious at gastric corpus. Histopathology reported as gastric mucosal calcinosis (GMC) with intestinal metaplasia (IM), negative for *Helicobacter pylori*.

GMC is rare, characterized by the nodular deposition of calcium salts in the gastric mucosa. GMC can be classified as metastatic, dystrophic, or idopathic. Metastatic type is the commonest type, found in the abnormal biochemical environment such as elevated calcium and phosphate level. Dystrophic calcification is calcification in inflamed or damaged gastric mucosa in the setting of normal biochemical environment. GMC is mostly seem in the patients with ESRD, hyperparathyrodism, organ transplantation, gastric cancer, or multiple myeloma, and long term aluminum-containing antacids or sucralfate. GMC rarely causes symptoms such as dyspepsia or epigastric pain. The natural history and the clinical significance of GMC are largely unknown. However, it is important for pathologist to report on GMC as some of the causes for the systemic calcification are reversible.

For our patient it's attributed to underlying ESRD with hyperparathyroidism. However, given the finding of IM together with his family history of gastric cancer, he needs long term OGDS surveillance.

EFFICACY AND SAFETY OF *PHYLLANTHUS NIRURI* IN NON-ALCOHOLIC STEATOHEPATITIS TREATMENT: PILOT STUDY FROM MALAYSIA: A SUB-ANALYSIS OF THE LIVER BIOPSY RESULTS ON *PHYLLANTHUS NIRURI* TREATMENT FOR NON-ALCOHOLIC STEATOHEPATITIS (NASH)

W K Lee[1], K K Kiew[1], Z Zainuddin[1], M R Hassan[1], N R Mustapha[2]

[1]Department of Gastroenterology and Hepatology, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia
[2]Department of Pathology, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia

INTRODUCTION

Non-alcoholic steatohepatitis (NASH) is an emerging problem with the risk of progressing to liver cirrhosis. The unique anti-inflammatory and antioxidant properties of *Phyllanthus Niruri* make it a potential cure for NASH. A pilot study conducted among patients with NASH who were treated with *Phyllanthus Niruri* showed a neutral result. However, we managed to get 7 patients to repeat liver biopsy after treatment for a more objective evaluation.

OBJECTIVE

Sub-analysis to evaluate the results of liver biopsy before and after the treatment of NASH with *Phyllanthus Niruri*.

METHODOLOGY

A study included fifty-two patients with biopsy-proven NASH were randomized to receive the treatment of *Phyllanthus Niruri* for 48 weeks. Liver biopsy was done at the baseline but only 7 patients consented to repeat liver biopsy after 48 weeks of treatment.

RESULTS

After 48 weeks of treatment, only 7 patients consented for a liver biopsy. Out of 7 patients, 4 patients showed histology improvement of NAFLD activity, 3 patients showed histology improvement of fibrosis stage after treatment.

DISCUSSION

Treatment with *Phyllanthus Niruri* for 48 weeks showed histological improvement of NAFLD activity as well as fibrosis stage.

CONCLUSION

Phyllanthus Niruri did show positive effects in the treatment of NASH. However, this study is limited by the small number of subjects and the difficulty in getting consent for post treatment liver biopsy.

AIDS CHOLANGIOPATHY: A HEPATOBILIARY PRESENTATION OF AIDS

Chai Zhen Hoo, Pek Woon Chin
Hospital Enche' Besar Hajjah Khalsom, Kluang, Johor, Malaysia

BACKGROUND

AIDS cholangiopathy was first described by Cello in 1989. It is usually seen in patients with CD4 below 100 cells u/L.

PRESENTATION

A 31 years old, Thai nationality lady who was newly diagnosed with Human Immunodeficiency Virus (HIV) was admitted with 1-month history of intermittent fever, vomiting, abdominal pain, loss of appetite and cough. There was no altered bowel habit. She was jaundiced and pale with hepatosplenomegaly. There were no stigmata of chronic liver disease. Other systemic examination was unremarkable.

INVESTIGATION & PROGRESS

Her Full Blood Count showed pancytopenia with lymphopenia (haemoglobin 5.2gm/dl, white cell count $2.55x10^3$/uL, platelet $62x10^3$/uL). Liver profile showed obstructive jaundice (Total Bilirubin 77.7umol/L, with direct hyperbilirubinemia, Alkaline Phosphatase 1184U/L, Aspartate Aminotransferase 770U/l, Alanine Aminotransferase 42U/L, Albumin 34g/L). Coagulation profile showed raised Prothrombin Time 15.5s. HIV test was positive with absolute CD4 count 28cells/uL. Hepatitis B and C tests were negative. X-ray chest was normal. Urgent ultrasound of hepatobiliary system showed oedematous gallbladder wall and thickened but non-dilated common bile duct. No calculi seen. Liver span was 15.7cm and spleen measured 11.5cm. In view of these findings, a diagnosis of AIDS cholangiopathy was made. She developed sudden onset blurring of vision on Day 2 of admission and was diagnosed with left eye Cytomegalovirus retinitis. Intravenous Gancyclovir, Metronidazole and Ceftriaxone were started. She continued to deteriorate and succumbed before initiation of anti-retroviral medications and further investigations could be performed.

CONCLUSION

AIDS cholangiopathy is not uncommon but diagnosis is often delayed. Prompt recognition can lead to earlier institution of anti-retroviral medications and better outcomes. Diagnosis of AIDS cholangiopathy is based on high index of suspicion, clinical, biochemical and radiological features; with gold standard diagnostic test being Endoscopic Retrograde Cholangio-pancreatography (ERCP).

OUTCOMES AND COMPLICATIONS OF ENDOSCOPIC ULTRASOUND-GUIDED DRAINAGE OF PANCREATIC PSEUDOCYSTS IN A SINGLE TERTIARY CENTRE

Yu Peng Tan, James Emmanuel, B Norhaniza, Tiong See Lee
Hospital Selayang, Selangor, Malaysia

OBJECTIVE

To evaluate duration of self-expandable metal stent placement post pancreatic cyst drainage.

METHODS

We analyzed retrospectively 41 subjects with symptomatic pancreatic pseudocyst from November 2014 until April 2018. They had pseudocyst drained with fully covered metal stent. Duration of drainage and stent in situ was monitored clinically and radiologically. We studied the technical and clinical success with early and late outcome including the complications.

RESULTS

Forty-one subjects (14 infected pseudocysts and 27 non-infected pseudocysts; 19 males, 22 females) received endoscopic ultrasound pseudocyst drainage using the Fully Covered Self Expanding Metal Stent (FCSEMS). The median age of the subjects was 44 years old. All subjects achieved technical success (100.0%). Pseudocysts resolved in 32 subjects (78.0%). The stents were removed after a median duration of 64 days. None of them experienced any immediate complication. Late complication were recurrence of pseudocyst (4/41; 0.1%), migrated stent (2/41; 0.5%), fistula (1/41; 0.1%). Two subjects were confirmed metastatic pancreatic cancer whilst one passed away due to severe pancreatitis.

CONCLUSION

Prolonged period of fully-covered metal stent placement was safe and effective for treatment of pancreatic pseudocysts.

A FIRST REPORTED CASE OF POSTERIOR REVERSIBLE ENCEPHALOPATHY SYNDROME (PRES) WITH VEDOLIZUMAB

Philip Pang Boon Cheong, Maylene Kok
Hospital Sultanah Aminah, Johor Bahru, Johor, Malaysia

OBJECTIVE

To report the first case of PRES after vedolizumab usage.

CASE

A 21 years old gentleman with severe fistulizing Crohn's disease (CD) was started on the first induction dose of vedolizumab. He then developed severe headache, hypertension, sinus bradycardia, and seizures after the infusion. MRI Brain done 48 hours later showed changes suggestive of PRES whilst a lumbar puncture excluded central nervous system infections. Vedolizumab was then withheld before recommencement 8 weeks later. He then tolerated the subsequent 3 doses of vedolizumab without any adverse reactions and showed clinical as well as biochemical improvements for his CD. A repeat MRI Brain 3 months after the event showed complete resolution of the previous changes.

CONCLUSIONS

PRES have been reported after administrations of many monoclonal antibodies. There was no published literature on PRES after vedolizumab, and we are reporting the first case of PRES after vedolizumab usage. There should be a high index of suspicion for PRES should patient develop rapid neurological signs or symptoms. Reintroduction of vedolizumab has thus far been uneventful in this patient and potentially safe in highly selected cases.

PRIMARY MALIGNANT MELANOMA OF DUODENUM WITH DISTANT METASTASIS: A RARE CAUSE OF UPPER GASTROINTESTINAL BLEEDING

Chiun Yann Ng[1], Asmawiza Awang[2], Raman Muthukaruppan[1], Lai Teck Gew[1], Phei Oon Tan[1], G Koleth[1]

[1]Gastroenterology Unit, Department of Medicine, Hospital Queen Elizabeth, Kota Kinabalu, Sabah, Malaysia
[2]Department of Pathology, Hospital Queen Elizabeth, Kota Kinabalu, Sabah, Malaysia

INTRODUCTION

Malignant melanoma is a neoplasm of melanocytes or a neoplasm of the cells that develop from melanocytes. Malignant melanoma in the gastrointestinal tract without any evidence of a primary lesion in the skin or any other site is extremely rare.

CASE

A 52 year-old lady with no past medical illness admitted to our hospital in September 2017 due to pneumonia with sepsis. She developed melena during the hospitalization and her hemoglobin level dropped from 9.8g/dL to 3.4g/dl. Oesophagogastroduodenoscopy performed after initial resuscitation showed four huge malignant-looking ulcers measuring about 3cm in the second part of duodenum with contact bleeding. Hemostasis was secured with argon plasma coagulation and ulcer edge biopsies were taken. Histopathological examination of the biopsies showed high grade malignant cells exhibiting large round to oval nuclei with marked nuclear pleomorphism and ample cytoplasm. By immunohistochemistry, HMB-45 antibodies and Melan A staining were strongly positive, thus confirming a diagnosis of malignant melanoma. The patient denied any history of cancerous lesions of the skin. Skin examination, including oral and anal mucosa failed to demonstrate a cutaneous primary lesion. Fundoscopic examination was normal. CT thorax-abdomen-pelvis revealed bilateral multiple lung nodules, right 8th rib lesion and enlarged right inguinal lymph node that suggestive of metastatic lesions. Histological examination of the rib lesion and the fine needle aspiration of right inguinal lymph node showed similar malignant cells as seen in duodenal ulcer biopsies. Hence, diagnosis of primary aggresive duodenal melanoma with distant metastasis was made. Unfortunately, the patient's condition deteriorated due to worsening sepsis and she succumbed after one week of hospitalization.

1-WEEK VERSUS 2-WEEK TRIPLE THERAPY WITH RABEPRAZOLE, AMOXICILLIN AND CLARITHROMYCIN FOR HELICOBACTER PYLORI ERADICATION, AN EAST MALAYSIA PERSPECTIVE

Chiun Yann Ng, Thee Ken Goh, Raman Muthukaruppan, Lai Teck Gew, Phei Oon Tan, G Koleth

Gastroenterology Unit, Department of Medicine, Hospital Queen Elizabeth, Kota Kinabalu, Sabah, Malaysia

OBJECTIVE

2-week proton pump inhibitor (PPI)-Clarithromycin based triple therapy for eradication of helicobacter pylori (H. Pylori) infection is recommended, unless shorter therapies are proven effective locally according to the Maastricht V/Florence Consensus. However, efficacy on the length of treatment course is never been studied in East Malaysia. Hence, our aim is to compare the efficacies of 1-week versus 2-week triple therapy for H. pylori eradication in East Malaysia.

METHODOLOGY

Retrospective analysis of clinical data of consecutive patients that diagnosed to have H. pylori infection from urea breath test (UBT), rapid urease test (RUT) and histology from 1 January 2017 to 31 June 2017. The patients were treated with either 1-week or 2-week triple therapy consisting rabeprazole 20mg bid, amoxicillin 1000mg bid and clarithromycin 500mg bid based on the physician preference. Demographic data, endoscopy findings and eradication rate of both groups of patients were analysed.

RESULTS

There were 98 patients (mean age 52.4±17.7 , 58.2% male) with H. pylori infection, of which 12.2% diagnosed by positive UBT, 84.7% with positive RUT and 3.1% with histology evidence of H. pylori from gastric biopsies. Oesophagogastroduodenoscopy (OGDS) was performed in 89 (90.8%) patients, peptic ulcers were reported in 30.6% of patients and 51.0% of patients had gastritis and/or duodenitis. There were 40 (48.0%) patients treated with 1-week triple therapy and the eradication rate was 85.0%, while 58 (59.2%) patients were treated with 2-week triple therapy and the eradication rate was 91.3%.

CONCLUSION

Two-week triple therapy had a higher eradication rate of H. pylori in our study but it was not statistically significant. Hence, randomised control trial with larger sample size should be conducted in the future.

A COMPARISON OF THE HEPAFAT-SCAN® AND FIBROSCAN® CONTROLLED ATTENUATION PARAMETER IN THE ESTIMATION OF HEPATIC STEATOSIS IN PATIENTS WITH NONALCOHOLIC FATTY LIVER DISEASE USING HISTOLOGY AS THE REFERENCE STANDARD

Syaman Harry[1], Anushya Vijayananthan[1], Chan Wah Kheong[2], Kartini Rahmat[1], Yang Faridah[1]

[1]Radiology, University Malaya Medical Centre, Kuala Lumpur, Malaysia
[2]Department of Medicine, University Malaya Medical Centre, Kuala Lumpur, Malaysia

INTRODUCTION

We aimed to compare the HepaFat-Scan®, a magnetic resonance [MRI] imaging-based technology for the measurement of liver fat and the FibroScan® (controlled attenuation parameter [CAP]) for the estimation of hepatic steatosis in patients with nonalcoholic fatty liver disease (NAFLD).

METHODS

NAFLD patients who underwent liver biopsy at our institution were enrolled in this study, and had MR imaging using the specific HepaFat-Scan® sequences and FibroScan examinations on the same day. Histopathological examinations of liver biopsy specimens were performed by a single expert pathologist who was blinded to the clinical data and reported according to the non-alcoholic steatohepatitis Clinical Research Network scoring system (NASH). Area under the receiver operating characteristic curve (AUROC) was used to evaluate the diagnostic accuracy of the HepaFat-Scan and CAP for the estimation of hepatic steatosis using liver histology as the reference standard.

RESULTS

Data of the 97 enrolled patients (mean age 57±10.1 years; males 43%; mean body mass index 30.6±4.5kg/m^2; central obesity 89%) was analysed.

The distribution of steatosis grades was as follows: S1, 40.2%; S2, 55.7% and S3, 4.1%. The AUROC (95% confidence interval), sensitivity, specificity, positive predictive value and negative predictive value of HepaFat-Scan and CAP for the diagnosis of steatosis grades ≥S2 and S3 using previously validated cut-offs are shown in Table 1.

CONCLUSION

The HepaFat-Scan has higher accuracy for the estimation of hepatic steatosis in NAFLD patients when compared with the CAP.

Table 1

Fibroscan CAP	≥S2	≥S3
AUROC	0.65 (0.53 – 0.76)	0.62 (0.29 – 0.94)
Optimal cut-off	310	378
Sensitivity	0.79	0.5
Specificity	0.54	0.87
Positive predictive value	0.72	0.14
Negative predictive value	0.64	0.97
HepaFat-Scan	≥S2	≥S3
AUROC	0.92 (0.86 – 0.97)	0.86 (0.75 – 0.97)
Optimal cut-off	12.4	17.8
Sensitivity	0.89	1.0
Specificity	0.79	0.76
Positive predictive value	0.87	0.15
Negative predictive value	0.84	1.0
P value comparing Fibroscan CAP and HepaFat-Scan	< 0.001	0.038

PYOGENIC LIVER ABSCESS - A 14 YEARS RETROSPECTIVE ANALYSIS OF THE TREND AND CLINICAL OUTCOMES IN A MALAYSIAN TERTIARY REFERRAL CENTRE (2004-2017)

C Fatinathan[1], R A Raja Ali[1], C S Ngiu[1], Z Q Wong[1], K Nawawi[1], P Periyasamy[2]

[1]Gastroenterology Unit, National University of Malaysia, Kuala Lumpur, Malaysia
[2]Infectious Disease Unit, National University of Malaysia, Kuala Lumpur, Malaysia

OBJECTIVE

Pyogenic liver abscess (PLA) is a potentially life-threatening disease and early diagnosis is crucial for prompt intervention. However, the last published local epidemiology data was more than 2 decades ago. The purpose of this study is to determine the incidence, emerging pattern of liver abscess and clinical outcomes in a tertiary teaching institute from 2004-2017.

