ANNUAL SCIENTIFIC MEETING OF THE
MALAYSIAN SOCIETY OF
GASTROENTEROLOGY AND HEPATOLOGY

GUT2011

27TH — 29TH MAY 2011

Shangri-La Hotel
Kuala Lumpur, Malaysia

Souvenir Programme & Abstract Book

Contents

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2010 – 2011

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GUT 2011
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Message from the President, MSGH & Organising Chairperson, GUT 2011

On behalf of the Organising Committee, I would like to welcome you to GUT 2011.

This congress will provide a good opportunity for us to update our knowledge of gastroenterology and hepatology and to share clinical experiences as well as basic research.

Recent breakthroughs in both gastrointestinal and liver disease will be highlighted in the scientific programme. A large panel of experts, within and outside the Asian-Pacific region, will share their experience at this meeting.

The Scientific Committee, chaired by Dr Tan Huck Joo and Professor Dato' Dr K L Goh, has drawn up a comprehensive programme to cover a wide range of topics. The meeting will extend over three