METHODOLOGY

It was a retrospective case mix study performed at Universiti Kebangsaan Malaysia Medical Centre (UKMMC). Clinical data of all PLA patients admitted from January 2004 till December 2017 in both surgical and medical wards were gathered using the International Classification of Diseases 10th Revision (ICD 10) in specific code K 75.0, medical records and from the hospital database computer system (OMS).

RESULTS

There was a total of 206 patients diagnosed with PLA from 2004 till 2017. PLA has shown an increasing trend from 23 patients per 100,000 admissions in 2004-2010 to 58 patients per 100,000 admissions in 2011-2017. Klebsiella spp. was the commonest microorganism isolated. Biliary tract (42.9%) was the main source of infection. Abscess was predominantly right sided of the liver (63.3%), multi-loculated (54.4%) with an average size of 6.35cm (range 1.00cm - 21.00cm). Percutaneous catheter drainage (56.5%) and 3rd generation of cephalosporin with metronidazole (21.0%) was the most common mode of treatment. Sepsis (30.6%) was the most common extra hepatic complication. Mean drainage, hospitalisation and antibiotic duration were 12 days, 15 days and 42 days respectively. Abscess resolution was achieved in 69.4%. Relapse rate was 5.7%. Mortality rate was 6.1%.

CONCLUSION

PLA showed a rising trend over the years predominantly originating from biliary tract with Klebsiella spp. as the main bacterial species isolated. Combined antibiotic with percutaneous intervention gave good abscess resolution.

ASSOCIATION BETWEEN NON-ALCOHOLIC FATTY LIVER DISEASE AND SEVERITY OF CORONARY ARTERY DISEASE IN YOUNG PATIENTS WITH ACUTE CORONARY SYNDROME

Alyaa Hassan Ali[1], Kairul Najmi M.Nawawi[1],Shawal Mohamed Faiza[l], Wong Zhiqina[1], Ngiu Chai Soon[1], Yazmin Yaacob[3],Shamsul Azhar Shah[4], Che H H Hamdi[2], Oteh Maskon[2], Raja Affendi Raja Ali[1]

[1]Gastroenterology Unit, National University of Malaysia Medical Centre, Kuala Lumpur, Malaysia
[2]Cardiology Unit, National University of Malaysia Medical Centre, Kuala Lumpur, Malaysia
[3]Department of Radiology, National University of Malaysia Medical Centre, Kuala Lumpur, Malaysia
[4]Department of Community Health, National University of Malaysia Medical Centre, Kuala Lumpur, Malaysia

OBJECTIVE

Coronary artery disease (CAD) is an important extrahepatic complication of non-alcoholic fatty liver disease (NAFLD). Studies had shown a positive association between NAFLD and severity of CAD in ACS patients. However, this relationship in young ACS patients is still unknown. The aim of this study is to assess the association between NAFLD and severity of CAD in young ACS patients, and to determine the prevalence of NAFLD.

METHODOLOGY

This cross-sectional study included 85 young (age ≤45 years) ACS patients. Coronary angiogram was performed to assess CAD severity, and complexity using SYNTAX score. CAD severity was classified into: no apparent CAD, mild CAD, single vessel disease (SVD), and multi-vessel disease (MVD). Liver ultrasound was used to diagnose and grade the fatty liver (grade 1-3). NAFLD fibrosis score (NFS) was calculated and patients categorized into: low, indeterminate, and high probability for advanced fibrosis.

RESULTS

Participants median age was 40 years (IQR 35-43).Thirty-three (38.9%) had ST elevation myocardial infarction (STEMI), 32 (37.6%) had Non-STEMI and 20 (23.5%) had unstable angina. Coronary angiogram revealed MVD in 36.5%, SVD in 24.7%, mild CAD in 31.8%, and no apparent CAD in 7.1% with median Syntax score of 16. NAFLD was detected in 85 patients (100%), with 13 (15.2%), 36 (42.4%) and 36 (42.2%) patients had grade 1, grade 2 and grade 3 steatosis, respectively. NFS detected low advanced fibrosis probability in 60 (70.6%), indeterminate probability in 24 (28.2%) and high probability in only 1 patient (1.2%). No significant association observed between NAFLD grades and ACS subtypes (p=0.72), severity of CAD (p=0.822) and SYNTAX score (p=0.982). No significant association between NFS and ACS subtypes (p=0.232), severity of CAD (p=0.445) or SYNTAX score (p=0.839, r=0.029).

CONCLUSION

NAFLD prevalence in young ACS patients is 100%. However, no association was observed between NAFLD and severity of CAD in young ACS.

NON-TARGETED LIVER BIOPSY (LB) BY TRANSJUGULAR VERSUS PERCUTANEOUS ROUTE - INDICATIONS, ADEQUACY, DIAGNOSTIC SUCCESS AND COMPLICATIONS

James Emmanuel[1], Yu Peng Tan[1], Noor Aliza Mutalib[1], Izazul Bin Hussin[1], Mohd Rizal Bin Roslan[2], Tan Soek Siam[1], Haniza Omar[1]

[1]Department of Hepatology, Selayang Hospital, Selangor, Malaysia
[2]Department of Radiology, Selayang Hospital, Selangor, Malaysia

INTRODUCTION

Transjugular liver biopsy (TJLB) is needed in patients with contra-indications to percutaneous LB for the diagnosis of aetiology of liver disease. The contraindications for percutaneous LB include deranged bleeding parameters and ascites.

OBJECTIVES

The purpose of this study was to compare percutaneous and transjugular (TJLB) liver biopsies, in histological adequacy, diagnostic success and complications.

METHODOLOGY

This retrospective study was performed on the medical records of 58 patients who underwent (TJLB) and percutaneous LB between January and December 2017. The data were analysed using SPSS version 16.0.

RESULTS

Out of 58 cases of liver biopsy, 7 (12.1%) underwent TJLB and 51 (87.9%) percutaneous LB. The median age is 44.5 (27) years old and 31(53.4%) were female patients. The indications for LB were 33 (56.9%) AIH, 8 (13.8%) NASH and 7 (12.1%) drug induced liver injury (DILI). There were no technical failures reported in both types of LB. Most cases were uneventful except for 6 patients (10.3%) who developed minor complications which are subcapsular hematoma (3.4%), abdominal pain (3.4%), fever (1.7%) and hypotension (1.7%).

Histological diagnosis were successfully made in 85% (6/7) in TJLB and 96.1% (49/51) in the percutaneous route. Overall, 86% of the LB samples were adequate based on the histological standard with better results 94.5% (48/51) from the percutaneous route as opposed to 42.9% (3/7) from the TJLB route.

CONCLUSION

Our results demonstrate that the histological adequacy in order to successfully attain a diagnosis in both routes of LB (TJLB vs percutaneous) were comparable despite the TJLB route achieving a much inferior ratio that met the accepted histological standard (42.9%). There were no technical failures or life-threatening complications reported in any of the LB subjects.

SURGICAL RATES FOR CROHN'S DISEASE IN MALAYSIA ARE SIGNIFICANTLY DECREASING: REAL WORLD DATA IN THE ERA OF BIOLOGIC THERAPY

Chuah Kee Huat[1], Raja Affendi Raja Ali[2], Ida Normiha Hilmi[1]

[1]University of Malaya, Kuala Lumpur, Malaysia
[2]The National University of Malaysia, Kuala Lumpur, Malaysia

OBJECTIVE

Biologic therapy (mainly anti-TNFs) which was introduced in the management of Crohn's disease in Malaysia in year 2000 has resulted in a paradigm shift in the management of Crohn's disease. However, alteration of the natural history since the advent of biologic therapy remains to be proven. Our aim is to look at the intestinal surgical rates, which is a marker for more severe disease, before and after the introduction of biologic therapy.

METHOD

This is a retrospective study in which all Crohn's disease patients seen in 2 major tertiary referral hospitals (University Malaya Medical Centre and University Kebangsaan Malaysia Medical Centre) were recruited. Patients were stratified into two cohorts; cohort 1 from year 1991-2000 and cohort 2 from year 2001-2010. Details of demography, disease location, medications and cumulative surgical rates over 7 years were recorded.

RESULTS

A total of 207 patients were recruited; 71 from cohort 1 and 136 from cohort 2. Details of demography and disease location for both cohorts were similar; terminal ileum 17.6% vs 19.7%, colon 28.2% vs 48.5%, ileocolon 39.4% vs 30.9% in cohorts 1 and 2 respectively (p value=0.519). Patients who were ever exposed to biologics were significantly different between the two cohorts, approximately two times higher at 36.0% (n=49) in cohort 2, and 18.3% (n=13) in cohort 1, p=0.01. There was a statistically significant reduction in the 7-year cumulative intestinal surgical rates between cohort 1 and cohort 2, from 22.5% (n=16) to 9.5% (n=13), p=0.019.

CONCLUSIONS

Conclusion: In our setting, the advent of biologic therapy has resulted in a significant reduction for intestinal surgical rates in Crohn's disease. The study adds to the growing real life evidence that early use of biologics for Crohn's disease results in improved outcomes for the patients.

PERIOD PREVALENCE AND CUMULATIVE INCIDENCE OF LAMIVUDINE RESISTANCE AND ITS ASSOCIATED FACTOR IN CHRONIC HEPATITIS B PATIENT IN HOSPITAL UNIVERSITI SAINS MALAYSIA

M S Ismail, A Abdul Rahim

School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia

INTRODUCTION

Lamivudine is a treatment option for chronic hepatitis B (CHB), however development of viral resistance has made it a less favorable as a first line treatment option. While the alternatives such as entecavir are favoured as first line due to its superior genetic barrier, constraints such as cost may not make these drugs readily available in some practice.

OBJECTIVES

To establish period prevalence of lamivudine resistance among patient with CHB who received Lamivudine from January 2010 to Dec 2016, and to explore if there are any factors that associated with development of resistance. The study also aims to look at the response rate for those treated with lamivudine during the same period.

METHODOLOGY

This is a retrospective record review done by reviewing record of 41 patients who was lamivudine during the period of 2010 to 2016. Subjects are chronic hepatitis B patient who were treated with lamivudine as a first line monotherapy. All relevant data are gathered from the review of case notes and recorded in statistical software for analysis.

RESULTS

Total number of patients included in this study is 41. During the 6 years periods, 9 patients with lamivudine resistance were detected and this yields an overall period prevalence of 21.9%. The cumulative incidence of developing resistance during first year, second year and third year while on lamivudine is 4.9%, 12.2% and 21.9% respectively. Factors such as age, gender, race, pre-treatment viral load, serum ALT, and duration of treatment are shown not associated with development of resistance. In terms of response to treatment, this study shows an overall response rate of 89.5%.

CONCLUSION

The prevalence and incidence of lamivudine resistance in this study is lower in comparison with the prevalence and cumulative incidence cited in many literatures. However, further study is warranted to include more patients from other centres in order to improve power of this study, before any recommendation can be proposed.

DIETARY INTAKE, FOOD AVOIDANCE AND FOOD BELIEFS AMONG PATIENTS WITH ACTIVE ULCERATIVE COLITIS

Nor Hamizah Shafiee[1], Zahara Abdul Manaf[1], Shanthi Krishnasamy[1], Raja Affendi Raja Ali[2]

[1]Dietetics Programme, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia
[2]Gastroenterology and Hepatology Unit, Department of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

OBJECTIVES

This study aimed to assess dietary intake of ulcerative colitis (UC) patients related to disease states.

METHODOLOGY

A cross-sectional study involving 64 patients diagnosed with UC were recruited from a tertiary medical centre in Kuala Lumpur. A modified semi-structured questionnaire was administered to collect data on food avoidance and beliefs. Anthropometric measurements were conducted including weight, height, and body fat percentage. A validated Diet History Questionnaire was administered to assess patients' dietary intake history. Disease states of patients were evaluated by the gastroenterologist using the Powell Tuck Index.

RESULTS

A total of 64.1% of recruited patients were categorized in the inactive group, whereas 35.9% were from the active group. Patients with active disease had significantly greater weight loss (39.1%) in the last 6 months. UC patients with the clinically active state were more likely to possess certain beliefs on food and nutrition (95.7%) and frequently practice dietary avoidance (95.7%) compared to those with the inactive disease. Energy intake was adequate for both groups, however, inadequacies of protein, calcium, iron, folate, zinc, vitamin D, vitamin B12 and vitamin E had been identified in patients with the active state. Specifically, only 4% of patients with active disease achieved the recommendation for iron, zinc and vitamin B12.

DISCUSSION AND CONCLUSION

The inadequacies of nutrients in patients with the active disease might be associated with the long-lasting avoidance of particular food groups especially if they avoided the foods with nutrients dense, inflammation of the disease and adverse effects of the treatments. Findings indicated that patients with active UC have poorer dietary intake and prone to practice food avoidance compared to patients in the inactive state. These results emphasized the need for the dietitian to provide the evidence-based dietary advice in their treatment to reduce the risk of malnutrition.

COSTS, CHALLENGES AND OUTCOMES OF CHRONIC HEPATITIS C TREATMENT WITH DIRECT-ANTIVIRAL AGENTS FROM PROVIDER-BASED PERSPECTIVE IN MALAYSIA: BEFORE THE ERA OF COMPULSORY LICENSING

M R A Hassan[1], R M Said[2], N R W Ibrahim[2], H Omar[3], N A Mutalib[3], M F A Rahman[1], L Y Chan[4], H K Chan[5]

[1]Medical Department, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia
[2]Medical Department, Hospital Ampang, Ampang, Selangor, Malaysia
[3]Medical Department, Hospital Selayang, Batu Caves, Selangor, Malaysia
[4]Pharmacy Practice and Development Division, Petaling Jaya, Selangor, Malaysia
[5]Clinical Research Centre, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia

OBJECTIVES

Before the compulsory licensing was granted to produce or import generic sofosbuvir since the early 2018, the use of high-priced direct-acting agents (DAAs) in chronic hepatitis C (CHC) treatment was generally limited in Malaysia. This study was designed to assess the costs, challenges and outcomes of the CHC treatment before the generic DAAs were made available across public hospitals.

METHODOLOGY

The treatment costs (medications, facilities and personnel, laboratory tests and imaging procedures) incurred by the Ministry of Health for all the CHC patients, who presented to any of the four selected public tertiary hospitals and completed 12- or 24-week DAA treatment during 2016 and 2017, were computed. The sources of funding for the medications and the success of treatment, defined as the achievement of the sustained virologic response (SVR), were also determined.

RESULTS

Over the two-year period, only 47 CHC patients were treated with DAAs. More than half of them were infected by genotype-3 hepatitis C virus (51.1%) and had compensated cirrhosis (53.2%). Approximately 60% of them self-purchased the medications. Although only funding the medications for 25.5% of the patients, the ministry had still spent a total of RM 2,106,536 on the hepatitis C treatment, 96% of which was the drug costs. However, irrespective of the budgetary pressure, all the patients who underwent assessment 12 weeks following the treatment were found to have achieved the SVR.

DISCUSSION

Despite its highly promising treatment outcomes, the use of DAAs was shown to have benefit only a small group of patients, the majority of whom needed to bear the high medication costs.

CONCLUSIONS

As the CHC treatment was confirmed to be restricted primarily by the high drug costs, the decision of the government to exercise its power to issue the compulsory licensing would significantly increase the accessibility to DAAs in Malaysia.

PREVALENCE AND DEMOGRAPHIC PROFILE OF ULTRASOUND-CONFIRMED NON-ALCOHOLIC FATTY LIVER DISEASE (NAFLD) IN ADULTS IN NORTHERN KEDAH, MALAYSIA

M A D M Mansor[1], M R A Hassan[2], H K Chan[1], S M M Ali[1], N F Salwati[3], M F A Rahman[1]

[1]Clinical Research Centre, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia
[2]Medical Department, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia
[3]Radiology Department, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia

OBJECTIVES

Non-alcoholic fatty liver disease (NAFLD) is one of the most common liver diseases detected in patients undergoing hepatobiliary system or abdomen ultrasound. However, to date, the information on NAFLD is limited in Malaysia. This study aimed to determine the prevalence and demographic profile of ultrasound-confirmed NAFLD in Hospital Sultanah Bahiyah, which serves as the main referral center for the northern region of Kedah.

METHODOLOGY

This is a cross-sectional study, in which the medical records and ultrasound images of all the patients who underwent hepatobiliary system or abdomen ultrasound over the past 8 years (January 1st, 2008 to December 2015). A patient was determined to have NAFLD only if the ultrasound image indicated (i) the diffusely increased echogenicity (brightness) liver parenchyma, (ii) uniform heterogeneous liver parenchyma (iii) vascular blurring of portal or hepatic vein and (iv) enlarged liver.

RESULTS

A total of 1,391 NAFLD cases were detected, representing a prevalence of approximately 221 per 100,000 population. More than half of the patients were male (52.1%) and aged 50 years or above (54.6%), while 43.1% were in the age range of 20 to 49 years. Malay (72.3%) composed the majority of the patients, followed by Chinese (20.5%), Indian (4.5%) and Siamese (2.8%).

DISCUSSION

As metabolic syndromes were shown to be common in Malaysia, this is the first study designed to provide insight into the prevalence of NAFLD at a state level. However, due to the limitation of the ultrasound in the detection of less severe steatosis, the prevalence of NAFLD could be underestimated.

CONCLUSIONS

The findings confirm that NAFLD is common among the patients undergoing ultrasound in public health settings across the northern region of Kedah, especially the middle-aged and elderly groups. This raises a public health concern which warrants a nationwide preventive strategy.

EPIDEMIOLOGY OF COLORECTAL CANCER IN NORTHERN MALAYSIA: A 7-YEAR REVIEW (2008-2014)

M R A Hassan[1], S A Soelar[2], I Ismail[2], M F A Rahman[1], H K Chan[2]

[1]Medical Department, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia
[2]Clinical Research Centre, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia

INTRODUCTION

Colorectal cancer (CRC) is the second most common cancer after breast cancer in Malaysia. This study was designed to determine its incidence, mortality, and sociodemographic and clinical profiles across four states (Perlis, Kedah, Penang and Perak) in Northern Malaysia.

METHODOLOGY

All the data contributed by 22 health centers, both public and private, during January 2008 and December 2014 was obtained from the National Cancer Patient Registry (Colorectal Cancer). The incidence and mortality were calculated and presented as the number of cases per 100,000 population, while the sociodemographic and clinical profiles of CRC were descriptively summarized.

RESULTS

Over the 7-year period, the incidence and mortality rates of CRC were 53.18 and 23.07, respectively. The patients were mostly male (56%) and Chinese (55.5%), with a mean age of 63.1±12.8 years. Most of them (61.3%) presented at Stage III or IV upon the diagnosis, with the altered bowel habits as the most common symptom (21.7%). Rectum appeared to be the major primary site of tumors (37.5%), the majority of which were left-sided (86.4%) and moderately differentiated (84.6%).

DISCUSSION AND CONCLUSIONS

The findings suggest that Northern Malaysia has one of the highest CRC incidence and mortality rates reported. As patients were shown to generally present at late stages, efforts to enhance their awareness of CRC, as well as to promote regular CRC screening, are warranted.

INCIDENCE, MORTALITY AND DEMOGRAPHIC PROFILE OF SEROLOGICAL ANTIBODY ASSAY-CONFIRMED HEPATITIS C INFECTION IN KEDAH, MALAYSIA

M A D M Mansor[1], M R A Hassan[2], A Azlan[3], C H Keat[1], S A Soelar[1], S M M Ali[1], F Z D A Wahid[3], M F A Rahman[2]

[1]Clinical Research Centre, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia
[2]Medical Department, Hospital Sultanah Bahiyah, Alor Setar, Kedah, Malaysia
[3]State Health Department, Alor Setar, Kedah, Malaysia

OBJECTIVES

The understanding of the epidemiology of hepatitis C virus (HCV) infection enables policymakers to plan an effective public health strategy. This study aimed to estimate the incidence, mortality and demographic profile of HCV infection in Kedah, Malaysia.

METHODOLOGY

This is a cross-sectional study, in which the medical records of all the patients who were enrolled in the state hepatitis C patient registry over the past 7 years (2011-2017) will be examined. The enrolment of the patients in the registry was primarily based on the positive results of the immunoassay tests.

RESULTS

The age-adjusted incidence rate of HCV infection in Kedah was 64.9 per 100 000. Of the 1116 HCV-infected patients, 1022 (91.6%) were male. The majority of them (35.3%) were aged 30-39 years, while 24.2% were in the 40-49 years. Malay (88.4%) composed the majority of the patients, followed by Chinese (6.2%) and Indian (4.2%). The age-adjusted mortality rates was 1.4 per 100 000 person-years.

DISCUSSION

As the confirmation of HCV infection is based solely on the presence of HCV antibody but not the antigen, its incidence could be slightly overestimated.

CONCLUSIONS

The findings indicate that HCV infection is common in Kedah, Malaysia. While the detection of HCV has been restricted by the screening with only immunoassay, such findings could be used to justify the allocation of resources for the definitive diagnosis of chronic hepatitis C, so that proper treatment can be delivered timely.

PSEUDOTUMORAL CROHN'S DISEASE: A CASE REPORT

Nor Aslina Abd Samat[1], Irfan Ziad[1], Norasiah Abu Bakar[1], Rosemi Salleh[1], Aniza Hassan[2]

[1]Gastroenterology Unit, Hospital Raja Perempuan Zainab II, Kota Bharu, Kelantan, Malaysia
[2]Pathology Department, Hospital Rqja Perempuan Zainab II, Kota Bharu, Kelantan, Malaysia

INTRODUCTION

Pseudotumoral form of Crohn's disease is a very rare entity and mainly reported to occur in young adult. It is often mistaken from colic or small bowel neoplasia leading to a major and mutilating surgery. The definitive diagnosis is based on the histopathological examination of the surgical specimen.

CASE

A 39-year-old lady presented with symptomatic anaemia and chronic diarrhoea for 3 months. She denies any other extraintestinal symptoms. She had history of appendicectomy in 2009 and history of anaemia with recurrent apthous ulcer in 2015. OGDS and colonoscopy were done in view of positive stool occult blood. OGDS revealed no significant findings, however colonoscopy showed a large caecal tumour. CT scan of the abdomen and pelvis showed features of caecal tumour with dilated distal ileum and multiple hypodense liver lesions possible metastases. Patient underwent a right colectomy with double-barrel stoma and chemoport insertion. Histopathological examination from the caecal tumor biopsy was reported as benign colonic ulcer with mild glandular distortion. However, the histopathological examination from the hemicolectomy specimens were reported as inflammatory pseudotumour in the background of Crohn's disease. Patient subsequently went for the closure of the stoma and chemoport removal. Appropriate treatment for Crohn's disease was initiated. Unfortunately, she developed a surgical site infection that later on complicated with the formation of enterocutaneous fistula. She is currently treated with biological agent and responding to the treatment.

CONCLUSION

This entity of Crohn's disease can only be diagnosed through histopathological examination. Clinical presentation, endoscopic assessment and radiological examination were still inadequate because of the failure to differentiate them from colonic neoplasms.

VALIDATION OF FAECAL PYRUVATE KINASE ISOENZYME TYPE M2 (FAECAL M2-PK QUICK) TEST IN DETECTION OF COLORECTAL CARCINOMA AMONG HIGH RISK MALAYSIAN POPULATION

M S Rosaida[1], K Sattian[1], W I Nik Razima[1], A H Muhammad Ilham[1,3], Ahmad Najib Azmi[1,2]

[1]Hospital Ampang, Selangor, Malaysia
[2]Universiti Sains Islam Malaysia, Kuala Lumpur, Malaysia
[3]University Teknologi Mara, Selangor, Malaysia

INTRODUCTION

M2-PK is a special isoenzyme of pyruvate kinase which catalyzes conversion of phosphoenolpyruvate to pyruvate and released into the faeces of patients with polyps or colo-rectal cancer. While shown to be a promising in at least 17 different independent international studies, none of the study had conclusively proven the effectiveness of the test kit compared to colonoscopy.

BACKGROUND

The main purpose of the study is to validate the usefulness of ScheBoR M2PK Quick Stool Test in detection of CRC and adenoma/polyp against the invasive goal standard colonoscopy among high risk Malaysian population. Secondary objective includes evaluation of general distribution of CRC and cancer staging at diagnosis.

METHODOLOGY

This study is a prospective, cross-sectional, and multicentre using convenient sampling method of high risk population totaling 952 patients. The investigators will be blinded to the M2PK Test result and colonoscopy will be performed. Both M2PK test result and colonoscopy findings will be compared.

RESULTS

A total of 28 patients have been recruited. Median age of patients recruited is 54.5 compromising 39% male and 61% female. The youngest patient is 25 while the oldest patient is 74 years old. 57.1% (n=16) tested positive while 42.9% (n=12) tested negative. 75.0% (n=12) of patients who tested positive for M2PK has significant findings on colonoscopy; polyp 75% (n=9) and colorectal carcinoma 25% (n=3). 83.3% (n=10) with negative M2PK test had nil findings on colonoscopy. The sensitivity and specificity of the M2PK kit is 75% and 66% respectively. The positive predictive value and negative predictive value is 85.7% and 71.4% respectively.

CONCLUSION

Preliminary data shows a promising result of future use of ScheBoR M2PK Quick Stool Test as a screening tool for high risk population however further recruitment required before final conclusion.

RETROSPECTIVE AUDIT OF THE INPATIENT REFERRAL FOR COMMON GASTROINTESTINAL AND HEPATOLOGY DISORDER DURING RAMADAN MONTH IN HOSPITAL RAJA PEREMPUAN ZAINAB II

Nor Aslina Abd Samat, Nur Hidayah Mohd Makhatar, Norasiah Abu Bakar, Rosemi Salleh
Gastroenterology Unit, Hospital Raja Perempuan Zainab II, Kota Bharu, Kelantan, Malaysia

OBJECTIVE

To look into the direct effect of Ramadan fasting on the Gastroenterology Unit service and workload.

METHODOLOGY

Retrospective review of all inpatient referral to the Gastroenterology Unit from April 2017 to July 2017 which were corresponding to one month before Ramadan, one month of Ramadan and one month after Ramadan.

RESULTS

Total numbers of inpatient referral were recorded to be higher during the pre-Ramadan month (n=120) followed by Ramadan month (n=81) and post-Ramadan month (n=66). Malay patients were the highest contributor for referral in each month. (Pre-Ramadhan, n=116; Ramadan, n= 76; post-Ramadan, n=64). Upper gastrointestinal bleeding was stilll the main reason for referral for each month eventhough the number and percentage were reduced in Ramadan and post-Ramadan month. (Pre-ramadan 71.7% (n=86), Ramadan 63% (n=51), post-Ramadan 45.5% (n=30)). Peptic ulcer disease was noted to be the main findings in patients who underwent OGDS. (Pre-Ramadan 44.6%; Ramadan 43.5%; post-Ramadan 44.5%). Majority of patients were alive and discharge home. (Pre-Ramadan, n=106, Ramadan, n=60, post-Ramadan, n= 59).

DISCUSSION

This study showed that there was a reduction of referral from pre-fasting month to fasting month. The incidence of upper gastrointestinal bleeding, particularly caused by peptic ulcer disease was also lower in Ramadan compared to pre-Ramadan month. This is contradicting with the prediction that the incidence of peptic ulcer, gastritis and acute gastrointestinal bleeding would increase parallel with the elevation of gastric acid secretion among people who fasted during Ramadan.

CONCLUSION

As demonstrated by this study, less referral and incidence of upper gastrointestinal bleeding were seen during Ramadan compared to pre-Ramadan month thus directly showing a lower workload for our unit during Ramadan. However, an audit with better power is required to justify these findings.

A CASE STUDY OF GASTROINTESTINAL STROMAL TUMORS IN STOMACH AND MANAGEMENT APPROACH

Chan W L[1], Md Jalil M A[2]

[1]Hospital Tengku Ampuan Afzan, Kuantan, Malaysia
[2]International Islamic University Malaysia, Kuantan, Malaysia

OBJECTIVE

To report on our experience in the diagnostic approach, investigation and management for a patient with gastrointestinal stromal tumor (GIST) in the stomach.

METHODOLOGY

Retrospective data for a patient with diagnosis of gastrointestinal stromal tumor (GIST) were collected and studied in respect with the clinical findings, investigations outcome and follow-ups. The case report studies on a 63 years old Malay lady with background history of anemia and hypertension who presented to our setting with lethargy and blackish stool.

RESULTS

Endoscopy done on 7th November 2017 shows fundal mass which is suspicious of tumor. Endoscopic Ultrasonography performed on 24th November 2017 displays fundal mass of 40mm. Computed Tomography (CT) of Thoracic, Abdomen and Pelvic on 29th November 2017 exhibits an irregular heterogenous gastric fundal mass of 5.4cm x 3.8cm x 3.7cm.

DISCUSSION AND CONCLUSION

Patient was proceeded with wedge resection of gastric fundal tumor and the histopathological finding shows low risk gastrointestinal stromal tumor (GIST). Our final diagnosis is gastric fundal tumor. The role of imatinib has been discussed. Based on literatures reviewed, adjuvant imatinib is usually reserved for patients who meet the criteria of “High Risk” based on tumor size, mitotic index, location within the gastrointestinal tract. Thus, adjuvant imatinib is not initiated for this patient as the histopathological finding of the tumor is “Low Risk” gastrointestinal stromal tumor (GIST). Patient is planned for a 6 months follow-up with endoscopy to reassess any evidence of recurrence or high risk features. In conclusion, adjuvant imatinib is decided based on risks stratification and continued surveillance should be practiced for patient with gastrointestinal stromal tumor (GIST).

A CASE OF DIFFICULT NON-VARICEAL UPPER GASTROINTESTINAL BLEEDING, ENDOSCOPIC HEMOSTASIS SECURED WITH N-BUTYL-2-CYANOACRYLATE INJECTION

P O Tan, R Muthukaruppan, C Y Ng, G Koleth
Gastroenterology Unit, Hospital Queen Elizabeth, Sabah, Malaysia

INTRODUCTION

N-butyl-2-cyanoacrylate endoscopic hemostasis can be a safe and effective salvage alternative to surgery or transarterial embolization when other measures have failed.

CASE DESCRIPTION

30-year-old gentleman with no co-morbids, presented with 1 day history of dizziness, diaphoresis and reduced effort tolerance. He was admitted to ward for blood transfusion and further workup. After admission, he developed multiple episodes of hematemesis and passing of melenic stools. Hemodynamically, he deteriorated rapidly with an episode of syncopal attack and recurrent hematemesis requiring inotropic support. Glasgow-Blatchford score was 16. He was intubated for airway protection and planned for emergency gastroscopy in operating theater with surgeon standby. His condition continued to worsen despite resuscitation with 8 units of packed cells, 8 pints of colloids, 6 pints crystalloids, 6 units of cryosupernatant and 4 units of Fresh Frozen Plasma. Hemoglobin dropped from 3.6g/dL at admission to 1.8g/dL, platelets reduced from $190x10^3$/uL to $80x10^3$/uL with prolonged APTT of 127.8s and INR of 5.27 due to massive transfusion and consumption coagulopathy.

During gastroscopy, noted there was massive amounts of blood in stomach with narrowed proximal duodenum. There was a Forrest 1a duodenal ulcer bleed refractory to endoscopic hemostasis with injection of 90cc of 1:10000 adrenaline and heater probe application. It was not suitable for clip deployment. Decision was made by attending consultant to inject 3cc N-butyl-2-cyanoacrylate into the ulcer which secured hemostasis finally.

Post-endoscopy, he was managed in high dependency unit and coagulopathy and anemia were corrected. He made an uneventful recovery. Repeat gastroscopy was performed before discharge which showed a healing Forrest 3 ulcer at first part of duodenum. Patient was discharged well after 11 days of hospitalization and a urea breath test performed later as outpatient was positive. Helicobacter pylori eradication for 2 weeks was given and repeat urea breath test was negative.

A CASE REPORT OF EOSINOPHILIC COLITIS: PRESENTATION, DIAGNOSIS & MANAGEMENT

Saiful Suhardi M A[1], MdJalil M A[1], Che Aun A[2], Selimin A[2], Loke W A[2], Rasidi R[2]

[1]International Islamic University Malaysia, Kuantan, Pahang, Malaysia
[2]Hospital Tengku Ampuan Afzan, Kuantan, Pahang, Malaysia

OBJECTIVE

To report on our experience on diagnosing and managing an interesting rare case of eosinophilic colitis.

METHODOLOGY

This is a retrospective write up on a case we encountered in April 2018. Case note was studied for clinical presentation and findings, laboratory and imaging results and respond to management. We report a case of a 37-year-old woman with history of previously treated pulmonary tuberculosis and infective ileitis, presented with severe diarrhea for 2 weeks, weight loss and polyarthritis.

RESULT

Blood investigation showed elevated total white blood cell with marked eosinophilia. Colonoscopy revealed atrophic villi and punctate lesion over terminal ileum and caecum. Histopathology showed significantly high eosinophilic infiltration (>100hpf) of colonic mucosa. Tuberculosis, inflammatory bowel disease, autoimmune, drug-induced and infective causes was also ruled out. Her eosinophilic colitis is thought to be part of primary hypereosinophilic syndrome. She was successfully treated with corticosteroid and currently on targeted therapy to avoid adverse effect of prolonged steroid.

DISCUSSION AND CONCLUSION

Eosinophilic colitis is a rare form of primary eosinophilic gastrointestinal disease (EGID). Primary EGID accounts only about 1% of the population and eosinophilic colitis is the least frequent form of primary EGID. Presentation could varies according to area of predominance inflammation: mucosal, transmural or serosal. It responds well with corticosteroid however relapse is common. Other possible treatment option includes anti-histamine, Leukotriene Inhibitors and Biologics. This patient improved significantly with corticosteroid and currently on Imatinib for the primary hypereosinophilia.

PRELIMINARY DATA ON THE INCIDENCE OF CHRONIC HEPATITIS B INFECTION AMONG PARTICULAR GROUP OF ORANG ASLI IN PAHANG

M A MdJalil[1], M A B Firdaus[1], H Hasmoni[1], H P Tee[2], A Che Aun[2]

[1]International Islamic University of Malaya, Kuantan, Pahang, Malaysia
[2]Hospital Tengku Ampuan Afzan, Kuantan, Pahang, Malaysia

OBJECTIVE

Hepatitis burden in Malaysia were recorded at 1.5-9.8% in general population and varies according to racial demographic. In Pahang, Orang Asli made up to 3.5% of its population. Unfortunately, there are lacks of data in regards to hepatitis B for this population. The main goal of our study is to observe the incidence of chronic hepatitis B infection among particular group of Orang Asli in Pahang.

METHODOLOGY

The participants for this study were recruited on a voluntary basis during one of our outreach health-screening service. There were 231 participants, Hepatitis B surface antigen (HBsAg) and antibody titre (HBsAb) were taken from each subject and analysed.

RESULTS

Out of 231 subjects, majorities were female, 70.6% (163) and male, 29.4% (68). Mean age was 37 (25,50). Overall incidence of Hepatitis B infection (defined as positive HBsAg) in our cohort was 10.4% (24). The prevalence of positive immunity towards Hepatitis B (defined as HBsAb titre >10 mIU/mL) was 34.2%. We also found that the highest prevalence of HbsAg was among those aged 45-54-years-old (17.4%) followed by those aged 55-64-years-old. Interestingly, the prevalence of positive HbsAb increased with age. Majority (54,6%) of those aged 65 years and above had positive HbsAb; while only 18.8% the youngest of this cohort (aged 18 years and below) had positive HbsAb ($p = 0.033$). Interestingly majority (55.4%) of the studied population are both HbsAg and HbsAb negative.

DISCUSSION AND CONCLUSION

The incidence of Hepatitis B infection is higher in our cohort (10.4%) as compared to national data (1.5-9.8%). High number of population without infectivity/immunity status means neither they have been infected nor vaccinated at the time of the survey, thus making them susceptible to infection in the future. Low percentage of immunity among subjects below 24-year-old might reflect poor access to healthcare service and immunization program.

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VASCULITIS: EXTRA-HEPATIC MANIFESTATION OF AUTOIMMMUNE HEPATITIS

Muhd Abdul Ghani Zenol Abidin, Muhd Ilham Azib, Nor Aslina Abd Samat, Norasiah Abu Bakar, Rosemi Salleh

Gastroenterology Unit, Hospital Raja Perempuan Zainab II, Kota Bharu, Kelantan, Malaysia

CASE

A 33 years old Malay lady, known case of Autoimmune Hepatitis (AIH) and Primary Biliary Cirrhosis (PBC) presented with saddle nose, generalised tonic clonic seizures and painless purpuric lesions over the left big toe. Clinically, there was saddling of the nose, vasculitic lesion over the left big toe and hepatosplenomegaly with ascites. Neurological examinations were normal. Blood reports showed pancytopenia, normal liver functions with positive ANA along with positive anti-smooth muscle antibody and anti-mitochondrial antibody and low complements levels. CT Brain showed ill-defined non-enhancing hypodense lesion at left occipital region. Skin biopsy revealed evidence of vasculitis and thrombosis. She was put on Prednisolone and Ursodeoxycholic acid with unsatisfactory response. Vasculitis may present as an extra-hepatic manifestation of autoimmune hepatitis but is often difficult to treat.

CHEMOPROPHYLAXIS IN HEPATITIS B PATIENT WITH HEMATOLOGICAL MALIGNANCY RECEIVING RITUXIMAB IN HOSPITAL PULAU PINANG

Kar-Choon Tan, Choon-Kin Lee, Zhe-Eu Leow, Lay-Ang Lim, Chee-Hoong Hoe
Gastroenterology Unit, Department of Medicine, Hospital Pulau Pinang, Pulau Pinang, Malaysia

OBJECTIVES

Hepatitis B reactivation is not uncommon in Hepatitis B patients who receive chemotherapy or immunosuppression especially Rituximab. The objective of this study is to assess the efficacy of antiviral among Hematological malignancy patients with hepatitis b infection who receive rituximab.

METHODOLOGY

This is a retrospective and analytical survey including twenty three hematological patients with hepatitis b who received rituximab in Hematology unit in Penang General Hospital from year 2015 till 2017. The study's variables include age, gender, HbsAg, anti- Hbc, types of antiviral treatment and Liver Function test.

RESULTS

There were 14 male and 9 female patients in this study with mean age of 60.6 year old. Among the 23 hematological malignancy patients (21 lymphoma, 1 Thrombotic Thrombocytopenic Purpura and 1 Chronic Lymphocytic Leukaemia) with Hepatitis b infection who received rituximab, 22 patients received Lamivudine and 1 patient received Tenofovir. Out of these patients, Hbs Ag were detected in 10 (43.5%) patients while 13 (56.5%) patients had occult hepatitis b infection (Hbs Ag negative and Anti- Hbc reactive). All patients had normal liver function test at baseline. 1 (4.35%) patient developed hepatitis b reactivation and passed away (The patient only received Tenofovir after 3 cycles of Rituximab). 2 (8.69%) patients had transaminitis due to Non-alcoholic Steatohepatitis and drug induced respectively.

CONCLUSION

Prior to chemotherapy and immunosuppression therapy, it is crucial to screen patient for Hbs Ag and anti-Hbc as delay in antiviral prophylaxis will result in adverse outcome.

MYASTHENIC CRISIS PRECIPITATED BY NEW DIRECT-ACTING ANTIVIRAL AGENTS (DAAs) TREATMENT FOR CHRONIC HEPATITIS C VIRUS (HCV) INFECTION: A CASE REPORT

Kar-Choon Tan[1], Choon-Kin Lee[1], Kenny Tan[2], Lay-Khoon Loo[2], Chee-Hoong Hoe[1]

[1]Gastroenterology Unit, Department of Medicine, Hospital Pulau Pinang, Pulau Pinang, Malaysia
[2]Department of Neurology, Hospital Pulau Pinang, Pulau Pinang, Malaysia

INTRODUCTION

Myasthenic crisis is an emergency condition precipitated by various factors including infection, electrolyte imbalance, and medications. Treatment of hepatitis C with Interferon and ribavirin has been implicated in myasthenic crisis but limited data regarding the new direct-acting antiviral agents (DAAs). We report a case of sofosbuvir and daclatasvir induced myasthenic crisis in a middle age man who has generalized Myasthenia Gravis (MG).

CASE SUMMARY

A 68 year old gentleman with underlying generalized MG on remission, was referred to gastroenterology team for chronic HCV infection. He was treated with Pegylated-Interferon and ribavirin for 24 weeks and failed to response. Treatment was terminated in January 2018 and treated with DAAs (sofosbuvir and daclatasvir) and ribavirin in May 2018. Otherwise, there were no other new medications prescribed.

On day 5 of DAAs administration, patient complains of fever, cough, breathlessness, dysphagia and generalized weakness for 3 days. On assessment, his GCS was 15/15, normotensive, tachycardia and tachypnoeic with Oxygen saturation 70% under room air. Lungs were clear on auscultation. There was no ptosis and no fatiguability. Cranial nerves were intact and there was no proximal muscle weakness.

His chest radiograph was normal but arterial blood gas showed type II respiratory failure. Other investigations did not show evidence of infection or electrolyte imbalance. He was treated as myasthenic crisis and electively intubated for impending respiratory failure. Pyridostigmine, intravenous hydrocortisone and intravenous Immunoglobulin were given. DAAs and ribavirin were withheld since admission. During hospitalization, patient remained afebrile and all cultures were negative. Patient was successfully extubated and discharge home with oral prednisolone and pyridostigmine on day 12 of admission.

CONCLUSION

This case highlights the potential correlation of new direct-acting antiviral agents and myasthenic crisis. Physicians need to be vigilant in identifying this life-threatening condition when prescribing new medication to myasthenia patients.

GASTROENTEROPANCREATIC NEUROENDOCRINE TUMORS (GEP-NETs) MASQUERADING AS CHRONIC LIVER DISEASE

Yu Peng Tan, Chee Keong Thye, James Emmanuel, N A Mutalib, B Norhaniza, Tiong See Lee, Shobana Mukunda Devan

Hospital Selayang, Selangor, Malaysia

INTRODUCTION

Gastroenteropancreatic neuroendocrine tumors (GEP-NETs) are rare tumors. Most of them are indolent and usually presented late with mass effect.

CASE REPORT

We report a case of submucosal duodenal mass in a 42 year-old Indian man presented with liver cirrhosis, chronic diarrhea, fatigue and abdominal pain. Infective screening and workup of cirrhosis were negative. He was not an alcoholic and not consuming any drugs or traditional medicine. Endoscopic ultrasound revealed submucosal mass at third part of duodenum. The computed tomography revealed calcified mesenteric mass with desmoplastic reaction, studded with regional lymphadenopathy. The mass encased the superior mesenteric vein. AFP was 1.7. Chromogranin A was positive; 5-HIAA was 59 micromol/24 H. Besides that, FNA as well as nuclear protein Ki-67 that less than 1 were all consistent with the low grade, well differentiated gastroenteropancreatic neuroendocrine tumors (GEP-NETs). The treatment decision of not adopting pancreaticoduodenectomy was made in view of the inoperable condition. He received somatostatin analog and lomotil for symptoms control.

DISCUSSION

Duodenal well-differentiated endocrine tumor comprises only 2.6% of all NETs and affects all ages especially fifth decade. Our patient had duodenal carcinoid with marginally raised 5-HIAA, possibly due to foregut tumors lacking the decarboxylase enzyme necessary to convert 5-hydroxytryptophan to serotonin. He experienced abdominal complaint of pain, nausea and vomiting which can easily be brushed aside since he presented with liver cirrhosis.

CONCLUSION

Cirrhosis increases the risk of developing hepatocellular carcinoma. However, carcinoid tumor with lymph node metastasis can still be possible in this setting.

THE CLINICAL CHARACTERISTICS AND PROGNOSTIC PREDICTORS OF 90 DAYS OUTCOME OF ACUTE-ON-CHRONIC LIVER FAILURE (ACLF) IN MALAYSIA

W W Mak[1], S S Tan[2]

[1]Hospital Bentong, Pahang, Malaysia
[2]Hospital Selayang, Selangor, Malaysia

OBJECTIVE

Acute-on-Chronic Liver Failure (ACLF) is a clinical syndrome with multi-organ failures and high short-term mortality which is precipitated by an acute insult in patients with background of cirrhosis or other chronic liver disease. ACLF is common, occurring in 30% of in-patients and 25% of out-patients. Accurate prognostication of ACLF is essential for therapeutic decisions. Our aim was to validate the various scores in predicting the 90 days mortality among hospitalized decompensated cirrhotic patients.

METHODOLOGY

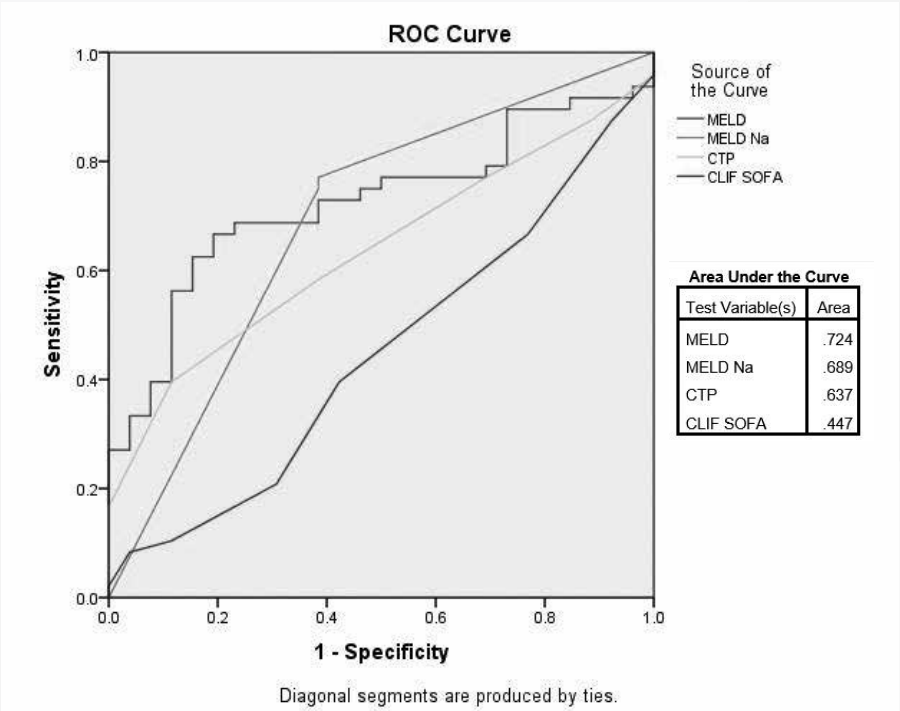
Retrospective and prospective data from 2014-2017 on Malaysian cohort were extracted from the APASL ACLF Research Consortium (AARC) database. ACLF were defined as APASL criteria: jaundice (serum bilirubin ≥85umol/l), coagulopathy (INR ≥1.5) and liver failure (clinical evidence of ascites and or hepatic encephalopathy) within 4 weeks of jaundice. Previously decompensated cirrhotics and hepatocellular carcinoma were excluded.

RESULTS

There were total of 77 patients, mean age of 46.9 years (SD 14.1) and 50 (65.8%) male patients. Fifty (65.8%) patients died within 90 days with mean survival length of 16.4 days (SD 14.6). The underlying cause of chronic liver disease were as follow: 39 (50.6%) viral hepatitis B / C, 10 (13.0%) alcohol liver disease, 5 (6.6%) drug induced, 3 (3.9%) autoimmune, 1 (1.3%) Wilson's disease and 19 (24.7%) other liver diseases. On admission, the mean MELD score (n=77) was 30.4 (SD 8.0), mean MELD Na score (n=77) 32.2 (SD 6.8), mean CLIF-SOFA score (n=77) 9.52 (SD 2.0), mean CTP score (n=77) 9.49 (SD 1.7), mean AARC score (n=35) 3.46 (SD 3.3), mean APACHE-II score (n=21) 9.71 (SD 4.4). MELD score displayed the highest AUROC of 0.724 outperforming all other scores in predicting 90 days mortality (p=0.001), odds ratio [OR] 7.41; 95% confidence interval [CI] (2.37-23.23). MELD score of > 30 on admission has a sensitivity of 60% and specificity of 81.5% in predicting mortality.

CONCLUSION

MELD score on admission enables accurate prediction of short-term mortality in patients with ACLF. Limitations of our study were the low number of available AARC and APACHE-II scores on admission.



THE IMPACT OF GASTROESOPHAGEAL REFLUX DISEASE, IRRITABLE BOWEL SYNDROME AND FUNCTIONAL CONSTIPATION ON HEALTH-RELATED QUALITY OF LIFE IN PATIENTS WITH CHRONIC KIDNEY DISEASE

Nurhayati Mohamad Nor[1], Yeong Yeh Lee[1], Azreen Syazril Adnan[1], Nor Azwany Yaacob[1], Noor Aman A Hamid[1], Nurhazwani Hamid[1], Nurzulaikha Abdullah[1], Mung Seong Wong[1], Thevarajan Jayaraman[2], Wan Hasnul Halimi Wan Hassan[3], Leong Goh Bak[3]

[1]School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia
[2]Gastrenterology Unit, Faculty of Medicine, Universiti Teknologi MARA, Sungai Buloh, Selangor, Malaysia
[3]Nephrology Department, Hospital Raja Perempuan Zainab II, Kota Bharu, Malaysia
[4]Nephrology Department, Hospital Serdang, Selangor, Malaysia

BACKGROUND

It is unknown if gastroesophageal reflux disease (GERD), irritable bowel syndrome (IBS) and functional constipation (FC) impacted quality of life of patients with various stages of chronic kidney disease (CKD).

METHODS

This was a cross-sectional study conducted in three centres (two in Kota Bharu and one in Kuala Lumpur) in Malaysia involving 391 patients (mean age 52.4±16.6, females 53.5%, Malays 86%). All completed the Malay language-translations of Kidney Disease Quality of Life (KDQOL-SF-24) with three main components i.e. disease-specific, physical and mental, GERDQ, and Rome III Diagnostic Questionnaires for IBS and FC. Multiple logistic regression analysis was used to evaluate association between GERD, IBS and FC with components of KDQOL. Significance set at P<0.05.

RESULTS

Of 391 respondents, 57.5% had CKD stage 4 and 5 disease, and 45.5% on dialysis. FC, GERD and IBS were reported in 80.8%, 13.0% and 6.4% respectively. Only FC affected total disease-specific scores of KDQOL-SF-24 (*P*<0.001). All three GERD, IBS and FC affected total physical scores of KDQOL-SF-24 (all *P*<0.03) but none affected total mental scores of KDQOL-SF-24 (all *P*>0.4). On the disease-specific domains of KDQOL-SF-24, GERD affected symptoms and sleep (both P<0.005), FC affected social support and patient satisfaction (both P<0.03) and both GERD and FC affected effects and burden of kidney diseases (all *P*<0.03). On the physical domains of KDQOL-SF-24, FC affected general health perception (*P*<0.001), both IBS and FC affected physical functioning (both *P*<0.03) and both GERD and IBS affected pain (both *P*<0.03). On the mental domains of KDQOL-SF-24, GERD affected emotion (*P*=0.001) and FC affected energy or fatigue (*P*=0.049).

CONCLUSIONS

FC is very common among patients with CKD and affected especially the disease-specific component of KDQOL-SF-24. GERD and IBS are less common than FC and GERD affected more domains of KDQOL-SF-24 than IBS.

THE IMPACT OF FUNCTIONAL NAUSEA ON HEALTH-RELATED QUALITY OF LIFE IN PATIENTS WITH CHRONIC KIDNEY DISEASE

Nurhayati Mohamad Nor[1], Yeong Yeh Lee[1], Azreen Syazril Adnan[1], Nor Azwany Yaacob[1], Noor Aman A Hamid[1], Nurhazwani Hamid[1], Nurzulaikha Abdullah[1], Mung Seong Wong[1], Thevarajan Jayaraman[2], Wan Hasnul Halimi Wan Hassan[3], Leong Goh Bak[3]

[1]School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia
[2]Gastrenterology Unit, Faculty of Medicine, Universiti Teknologi MARA, Sungai Buloh, Selangor, Malaysia
[3]Nephrology Department, Hospital Raja Perempuan Zainab II, Kota Bharu, Kelantan, Malaysia
[4]Nephrology Department, Hospital Serdang, Selangor, Malaysia

BACKGROUND

It is unknown if functional nausea has an impact on health-related quality of life in patients with various stages of chronic kidney disease (CKD).

METHODS

This was a cross-sectional study conducted in three centres (two in Kota Bharu and one in Kuala Lumpur) in Malaysia involving 391 patients (mean age 52.4±16.6, females 53.5%, Malays 86%). All completed the Malay language-translations of Kidney Disease Quality of Life (KDQOL-SF-24) with three main components i.e. disease-specific, physical and mental components and Rome III Diagnostic Questionnaire for functional nausea. Multiple logistic regression analysis was used to evaluate association between functional nausea with components of KDQOL-SF-24. Significance was set at $P<0.05$.

RESULTS

Of 391 respondents, 57.5% had CKD stage 4 and 5 disease, and 45.5% on dialysis. Nausea affected 18.9% of all respondents with 1/3 involved stage 4 disease. Status of dialysis (i.e. dialysis vs. no dialysis) did not affect nausea (54% vs. 45.9%, $P=0.09$). On the disease specific domains of KDQOL-SF-24, nausea affected burden of kidney disease, cognitive function, quality of social interactions, sleep, social support and dialysis staff encouragement (all $P<0.002$). For the physical domains of KDQOL-SF-24, nausea affected physical functioning and general health perception (both $P<0.02$). For the mental domains of KDQOL-SF-24, nausea affected emotional well-being and energy or fatigue (both $P<0.02$).

Conclusions

Functional nausea is common, not affected by dialysis, and significantly impacted all three components of KDQOL-SF-24 in CKD.

AN URBAN-RURAL COMPARISON OF THE PREVALENCE OF IRRITABLE BOWEL SYNDROME IN MALAYSIA

Atif Zimam Zamri[1], Nur Fareehah Ahmad Basir[1], Nur Adilah Rosli[1], Nur Adilah Che Ghani[1], Wong Zhiqin[2], Khairul Najmi Muhammad Nawawi[2], Lee Yeong Yeh[3], Raja Affendi Raja Ali[2], Norfilza Mohd Mokhtar[1]

[1]Department of Physiology, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

[2]Gastroenterology Unit, Department of Medicine, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

[3]Department of Medicine, School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia

OBJECTIVE

Irritable bowel syndrome is hypothesized to be closely related to economic development, fast living and greater psychological stress, typically described the urban lifestyle. There is probably a slight difference in term of access to healthcare, socio-cultural and environmental factors which may in theory affect the epidemiological features of irritable bowel syndrome (IBS). The aim of present study was to determine whether residential difference has an effect on the prevalence of IBS in multi-racial population in Malaysia.

METHODOLOGY

A random sampling method was used to obtain targeted samples among accompanying persons, either friends or relatives of patients attending the out-patient gastroenterology clinic or the Endoscopy Centre, Universiti Kebangsaan Malaysia Medical Centre, taken as an urban data. Pre-validated Malay, Chinese and English versions of Rome III irritable bowel syndrome module questionnaires were used for the evaluation of IBS. Data for prevalence of IBS in rural setting was obtained from a published study in 2012 conducted at Hospital Universiti Sains Malaysia.

RESULTS

For a total data of 731 subjects interviewed, the prevalence of irritable bowel syndrome was 11.1% with slightly higher rate in rural than in urban population (11.8% vs 10.8%). Mixed-type IBS was the most predominant subtype (51.9%). IBS was significantly higher among subjects with non-tertiary education (76.5%, p=0.02). Comparing between IBS subjects in urban and rural population, IBS was significantly higher among Malays (p=0.04) and married people in rural setting (p=0.01). In term of educational status, the majority of urban IBS subject were non-tertiary education (92.6%) and were low income earners (51.9%) as compared to the rural IBS (p=0.03).

CONCLUSION

The prevalence of IBS based on Rome III criteria in the rural community was found to be higher than in urban, with racial group, marital status, educational level and income were the discriminator to seek consultation.

DENGUE FEVER AND ITS EFFECT ON GASTROINTESTINAL SYSTEM AND LIVER

Logaruban Aravan[1], Durga Arinandini Arimuthu[1], Tharani Naidu[1], Wendy Tan[1], J Y Chieng[2]

[1]Department of Medicine, Serdang Hospital, Selangor, Malaysia

[2]Department of Pathology, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, Selangor, Malaysia

BACKGROUND

Dengue fever (DF) is endemic in Malaysia, with a wide spectrum of gastrointestinal and hepatic manifestations.

OBJECTIVES

To evaluate the prevalence and characteristics of gastrointestinal and hepatic manifestations among inpatients diagnosed with DF in Serdang Hospital.

METHODOLOGY

This is a retrospective study of all patients above fifteen year old that had been diagnosed DF and admitted to Serdang Hospital from 1st January 2017 to 31st March 2017. Those with negative dengue serology or incomplete data were excluded from our study. Patients' demography, clinical presentations, as well as biochemistry results were identified and recorded. Data were further analyzed with SPSS version 16.

RESULTS

312 patients were diagnosed with DF with positive serology test within this time frame. Majority of patients were Malay (70.5%). More male were affected with DF. 46.2% of them were in between age 20-39 years; the median age affected was 30 years. In terms of gastrointestinal symptoms, diarrhea was the commonest presentation with prevalence of 46.1%, followed by vomiting (43.1%) and abdominal pain (30.4 %). Elevated aspartate transaminase (AST) level had been seen in 89.7% of patients, while elevated alanine transaminase (ALT) level in 70.2% of patients. In majority of them, elevation of AST was more than ALT, with AST/ALT ratio >1. Hyperbilirubinemia was found in 8.0% of patients. International normalized ratio (INR) >1.5 had been found in 0.5% of patients, and deranged Activated prothrombin time (APTT) in 61.2% of patients. 9.9% (31/312) of patients were classified as severe DF according to WHO criteria. However, there was no liver failure reported among all patients.

DISCUSSION AND CONCLUSION

Both gastrointestinal and hepatic manifestations are common in DF. However, fatal liver failure is rare. Most patients can achieve symptomatic relief and normalization of liver function and full recovery with early supportive treatment.

COLORECTAL CARCINOMA BELOW 50 YEARS OF AGE - A RETROSPECTIVE DATA REVIEW ON THE NATIONAL COLORECTAL CANCER DATA REGISTRY

Nik Razima WI[1], S A Soelar[2], H K Chan[2], Ahmad Najib Azmi[1,3], Rosaida M S[1]

[1]Hospital Ampang, Ampang, Selangor, Malaysia
[2]CRC Hospital Sultanah Bahiyah, Alor Star, Kedah, Malaysia
[3]Faculty of Medicine and Health Sciences, Universiti Sains Islam Malaysia, Kuala Lumpur, Malaysia

INTRODUCTION

Colorectal cancer remains a notable source of mortality and morbidity across the globe. It is the second commonest cancer in Malaysia. Robust screening program has exponentiated worldwide in last few decade especially in the western countries. Interestingly, there are more worrying reports of late to show that the incidence in younger patients, below 50 years of age are increasing. This study is aimed to look at clinical characteristics and survival outcome of this group in our local context.

METHODOLOGY

The National Colorectal Cancer Registry, The Northern Report 2008 - 2014 was reviewed retrospectively into the data to determine the number and clinical characteristics in patients with colorectal cancer in patients aged below 50 and in patients of 50 years and above.

RESULTS

A total of 3117 patients were included in the registry. 477 patients were younger than 50 years of age. Majority of the patients with colorectal cancer in the registry were from the Chinese ethnic group (59%), followed by the Malays (35%), Indian (5%) and others (1%). However, the younger patients' cohort seem to have more Malays diagnosed (54%), followed by the Chinese (36%), Indian (9%) and others (1%). Only 7.3% of the younger adults have family history of colorectal cancer. 68.1% of these patients, falls into the 40-49 age group. Sadly majority of them (69.4%) are already in Stage III or Stage IV on presentation. The survival rate at 5 years however are significantly better in the younger patients with 45.49% as compared to the older group with 37.42% (p=0.015).

CONCLUSION

Patients below 50 years with colorectal cancer presents with a different clinical characteristic as compared to the older patients. A review on a bigger national registry would be beneficial. Perhaps advocating a surveillance screening program for populations at an earlier age may be warranted in the future.

GASTRIC EXTRAMEDULLARY MYELOMA: A REPORT OF 2 CASES AND A REVIEW OF THE LITERATURE

Nik Razima W I[1], S Kollanthavelu[1], Muhammad Ilham A H[1], Ahmad Najib Azmi[1,2], Rosaida M S[1]

[1]Hospital Ampang, Ampang, Selangor, Malaysia

[2]Faculty of Medicine and Health Sciences, Universiti Sains Islam Malaysia, Kuala Lumpur, Malaysia

INTRODUCTION

Multiple myeloma (MM) is characterized by an uncontrolled proliferation of plasma cells, usually restricted to the bone marrow. Extramedullary spread of MM may occur either at diagnosis or during the course of the disease.

CLINICAL CASE

We report 2 interesting case of patients with MM who developed gastric extramedullary manifestation during their course of disease. The first case was a 56 year old lady, who had a relapse of MM, a year after an autologous stem cell transplant. An OGDS was done following her complaints of abdominal pain and anaemia, which revealed multiple ulcerated broad based polyps with signs of recent bleed. The second case, a 52 year old lady admitted 10 months after her diagnosis of multiple myeloma with anaemia and melaena, following her induction chemotherapy. Her OGDS showed similar findings. Both biopsied lesion confirmed the presence of extramedullary manifestations of MM. Unfortunately both succumbed in less than 10 days of diagnosis.

DISCUSSION

Gastrointestinal extramedullary myeloma could present as abdominal discomfort and haematemesis or melaena. To date, there is no standard treatment for gastric EM myeloma. Some papers have also described successful cases of endoscopic mucosal resection (EMR) or endoscopic submucosal dissection (ESD) or surgical removal for solitary lesions. Unfortunately it may not be the best option in patients with multiple lesions. However, there are successful reports in usage of high dose dexamethasone and also with bortezomib.

CONCLUSION

Extramedullary myeloma involving the GI tract is rare. The presence of extramedullary lesion in the course of the disease indicates a poor prognosis. Perhaps every clinician must consider the possibility of GI extramedullary involvement in patients with multiple myeloma presenting with signs of anaemia or gastrointestinal haemorrhage as it may help in prognostication to aid further patient management and care.

ACUTE GASTROINTESTINAL GRAFT VERSUS HOST DISEASE AND CYTOMEGALOVIRUS ENTERITIS IN PATIENTS WITH ALLOGENIC HEMATOPOETIC STEM CELL TRANSPLANT

Soon Liang Lee[1], Kim Wah Ho[2], Ahmad Najib Azmi[1,3], MS Rosaida[1], Sharifah Shahnaz S A K[2], Sen Mui Tan[2], Tee Chuan Ong[2]

[1]Gastroenterology Unit, Hospital Ampang, Selangor, Malaysia
[2]Department of Hematology, Hospital Ampang, Selangor, Malaysia
[3]Faculty of Medicine and Health Sciences, Universiti Sains Islam Malaysia, Kuala Lumpur, Malaysia

BACKGROUND

Gastrointestinal (GI) Graft Versus Host Disease (GVHD) and Cytomegalovirus enteritis (CMV) are common complications in recipients of allogenic hematopoietic stem cell transplant (HSCT). We aim to analyse the incidence, onset, diagnostic methods and treatment of acute GI GVHD and CMV enteritis in our centre.

METHODOLOGY

We perform a retrospective review of patients with acute GI (GVHD) and CMV enteritis following allogenic HSCT from a single centre. All patients with acute GI GVHD were diagnosed clinically using National Institute of Health (NIH) consensus criteria.

RESULTS

A total of 174 patients whom undergone allogenic HSCT in the year 2016 and 2017 were included in the analysis. The incidence of acute GI GVHD and CMV enteritis were 13.8% and 4 % respectively. Median of onset to GI GVHD and CMV enteritis from allogenic HSCT were 43 days and 61 days respectively. Diagnosis of CMV enteritis in allogenic HSCT patients were established with histopathological examination *n=4* (57%) and tissue CMV Polymerase Chain Reaction *n=3* (43%) along with endoscopic evaluation. All patients with CMV enteritis had CMV viremia prior to diagnosis of CMV enteritis. Treatment administered for acute GI GVHD were mainly methylprednisolone *n=13* (54.2%) and prednisolone *n=11* (45.8%) while treatment for the patients with CMV enteritis include Cidofovir *n=1* (14.3%), valganciclovir *n=3* (42.9%), ganciclovir *n=1* (14.3%) and foscarnet *n=2* (28.6%).

CONCLUSION

The incidence of acute GI GVHD may be overestimated with its broad and non-specific clinical manifestations when clinical diagnosis is made with NIH consensus criteria. Endoscopy and histopathological examination should be considered in establishing its diagnosis. Allogenic HSCT recipients with gastrointestinal symptoms and CMV viremia may benefit from early diagnosis of CMV enteritis with endoscopy and histopathological examination or tissue CMV PCR.

A EASIER AND THE LEAST COSTLY WAY TO ASCESS COMMON BILE DUCT (CBD) - DIRECT PEORAL CHOLANGIOSCOPY (DPOC), BY USING SLIM SCOPE WITH DIAMETER OF 4.9MM WITH ONE-MAN FREEHAND TECHNIQUE

Choong Fu Hew

Regency Specialist Hospital, Johor Bahru, Johor, Malaysia

OBJECTIVE

To observe the feasibility and limitation of direct peroral cholangioscopy (DPOC) for post-sphincterotomy (EPT) cases with one-man freehand technique.

METHODS

Patients: Three patients were included, all are male, age 54 to 68 years old with CBD stones, first case needed to do ERCP, the other two had EPT done before at 5 years and 2 months ago respectively.

First case was under GA, on supine position, the other two cases were under conscious sedation without fluoroscopic guidance. A slim scope (Olympus GIF N180, Super-slim 4.9mm diameter) was inserted directly via nose or mouth into second portion of duodenum, and J-turn was made as scope was pushing further down to 3rd portion of duodenum, rotate up and down the scope until the scope and the orifice of previous EPT were in view, scope was negotiated into CBD with or without the guidance of guide wire.

RESULT

DPOC was successfully done in three cases, first case has complication of pancreatitis with extremely high lipase but dropped dramatically the next day, it could be due to Balloon dilatation during ERCP and delayed ERCP for penicillin treatment of Syphilis, the other two have no complication. No residual CBD stone and no distal CBD stricture were detected.

DISCUSSION

1. DPOC has limitation to view proximal CBD , technique like by using occlusion balloon catheter, overtube may be needed.

2. Endoscopist must has experiences in ERCP and slim scope which has only two angulation.

CONCLUSION

DPOC is a cost saving procedure and could be done for every post-EPT cases.

THE PREVALENCE OF NON-ALCOHOLIC FATTY LIVER DISEASE IN PATIENTS WITH CHRONIC HEPATITIS B AND ITS ASSOCIATED CHARACTERISTICS

K N Muhammad Nawawi, D Chew, Z Q Wong, C S Ngiu, R A Raja Ali

Gastroenterology Unit, Department of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

BACKGROUND

Non-alcoholic fatty liver disease (NAFLD) is increasingly common nowadays. Little is known regarding NAFLD in concomitant chronic hepatitis B (CHB) patients.

OBJECTIVES

To determine the prevalence of NAFLD in CHB patients, and to compare the virological, biochemical and metabolic profiles between CHB patients with and without NAFLD. The incidence of new NAFLD and cirrhosis progression over the follow-up period will also be analysed.

METHODOLOGY

Retrospective study on a cohort of CHB patients was conducted. Baseline parameters at the time of CHB diagnosis were compared between the two groups (CHB vs. CHB/NAFLD). NAFLD and cirrhosis were diagnosed by liver ultrasonography.

RESULTS

A total of 201 adult CHB patients with a mean of 9-year follow-up were analysed. Of these, 15.9% (*n*=32) had concomitant NAFLD. Mean age of diagnosis were similar in both groups (46 vs. 48 years old, p=0.39). Less CHB/NAFLD patients had HBeAg +ve than in CHB patients (6.3% vs. 27.8%, p=0.007). For the biochemical analysis, CHB/NAFLD patients had significantly higher levels of alanine transaminase (ALT), triglyceride and fasting blood glucose as compared to CHB patients; [48 vs. 33IU/L (p=0.004), 1.7 vs. 1.3mmol/L (p=0.009) and 6.0 vs. 5.4mmol/L (p=0.04) respectively]. Dyslipidaemia and type 2 diabetes mellitus were more prevalent in CHB/NAFLD patients (31.3% vs. 10.7%, p=0.005 and 18.8% vs. 5%, p=0.01 respectively). Furthermore, the liver stiffness and controlled attenuated parameter values for CHB/NAFLD patients were higher than CHB patients (9.8 vs. 7.3kPa, p=0.051 and 304 vs. 226 dB/m respectively).

During the follow-up period, 21.3% (36/169) of CHB patients developed NAFLD within the mean of 6 years from diagnosis. Among them, 41% and 3% developed newly diagnosed diabetes mellitus and dyslipidemia respectively and 11% (4/36) progressed to cirrhosis. In pre-existing CHB/NAFLD patients, 15.6% (5/32) have progressed to cirrhosis.

CONCLUSION

Overall, one third (33.8%) of CHB patients had concomitant NAFLD (pre-existing, *n*=32 and newly diagnosed, *n*=36). NAFLD should be screened among patients with CHB and hence appropriate preventive measures can be undertaken to control the associated metabolic risks.

EFFECTS OF PROVOCATIVE BOLUS AND POSITIONS ON CHICAGO 3.0 METRICS IN NORMAL MALAY POPULATION

Su Fui Thung[1], Muhammad Ilham Abdul Hafidz[2], Thevaraajan Jayaraman[2], Mung Seong Wong[1], Rona Marie Lawenko[3], Azliani Abdul Aziz[1], Siti Norhasliza[1],Chai Soon Ngiu[4], Yeong Yeh Lee[1]

[1]School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia
[2]Faculty of Medicine, Universiti Teknologi MARA, Sungai Buloh, Selangor, Malaysia
[3]De La Salle Health Sciences Institute, Dasmarinas, Cavite, Philippines
[4]Unit of Gastroenterology, Department of Medicine, The National University of Malaysia, Kuala Lumpur, Malaysia

BACKGROUND

High resolution manometry (HRM) is considered as gold standard test for dysphagia. Provocative bolus in different postures may demonstrate more abnormalities but need to establish normative values first, thus the aim of current study.

METHOD

A cross-sectional study involving 50 healthy Malay volunteers was performed using the 36-channels HRM system (Medical Measurement System, Amsterdam). Four Chicago 3.0 metrics (integrated relaxation pressure or IRP4s, distal contractile integral or DCI, distal latency or DL and peristaltic break or PB) were determined following protocol that consisted of ten liquids, three viscous and three solid boluses in each supine, sitting and standing postures.

RESULT

Different postures affected IRP4s, DCI and PB but not DL. IRP4s was reduced in supine vs. sitting ($P<0.001$) for liquid and viscous boluses. DCI was lower in supine vs. sitting and supine vs. standing (both $P<0.001$) for liquids and solids but only supine vs. standing ($P<0.001$) with viscous bolus. PB was longer in supine vs. sitting only for all types of boluses (all $P<0.001$). On the other hand, boluses types affected DCI, DL and PB but not IRP4s. DCI was greater with viscous vs. solid ($P<0.001$) in supine, liquid vs. solid and viscous vs. solid (both $P \leq 0.017$) in sitting and liquid vs solid and viscous vs solid (both $P \leq 0.002$) in standing posture. DL was longer with liquid vs. solid and viscous vs. solid (both $P<0.001$) in supine, liquid vs. viscous and liquid vs. solid (both $P \leq 0.009$) in sitting and with liquid vs. viscous, liquid vs. solid and viscous vs. solid (all $P \leq 0.001$) in standing posture. Lastly, PB was shorter with liquid vs. solid and viscous vs. solid (both $P \leq 0.004$) in sitting and liquid vs. solid and viscous vs. solid (both $P<0.001$) in standing posture.

CONCLUSION

Provocative boluses and postures have differential effects on Chicago 3.0 metrics and this should be considered when evaluating dysphagia.

WHAT FACTORS AFFECT MARITAL QUALITY, PSYCHOLOGY AND QUALITY OF LIFE IN MARRIED FEMALES WITH FUNCTIONAL GASTROINTESTINAL DISORDERS?

Nurhazwani Hamid[1], Rosediani Muhamad[1], Yee Cheng Kueh[1], Zalina Zahari[2], Nurhayati Mohamad Nor[1], Nurzulaikha Abdullah[1], Mung Seong Wong[1], Thevaraajan Jayaraman[3], Yeong Yeh Lee[1]

[1]School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia
[2]Faculty of Pharmacy, Universiti Sultan Zainal Abidin (UniSZA), Terengganu, Malaysia
[3]Gastroenterology Unit, Faculty of Medicine, Universiti Teknologi MARA, Sungai Buloh, Selangor, Malaysia

BACKGROUND

We aimed to determine factors associated with marital quality, psychological stress and quality of life (QOL) among married females affected by functional gastrointestinal disorders (FGIDs) including irritable bowel syndrome (IBS), functional dyspepsia (FD) and overlap of both.

METHODS

This was cross-sectional study among married females with and without clinically diagnosed IBS and FD. Factors studied included age, education, height, weight, incomes of wife and husband, duration of current marriage, number of marriages and number of children. Revised Dyadic Adjustment Scale (RDAS; a measure of distress; lesser score more distress) and Relationship Dynamics Scale (RDS; a measure of conflict; higher score more conflicts) were outcome measures of marital quality. Hospital Anxiety Depression Scale (HADS) and Quality of life (EQ-5D-5L and EQ-VAS) were also evaluated outcomes. Multivariate analysis (Odd Ratio, OR and or P value) was used to determine associations between factors and outcomes.

RESULTS

Of 68 consented participants (Mean age 37.8±9.4 years, Malays 69%), 56% were IBS, 32.4% were FD and 12% overlap of two. Factors associated with distressed relationship were wife income (OR 6.1, P=0.001), height (OR 1.2, P=0.017), weight (OR 1.1, P=0.019), anxiety (OR 1.5, P=0.015) and QOL (OR 1.1, P=0.045). Factors associated with marital conflicts included education (P=0.009), wife income (P=0.02), height (P=0.02) and number of children (P=0.05). Factors associated with anxiety included age (P=0.04), duration of current marriage (P=0.01) and number of marriages (P=0.03) and with depression, age and duration of marriage (both P=0.01). QOL was affected by marital conflicts (P=0.01) not others. Of 150 control participants without FGIDs (Mean age 34.0±9.4 years, Malays 100%), there were no identifiable factors associated with distressed relationship (all P>0.05) but with marital conflicts, husband income was found to be significant (P<0.001).

CONCLUSIONS

Compared to controls, there are identifiable personal and psychological factors associated with relationship distress and conflicts among married females with FGIDs.

A RARE CASE OF GASTROINTESTINAL BLEEDING: SMALL BOWEL TUMOR

R Puthashanan Rajamanickam[1], Rosaida Mohd Said[1], Ahmad Najib Azmi[1,2]

[1]Hospital Ampang, Selangor, Malaysia

[2]Faculty of Medicine and Health Sciences, Universiti Sains Islam Malaysia, Kuala Lumpur, Malaysia

BACKGROUND

Malignant neoplasms of the small bowel are among the rarest types of cancer, accounting to only 2% of all gastrointestinal (GI) cancers. Research has shown the heterogeneity of tumour types, including adenocarcinomas, carcinoids, sarcomas and lymphomas. Unfortunately, malignant lesions are often discovered when they have metastasized to distant sites or at surgery when indicated for other diagnosis or intestinal obstruction.

CASE

We report a case of a 51-year old man, presented with fatigue, lethargy and unexplained severe anemia for one month. He was transfused multiple times during admission. Upper endoscopy was unremarkable. Lower endoscopy revealed blood clots originating from ileocecal valve. Capsule endoscopy showed a mass with overlying blood clots at the mid jejunal region. CT mesenteric angiography showed a small bowel mass with clots at mid abdominal region. Exploratory laparotomy was performed, which revealed a large tumour at proximal and mid jejunum region with presence of another tumour at distal ileum with nodal involvement. Small bowel resection and end to end anastomosis was performed.

Histopathological report showed primary undifferentiated carcinoma of the small bowel.

DISCUSSION

As the patient did not present with gastrointestinal bleeding initially, it is important to investigate thoroughly by endoscopic and imaging studies due to the severe refractory anemia. Point should be taken not to miss small bowel territories as undifferentiated adenocarcinoma of small bowel may present in a non-specific manner. The small bowel adenocarcinoma is the primary lesion as the computed tomographic imaging did not reveal any pathology in other region. The prognosis of patients with undifferentiated carcinoma of the small intestine is very poor. Lymph node invasion is the main prognostic factor for local small bowel adenocarcinoma; moreover, the number of lymph nodes assessed and the number of positive lymph nodes are of prognostic value.

CONCLUSION

All anemia cases must be investigated thoroughly. Besides serological analysis to find out the cause of anemia, endoscopic and small bowel investigations must not be neglected. Further delays in localizing the source of bleeding will waste more resources and worsens the prognosis.

MOLECULAR DETECTION OF PATHOGENIC GUT BACTERIA IN PATIENTS WITH INFLAMMATORY BOWEL DISEASE IS NOT INFLUENCED BY DISEASE STATUS

D C H Chew[1], Z Z Rashid[2], S A Aljeffry[2], S H Che Mohd Azmi[2], A M S Khoo[2], M A Shahrudin[2], V Kaneysan[2], M N Abdul Samat[2], H Yusoff[2], R A Raja Ali[1]

[1]Gastroenterology Unit, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Kaula Lumpur, Malaysia

[2]Department of Medical Microbiology and Immunology, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Kaula Lumpur, Malaysia

BACKGROUND

Little is known about the isolation of pathogenic gut bacteria among patients with inflammatory bowel disease (IBD) of different disease activity status. We aimed to determine the influence of IBD disease status on the presence and composition of pathogenic gut bacteria.

METHODS

A cross-sectional study was carried-out from January 2017 to April 2018 at Universiti Kebangsaan Malaysia Medical Centre. Based on crohn's disease and ulcerative colitis disease activity indices, IBD patients were classified into active or inactive status. Stool samples were collected from all IBD patients. Those on antibiotics or corticosteroid therapy were excluded. The samples were analysed using multiplex real-time quantitative polymerase chain reaction by Seegene Allplex™ gastrointestinal panels.

RESULTS

A total of 49 IBD patients were recruited, of which 20 (40.8%) had Crohn's disease (CD) and 29 (59.2%) ulcerative colitis (UC) and 63.3% of them had inactive and 36.7% had active diseases. 69.3% of IBD patients had at least one pathogenic gut bacteria detected in which 46.9% of them had inactive and 22.4% had active diseases. Inactive IBD was not associated with the absence of pathogenic gut bacteria (p=0.834). No statistical difference was found between the presence of bacteria in CD (28.5%) and UC (40.8%) and patients, p=0.699. The commonest pathogenic bacteria detected for active and inactive IBD patients was Escherichia coli (73%); subtypes of *Enteropathogenic E.coli* (55.1%), *Enteroaggregative E.coli* (18.4%), *E.coli* O157 (14.3%), *Enterohaemorrhagic E.Coli* (10.2%) and *Enterotoxigenic E.coli* (10.2%). Other pathogens detected were *Aeromonas spp.* (18.4%), *Salmonella spp.* (14.3%), *Clostridium difficile B* (6.1%), and *Campylobacter spp.* (4.1%).

CONCLUSION

The commonest pathogenic gut bacteria isolated from faeces of patients with IBD is *Escherichia coli* with the commonest subtype of *Enteropathogenic E.coli*. However, the detection of these bacteria is not influenced by the disease status and its clinical relevance in the management of IBD remains to be determined.

Keywords

Inflammatory bowel disease, different disease status, E. coli, Enteropathogenic E.coli

NORMATIVE VALUES FOR 24-HOURS AMBULATORY MULTICHANNEL INTRALUMINAL IMPEDANCE AND PH MONITORING (SANDHILL AND MMS SYSTEMS) IN THE MALAY POPULATION

Su Fui Thung[1], Mohd Ridzuan Mohd Said[2], Muhammad Ilham Abdul Hafidz[3], Thevaraajan Jayaraman[3], Mung Seong Wong[1], Rona Marie Lawenko[4], Azliani Abdul Aziz[1], Siti Norhasliza[1], Chai Soon Ngiu[2], Yeong Yeh Lee[1], Zhiqin Wong[2], Raja Affendi Raja Ali[2]

[1]School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia
[2]Unit of Gastroenterology, Department of Medicine, The National University of Malaysia, Kuala Lumpur, Malaysia
[3]Faculty of Medicine, Universiti Teknologi MARA, Sungai Buloh, Selangor, Malaysia
[4]De La Salle Health Sciences Institute, Dasmarinas, Cavite, Philippines

BACKGROUND

Normative data among Asians for 24-hour ambulatory pH impedance monitoring is currently lacking. We aimed to determine normative metrics using two widely used systems in Malaysia and to evaluate factors affecting these values.

METHOD

We conducted a cross-sectional study involving 100 healthy Malay adults (39 Medical Measurement System (MMS), Amsterdam and 61 ZepHr® system, Diversatek, Highlands Ranch, USA). Normative values for Johnson DeMeester composite score, total percentage time pH less than 4, gastro-esophageal refluxes for total, acidic and non-acidic for supine and upright were determined for each system and also the combination of two. Factors including age, weight, height, body mass index (BMI) and waist circumference were analyzed to see if they affected each metric using the multivariate analysis with $P<0.05$ being significant.

RESULT

The normative metrics (MMS, Sandhill and combined) are shown in Table 1. Using independent t test, there were no statistical differences in pH-impedance metrics between the two systems (all $P >0.05$). As for factors affecting the values, there were no significant association between age, weight, height, BMI and waist circumference with the DeMeester score, total all refluxes and acidic refluxes (all $P>0.05$). Height was the only factor that affected the total percentage time pH less than 4 with adjusted B -0.60, $P=0.037$. As for non-acidic refluxes, there was significant association observed with weight (adjusted B -5.56, $P=0.002$), height (adjusted B 4.93, $P=0.001$) and BMI (adjusted B 14.51, $P=0.002$).

CONCLUSION

Normative values for both system can be used interchangeably. Non-acidic refluxes are significantly affected by BMI metrics.

IDENTIFICATION OF CANCER-RELATED MICORNAS IN NON-ALCOHOLIC STEATOHEPATITIS INDUCED LIVER CIRRHOSIS WITH OR WITHOUT HEPATOCELLULAR CARCINOMA

Allia Najmie Muhammad Yusuf[1], Raja Affendi Raja Ali[2], Khairul Najmi Muhammad Nawawi[2], Norfilza Mohd Mokhtar[1]

[1]Physiology Unit, Department of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia
[2]Gastroenterology Unit, Department of Medicine, Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

OBJECTIVE

The current available biomarkers for hepatocellular carcinoma (HCC) are still lack of sensitivity and specificity. Therefore, clinically validated and promising biomarkers such as microRNA (miRNA) is required. Hence, this study was designed to identify HCC-related miRNAs in NASH-induced liver cirrhosis that can be potential biomarkers in detecting NASH-induced liver cirrhosis with HCC.

METHODOLOGY

A literature search was performed to identify potential miRNAs as biomarkers in HCC. Three oncogenic miRNAs (miR-182, miR-301a and miR-373) with high expression in the HCC tissues as compared to normal liver tissue were selected as the candidate genes. Serum and ascitic fluid expression of miR-182, miR-301a and miR-373 were tested in 28 cases of NASH-induced liver cirrhosis with HCC (n=3) as compared to NASH-induced liver cirrhosis without HCC (n=25). The miRNA expression was performed using quantitative real-time PCR miRCURY LNA miRNA custom PCR panels. Relative quantification against endogenous control, which was miR-26a and fold change was calculated using 2^- ΔΔCT method.

RESULTS

We found that the expression of miR-301a and miR-373 were slightly increased in both serum (fold change =1.01 and 1.08 respectively) in NASH-induced liver cirrhosis with HCC as compared to NASH-induced liver cirrhosis without HCC. The same trend could be observed in the ascitic fluid where the expression level was also upregulated for both miR-301a (fold change = 1.29) and miR-373 (fold change = 3.38) in NASH-induced liver cirrhosis with HCC as compared to NASH-induced liver cirrhosis without HCC. On the contrary, the expression level of serum miR-182 was found to be downregulated (fold change = -0.63), as well as in the ascitic fluid (fold change = -0.90) in NASH-induced liver cirrhosis with HCC as compared to NASH-induced liver cirrhosis without HCC.

CONCLUSION

MiR-301a and miR-373 expression level were found to be slightly increased in both serum and ascitic fluid in NASH-induced liver cirrhosis with HCC, which can potentially be used as biomarkers to detect early stage of hepatocellular carcinoma, however further research is needed for a larger sample size in the future.

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ADENOMA DETECTION RATE IN TERTIARY PRIVATE HOSPITAL

George, Md Sapie, Sulaiman, Mohd Sukri

Department of Endoscopy, KPJ Johor Specialist Hospital, Johor Bahru, Johor, Malaysia

OBJECTIVE

Colorectal cancer (CRC) is the second most common cancer and accounts for 10% of all types of cancers worldwide. However, the effectiveness of colonoscopy procedure is strongly associated with its quality. Among different quality indicators, the one most used is the adenoma detection rate (ADR). The objectives was to establish ADR as a quality measure in endoscopy unit and obtain data regarding ADR for local population.

METHODS

Retrospective study conducted in a tertiary private hospital in Johor bahru. On average, our centre performs 4000 endoscopy procedures yearly. Our centre has 4 consultants performing endoscopy. We retrospectively analysed all colonoscopy procedures performed in patients above the age of 50 yrs. Our study period was between 2016 until 2018. We excluded patients who had incomplete colonoscopies due to poor bowel preparation, stenosis/obstruction and extensive looping. The histopathology reports of all patents who had polypectomies performed were reviewed by a trained Endoscopy nurse. We decided on an initial benchmark figure of 20% for our target ADR.

RESULTS

In total, 4377 colonoscopies were performed during the study period. 2092 procedures were performed in patients above the age of 50. The mean ADR for the year 2016 was 16%, 2017 was 17% and up to April 2018 was 20%.

CONCLUSION

We embarked on this project as one of our hospital quality initiative. Results showed a wide variation in ADR between consultants. After preliminary analysis of the ADR data of 2016, individual consultants were informed of the results in early 2017. From the results of 2017, there is definitely an improvement in the overall ADR rate. We believe that certain measures we have taken such as colonoscope withdrawal time, endocuff device and Simethicone to improve visualization will all enable us to increase our ADR benchmark to 25% within the next 2 years.

A CASE OF A SUCCESSFUL ENDOSCOPIC ULTRASOUND (EUS) GUIDED DRAINAGE OF A LARGE PANCREATIC PSEUDOCYST WITH SUPERIOR EXTENSION INTO THE INTRATHORACIC REGION

V S L Kok, Jasminder Sidhu, E S Tan

Gastroenterology Unit, Medical Department, Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

INTRODUCTION

Pancreatic pseudocyst can develop in up to 20% of patients with pancreatitis. Endoscopic Ultrasound (EUS) guided drainage of pseudocysts is now frequently performed in patients who develop complications due to the enlarging size of the pseudocyst.

CASE

A 64-year-old Indian gentleman with multiple co-morbidities initially presented to Institut Jantung Negara (IJN) for severe back pain and hiccups for one month. He had history of severe epigastric pain three months prior and was treated with analgesics by his local general practitioner. A computed tomography (CT) scan of the thorax was performed to rule out aortic dissection. It showed a left pleural effusion and a cyst-like lesion in the pancreatic body and tail measuring 5cm x 6cm. He was subsequently referred to us. A diagnostic EUS done showed a large pancreatic pseudocyst. Subsequently, CT pancreatic protocol confirmed the findings of a large peripancreatic pseudocyst measuring 9.3cm x 11.8cm x 15.3cm with superior extension in to the intrathoracic cavity. EUS-guided drainage of the pseudocyst was performed with a single double pig tail stent (10F x 5cm). Turbid fluid was aspirated. He was also given a course of antibiotics. His symptoms improved following drainage. Repeat CT one week later showed reduction in cyst size of more than 50%.

DISCUSSION

EUS-guided drainage of pancreatic pseudocysts is a feasible and safe procedure, if done under experienced hands. This therapeutic strategy decreases morbidity and mortality as compared to the surgical and percutaneous approaches.

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A CASE OF EXUDATIVE ASCITES IN A YOUNG WOMAN

V S L Kok, J Sidhu

Gastroenterology Unit, Medical Department, Hospital Kuala Lumpur, Kuala Lumpur, Malaysia

INTRODUCTION

Peritoneal ascites often warrants investigation and often than not referrals are made to the gastroenterologists. The serum-ascites albumin gradient and fluid protein levels help to differentiate between exudative or transudative ascites.

CASE

An immunocompetent 33-year-old woman with presented to us with a five month history of ascites, abdominal distension and constitutional symptoms. She was an unemployed divorcee with two children. There was no history of recent travel or tuberculosis contact. There were no clinical, biochemical or radiological evidence of liver cirrhosis. Her viral hepatitis screen was negative. Multiple investigations done were negative for bacterial infection, malignancy and autoimmune disease. Her Mantoux test was positive but sputum for acid-fast bacilli were negative. The computed tomography (CT) scan of the thorax showed a small calcified nodule in the left lung. The CT scan of the abdomen showed enlarged perigastric nodes with generalized ascites. An endoscopic ultrasound (EUS) performed showed ascites and peritoneal thickening. There were two porta hepatis nodes which measured 2cm X 2cm and 1.5cm X 1cm. EUS-guided fine needle aspiration (EUS-FNA) was performed with a 25 G Boston Scientific needle. Rapid onsite examination (ROSE) revealed caseating granuloma with giant cells seen, most likely tuberculosis. She was subsequently started on anti-TB drugs.

DISCUSSION

EUS-FNA, a useful and safe technique, allows tissue sampling and diagnosis of abdominal lymph nodes avoiding the need for open or laparoscopic surgery. The presence of ROSE allows a rapid diagnosis to avoid delay in initiating treatment.

CYTOMEGALOVIRUS COLITIS IN ULERATIVE COLITIS: A RETROSPECTIVE, COMPARATIVE STUDY ON PREVALENCE AND TREATMENT

Muhammad Ilham Abdul Hafidz[1], Nik Razima Wan Ibrahim[2], Sattian Kollathavelu[2], Ahmad Najib Azmi[3], Rosaida Mohd Said[2]

[1]Universiti Teknologi MARA, Shah Alam, Selangor, Malaysia
[2]Gastroenterology Unit, Hospital Ampang, Selangor, Malaysia
[3]Universiti Sains Islam Malaysia, Nilai, Negeri Sembilan, Malaysia

OBJECTIVE

Cytomegalovirus (CMV) infection has been reported in ulcerative colitis (UC), especially in severe, steroid refractory disease. Our objectives are to evaluate the prevalence of CMV colitis in UC, and to study the characteristics of UC patients with CMV colitis compared to those without.

METHODOLOGY

We retrospectively identified 23 patients with UC. Colonic CMV in inflamed mucosa was identified using quantitative real-time PCR. The characteristics and clinical course in these patients were evaluated.

RESULTS

CMV colitis was identified in 7 patients. The majority were of Malay ethnicity, average age of patients with CMV colitis was 35.6 years, 86% of them had prior exposure to steroids, with an average total prednisolone dose of 700mg over a 4-week period.

DISCUSSION AND CONCLUSION

Prior high doses of steroid treatment may predispose UC patients to CMV colitis. The impact of antiviral therapy on the clinical outcome of these patients remain to be elucidated.

COMPARISON OF ANORECTAL MANOMETRY, BALLOON EXPULSION TEST, AND COLONIC TRANSIT TIME IN ELDERLY PATIENTS WITH AND WITHOUT FUNCTIONAL CONSTIPATION (FC) IN KELANTAN: AN INTERIM ANALYSIS

Thevaraajan Jayaraman[1], Azliani Abdul Aziz[2], Siti Norhasliza[2], Dariah Mohd Yusoff[2], Yeong Yeh Lee[2]

[1]Gastroenterology Unit, Faculty of Medicine, Universiti Teknologi MARA, Selangor, Malaysia
[2]School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia

BACKGROUND

There is a lack of local data comparing results of lower gastrointestinal functional and motility tests among elderly patients with and without FC.

METHODS

Patients aged > 65 years of age filled in a screening questionnaire and underwent anorectal manometry (AM), balloon expulsion test (BET), and colonic transit study (CTS) with radio-opaque markers.

RESULTS

Eighteen patients were recruited into this ongoing study with mean age of 67 years, 83% female gender, and 89% Malay ethnicity. Eight patients (44%) had FC. Comparison of demographic, AM, BET and CTS characteristics between elderly patients with and without FC is summarized in Table 1.

CONCLUSION

Interim analysis showed no significant difference in AM, BET, and CTS in our study population.

Table 1. Comparison of demographic, AM, BET and CTS characteristics between elderly patients with and without FC.

	FC (n = 8)	No FC (n = 10)
Age *	68 (7)	65 (8)
Female gender, % (n) *	75 (6)	90 (9)
Mean rest anal pressure ‡*	57 (42)	36 (16)
Mean squeeze anal pressure ‡*	81.5 (45)	96.5 (37)
Squeeze duration, s *	8.5 (14)	14 (15)
Defecation index *	0.71 (0.74)	0.62 (0.41)
Sensation †*	20 (10)	25 (30)
Desire †*	50 (25)	55 (40)
Urge †*	105 (93)	115 (55)
Pain †*	90 (105)	130 (55)
Mean exhale anal pressure *	50.5 (38)	68 (29)
Prolonged CTS, % (n) *	33.3 (2)	0 (0)
Abnormal BET, % (n) *	12.5 (1)	20 (2)
Dyssynergic defecation, % (n) *		
Type 1	12.5 (1)	0 (0)
Type 2	62.5 (5)	70 (7)
Type 3	0 (0)	0 (0)
Type 4	25 (2)	30 (3)
Absent RAIR, % (n) *	50 (4)	20 (2)
Rectal hypersensitivity *	62.5 (5)	80 (8)

*p > 0.05; ‡unit: mmHg; †unit: ml
Data presented as median (IQR) or percentage (number)

EVALUATING THE SAFETY OF ERCP IN COMMON BILE DUCT (CBD) STONE REMOVAL IN OCTOGENARIANS

James Emmanuel, Yu Peng Tan, Lee Tiong See, Norhaniza Bahar, Haniza Omar
Department of Hepatology, Selayang Hospital, Selangor, Malaysia

INTRODUCTION

ERCP (Endoscopic retrograde cholangiopancreaticography) is the primary modality for management of pancreatico-biliary disorders. Despite its relative safety (in comparison with surgery), and undoubted role in many clinical circumstances, complications continue to occur at a relatively consistent rate regardless of the age group.

OBJECTIVES

To evaluate the safety of ERCP in CBD stone removal among octogenarians .

METHODOLOGY

We report a case series of 200 patients undergoing the first trial of ERCP done between January - September 2017. Basic information and ERCP procedural notes were retrospectively reviewed. Results are analysed using SPSS version 16.0.

RESULTS

200 patients were divided according 3 age groups, 141 patients in Group 1 (<65 years old), 49 patients in Group 2 (between 65 and 80 years old), 10 in Group 3 (>80 years old). There were 96 females (48%) and 104 males (52%). There was a significant difference in average length of stay between the 3 groups where in Group 3 reported the highest length of stay (6 days). Pancreatitis occurred most frequently in Group 1 patients. The occurrence of biliary infection and hemorrhage was not statistically different among the three groups. None of the patients in Group 3 developed any procedure related complications. There were no mortalities reported in this study.

DISCUSSION

Despite the data revealing that none of the patients in Group 3 (>80) had any reported procedure related complications, the average length of stay were significantly higher in that cohort of patients. It is most likely attributed to non procedure related complications.

Larger studies are needed to accurately determine the incidence rates for specific adverse events in each age strata.

CONCLUSION

Advanced age should not be an exclusion index for selecting patients for ERCP as it remains a technically feasible and safe procedure.

DIRECT ACTING ANTI-VIRALS (DAA) IN TREATMENT OF CHRONIC HEPATITIS C (CHC) - REAL-WORLD DATA FROM A PRIVATE MEDICAL CENTRE

H P Tee[1], A Che Aun[2]

[1]KPJ Pahang Specialist Hospital, Tanjung Lumpur, Kuantan, Pahang, Malaysia
[2]Gastroenterology Unit, Medical Outpatient Department, Hospital Tengku Ampuan Afzan, Kuantan, Pahang, Malaysia

INTRODUCTION

Prior to availability of DAAs in Malaysian government hospitals from early 2018, patients with Chronic Hepatitis C was treated with DAAs in a clinical trials or by compassionate drug use. Only few purchased their own treatment under the supervision of hepatologists. This paper presents the data from self-purchased DAAs in a real-world scenario from 2016-2018.

METHODS

Case notes were retrospectively reviewed for all patients using DAAs. Information on liver function tests and HCV viral loads were extracted. Cirrhosis was defined by Fibroscan results of >12.5 kPa.

RESULTS

Eleven cases of DAA use were identified. There were 4 (36.4%) male patients. Six were Malay, four Chinese and one Indian. The mean age of the cohort is 52.3 (SD 4.6) years old. Pre-treatment mean Alanine transamineses (ALT) was 100.2 (SD 16.5) U/L. Post-treatment mean ALT was 35.5 (SD 6.7) U/L. Mean baseline platelet count was 95.5 (SD 20.7) X 10^9 per litre. Mean baseline bilirubin was 32.5 (SD 8.9) umol/L. Three (27.3%) of them were treatment experienced. One patient was HIV co-infected and one had history of HCC. Majority of them received Sofosbuvir/Velpatasvir for 12 weeks (n=7, 63.6%), three patients (27.3%) received Sofosbuvir/Daclatasvir/Ribavarin for 24 weeks and one patient received Sofosbuvir/Ledipasvir/Ribavarin for 24 weeks. All patients achieved SVR without major side effects.

DISCUSSION

This cohort of patients represents the most difficult-to-treat CHC. The data for DAA treatment in advanced cirrhotic CHC is scarce. Similar real-world studies reported SVR from 88.2% to 98.1%, with various DAA regimens. This study provides an input in a resource-limited setting and showed SVR can be achieved in the most difficult-to-treat patients. However the study is limited by small sample size and short duration of follow-up.

CONCLUSION

SVR is achieved in all 11 patients and significant improvement of ALT is observed.

THE HOSPITAL QUEEN ELIZABETH'S INFLAMMATORY BOWEL DISEASE (IBD) REGISTRY: COMPARISON OF THE DEMOGRAPHIC DATA AND RISK FACTORS OF PATIENTS WITH ULCERATIVE COLITIS AND CROHN'S DISEASE

H Keith Leung[1], Gew Lai Teck[1], H S Tee[1], C Y Ng[1], P O Tan[1], G Koleth[1], Hari S[2], Raman M[1], Jayaram M[1]

[1]Gastroenterology Unit, Hospital Queen Elizabeth, Kota Kinabalu, Sabah, Malaysia
[2]Medical Department, Hospital Keningau, Sabah, Malaysia

OBJECTIVE

To demonstrate the difference of demographic distribution between patients with Ulcerative Colitis (UC) and Crohn's Disease (CD).

METHODOLOGY

51 patients (29 UC, 22 CD) diagnosed with IBD and followed up in Hospital Queen Elizabeth were registered with standard forms prepared by National Gastroenterology Society. The demographic data was collected. The age at diagnosis, gender, educational level, and risk factors (family history of IBD and colorectal cancer was examined. In addition, history of appendicectomy, tonsillectomy, used of oral contraception, antibiotics overuse, and whether they were being breastfed) were analyzed. Statistical comparison for both groups were done.

RESULTS

CD and UC affect mainly patients at their middle age (median 43 vs 38). When CD patients are compared to UC patients, they seemed to afflict more male patient (68% vs 45%) and those with tertiary education (55% vs 21%). There were more patients who had tertiary education in CD than UC and this was statistically significant. Analysis of other risk factors showed no difference statistically.

Risk Factors	CD	UC	P-value
Cigarette Exposure	36%	21%	0.366[a]
Family history of IBD	18%	13%	0.713[b]
Family history of CRC*	0%	7%	0.500[b]
Appendicectomy	23%	3%	0.073[b]
Tonsillectomy	0%	3%	1.000[b]
Oral Contraceptive Used	5%	7%	1.000[b]

* CRC - colorectal cancer
[a] Chi-squared test
[b] Fisher's Exact Test

CONCLUSIONS

In our cohort, there were more patients who had tertiary education in CD than UC and this was statistically significant. Analysis of other factors had shown no difference statistically.

THE HOSPITAL QUEEN ELIZABETH'S INFLAMMATORY BOWEL DISEASE (IBD) REGISTRY: THE DISEASE PATTERN AT THE TIME OF DIAGNOSIS OF ULCERATIVE COLITIS

H S Tee[1], Gew Lai Teck[1], H Keith Leung[1], H S Tee[1], Chiun Yann Ng[1], P O Tan[1], G Koleth[1], Hari S[2], Raman M[1], Jayaram M[1]

[1]Gastroenterology Unit, Hospital Queen Elizabeth, Kota Kinabalu, Sabah, Malaysia
[2]Medical Department, Hospital Keningau, Sabah, Malaysia

OBJECTIVE

To define the pattern of disease at the time of diagnosis of Ulcerative Colitis (UC) in Hospital Queen Elizabeth.

METHODOLOGY

Retrospective observational analysis from august 1994 till January 2018 on 29 patients (13 males, 26 females) whom diagnosed with UC and followed up in Hospital Queen Elizabeth were analysed by using standard forms of Malaysian IBD Registry. Symptoms, methods of diagnosis, disease location, disease sequele and complications, extraintestinal manifestation and required medication to control the diseases were recorded and analyzed.

Disease Pattern	Subgroup	Percentage
Presentation	PR bleed	69%
	Abdominal Pain	52%
	Diarrhea	52%
	Urgency	7%
	Mucus	38%
Method of Diagnosis	Endoscopy	100%
	Histology	100%
Disease Location	Proctitis	10%
	Limited Disease	24%
	Extensive Disease	66%
Extraintestinal Manifestation	Large joint arthritis	9%
	Skin, Eye, Hepatobiliary	0%
	Colon Cancer	0%
	Thrombotic Complication	0%

CONCLUSIONS

In our cohort, majority of the patients presented with abdominal pain, per rectal bleeding and diarrhea. All UC patients were diagnosed by endoscopy. Majority of the patients have extensive disease. 100% of patients were on 5-ASA while only 2 out of 29 patients needs biologics to control the disease activity.

HOSPITAL QUEEN ELIZABETH'S INFLAMMATORY BOWEL DISEASE (IBD) REGISTRY: FOLLOW UP OF DISEASE SEVERITY AND PROGRESSION OF CROHN'S DISEASE

Gew Lai Teck[1], H Keith Leung[1], H S Tee[1], Chiun Yann Ng[1], P O Tan[1], G Koleth[1], Hari S[2], Raman M[1], Jayaram M[1]

[1]Gsatroenterology Unit, Hospital Queen Elizabeth, Kota Kinabalu, Sabah, Malaysia
[2]Medical Department, Hospital Keningau, Sabah, Malaysia

OBJECTIVE

To define the pattern of presentation, diagnosis, treatment and progression of CD in Hospital Queen Elizabeth.

METHODOLOGY

Retrospective observational analysis from March 2004 till March 2018. 22 patients (15 males, 7 females) diagnosed with CD were analysed with standard forms of Malaysian IBD Regsitry. Symptoms, method of diagnosis, disease location, disease complications, extraintestinal manifestations and medications used to treat CD were recorded and analyzed.

Disease Pattern	Subgroup	Percentage
Presentation	Abdominal Pain	68%
	Diarrhea	50%
	PR bleed	72%
	Weight Loss	36%
	Intestinal Obstruction	14%
Method of Diagnosis	Endoscopy	14%
	Endoscopy + histology	50%
	Surgery + histology	9%
	Endoscopy + radiology + histology	14%
	Endoscopy +surgery + histology	4.5%
	Surgery	4.5%
	Endoscopy + surgery	4.5%
Disease Location	Ileal	23%
	Colon	27%
	Ileal colonic	50%
Disease Phenotype at the point of diagnosis	Stricturing	32%
	Penetrating	4.5%
	Non-Stricturing, non Penetrating	59%
	Fistula	4.5%
Disease complicated with fistula		32%
Extraintestinal Manifestation	Large joint arthritis	9%
	Skin	9%
Medication	Azathioprne	86%
	Biologics + azathiprine	27%

CONCLUSION

In our cohort, majority of the patients presented with per rectal bleeding, abdominal pain, and diarrhea. Most were diagnosed by endoscopy, and ileocolonic manifestation were the most common phenotype. 86% of them were on Azathioprine and 27% needs biologics therapy for control of disease activity.

FOLLOW UP OF 4 CASES OF PATIENTS WHO UNDERWENT POEM FOR ACHALASIA CARDIA IN HOSPITAL QUEEN ELIZABETH: A CASE SERIES

Gew Lai Teck, H Keith Leung, C Y Ng, P O Tan, G Koleth, Raman M, Jayaram M
Gastroenterology unit, Hospital Queen Elizabeth, Kota Kinabalu, Sabah, Malaysia

OBJECTIVE

To observe the outcome of 4 patients who had undergone Per Oral Endoscopic Myomectomy (POEM) for Achalasia Cardia during EndoQE workshop 2017.

METHODOLOGY

4 patients who had undergone POEM were actively followed up on their weight, Eckhardt score, barium swallow, and manometry at day 3 and week 6 after the procedure.

RESULTS

All 4 patients showed significant improvement in all aspects after POEM procedure. Symptoms of dysphagia, pain, barium swallow were assessed 3 days after POEM. Body weight, ECKHART score, barium swallow and manometry were assessed 6 weeks after the procedures. One patient had dysphagia recurrence after 1 month post POEM and under close follow up. All POEM procedure were uneventful.

	Patient	A	B	C	D
1	Age	26	55	33	54
	Co-morbid	nil	DM/Gout	nil	DM/HPT/ Dyslipidemia
2	Duration of symptoms (years)	5	4	2	5
3	Previous intervention	nil	Balloon dilatation, persistent symptoms after dilatation	Balloon dilatation, symptom recur after 1 month	nil
4	Type of Achalasia (maometry)	Type I	Type I	Type I	Type I
5	Weight prior to POEM	47kg	65kg	76kg	70kg
6	PrePOEM Pain score (over 10)	0	0	8	0
7	Eckhart Score before POEM	8	6	5	9
8	Barium swallow before POEM	Classical achalasia	Classical achalasia	Classical achalasia	Delayed barium clearance
9	Manometry (IRP) before POEM	41	25	15	34
10	Pain score Day 2 post POEM⊠	0	0	0	2
11	Barium day 3 post POEM⊠	Delayed contrast emptying	Delayed contrast emptying	Delayed contrast emptying	Delayed contrast emptying
12	Weight gain post POEM*	4kg	16kg	2kg	5.5kg
13	Pain score+ post POEM*	0	4	1	0
14	ECKHART Score post POEM*	0	0	2 (symptoms recur after 1 month)	0
15	Barium swallow post POEM*	Delayed contrast emptying, complete emptying to stomach.	Normal	Normal	Normal
16	Manometry (IRP) post POEM*	11	11	12	14

+ day 2 or 3 after POEM, shaded in light grey
* 6 weeks after POEM, shaded in dark grey

CONCLUSIONS

POEM is an effective, a safe method in managing Achalasia Cardia in our patients.

CLINICAL PRESENTATION AND SEQUELAE OF HEPATOBILIARY TUBERCULOSIS: A CASE SERIES

Hari S[1], Gew Lai Teck[2], T Ken Goh[2], Ng Chiun Yann[2], Tan Phei Oon[2], Raman M[2], Jayaram M[2]

[1]Hospital Keningau, Sabah, Malaysia

[2]Hospital Queen Elizabeth, Kota Kinabalu, Sabah, Malaysia

OBJECTIVE

Hepatobiliary involvement of Tuberculosis (TB) is common especially in the endemic areas such as Sabah. We aim to study the sequelae of hepatobiliary involvement in Tuberculosis.

METHODOLOGY

A Total of 7 patients (3 females, 4 males; aged between 30-51 years) were followed up at Gastroenterology Unit of Hospital Queen Elizabeth from March 2015 to April 2018 were reviewed. The demography, method of diagnosis, extrahepatic involvement, radiological findings (MRCP/CT/Ultrasound), endoscopy, cholangiogram and blood tests were reviewed.

RESULTS

Hepatobiliary Tuberculosis in all our patients presented with disseminated TB with 1-2 extrahepatic organ involvement in all patients. The commonest method to support the diagnosis of tuberculosis was presence of granulomatous change on histopathological examination; such as from lymph nodes sampling, either from biopsy of cervical lymph nodes (3 patients), through EUS-FNAC of the abdominal lymph nodes (2 patients) or EBUS-FNAC of pulmonary hilar lymph node (1 patient). Only 1 patient's bile had positive microbiological evidence for TB (GeneXpert), however bile for TB culture was negative in all patients. 6 out 7 patients had at least 1 ERCP (ranges 1-4) performed which showed strictures involving mid CBD, proximal CBD and/or diffuse IHD. Majority (6 patients) developed radiological evidence of liver cirrhosis and 3 patients had evidence of portal hypertension with oesophageal varices. In view of the presence of biochemical hepatitis, 6 out of 7 patients required alternative anti-Tuberculosis regiment with extended treatment duration (more than 9 months). Although general recovery was seen in most of the patients, majority remained biochemically and radiologically cirrhotic. However, no liver related mortality was recorded in our series.

DISCUSSION AND CONCLUSION

Hepatobiliary TB is an important infective cause of rapid and irreversible insult to the liver that leads to liver cirrhosis in Sabah. Early diagnosis and appropriate treatment is essential to prevent TB sequelae.

PERORAL ENDOSCOPIC MYOTOMY (POEM) FOR ACHALASIA CARDIA IN UNIVERSITY MALAYA MEDICAL CENTRE (UMMC): A SINGLE CENTRE EXPERIENCE REPORT

Shiaw Hooi Ho[1], Peng Choong Lau[2], Wei Jin Wong[2], Sook Hui Chaw[3], Pui San Loh[3], Sanjiv Mahadeva[1]

[1]Department of Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia
[2]Department of Surgery, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia
[3]Department of Anaesthesiology, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

OBJECTIVES

Peroral endoscopic myotomy (POEM) was introduced in 2008 as a novel minimally invasive and definitive treatment modality for achalasia cardia (AC). Herein we report our local treatment experience with POEM, performed jointly by both gastroenterologist and upper gastrointestinal surgeon.

METHODOLOGY

Consecutive patients with AC who underwent POEM at our centre from November 2015 to April 2018 were included for analysis. Patient demographics, clinical features of AC, technical and procedural success, and complications were recorded. The POEM procedure (posterior approach) was conducted in a standard manner as described elsewhere under general anaesthesia. Technical success was defined as the ability to complete the POEM procedure from mucosal incision to subsequent myotomy and finally, mucosal closure. Procedural success was defined as a post-procedural Eckardt Symptom Score (ESS) of less than 2, or a reduction by 4 or more points at 2 months or more after a successful procedure.

RESULTS

Twenty-three patients were included in the analysis. Patient demographics and clinical features are shown in Table 1. Overall technical success was achieved in 82.6% and procedural success in 94.7% of the patients. Subgroup analysis revealed that the technical success rate was 70.0% in the first ten patients which improved to 92.3% in the remaining 13 patients. Only minor complications were encountered in 7 patients (30.4%) which did not require additional endoscopic or surgical intervention.

DISCUSSION

The improvement in the technical success rate and complication rate after the first 10 patients was compatible with institutional learning curve. There was one patient who did not achieve procedural success and she subsequently received a repeat POEM which resulted in symptom resolution. The mechanism underlying the persistent symptom was likely due to inadequate intra-gastric myotomy length during the 1st procedure.

CONCLUSIONS

POEM is shown to be an effective and safe definitive treatment modality for AC in our local setting.

Peroral Endoscopic Myotomy (POEM) for Achalasia Cardia in University Malaya Medical Centre (UMMC): A Single Centre Experience Report

Table 1: Patients Characteristics, Clinical Features of Achalasia Cardia and Treatment Outcomes

Demographic/ Clinical Features of AC / Treatment Outcomes	Number of Subjects N (%)
Number of subjects	23
Mean age ± SD (years)	44.0 ± 16.9
Gender	
Male	10 (43.5)
Female	13(56.5)
Ethnicity	
Malay	6 (26.1)
Chinese	9 (39.1)
Indian	8 (34.8)
Others	0
Chicago Classification	
Type 1	8 (34.8)
Type 2	11 (47.8)
Type 3	0
Unknown	4 (17.4)
Sigmoid Achalasia	
Type 1	1 (4.3)
Type 2	1 (4.3)
Overall Technical Success	19/23 (82.6)
First 10 patients	7/10 (70.0)
Remaining 13 patients	12/13 (92.3)
Procedural Success	18/19 (94.7)
Overall Complication	7/23 (30.4)
First 10 patients	4/10 (40.0)
Remaining 13 patients	3/13 (23.1)
Types of Complications	
Mucosal injury	3 (13.0)
Excessive bleeding	2 (8.7)
Transient cardiopulmonary compromise	1 (4.3)
Surgical emphysema	1 (4.3)
Retained Hemoclip applicator component in submucosal tunnel	1 (4.3)

SD = standard deviation

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Tel: (603) 5541 7748 Email: enquirymys@dchauriga.com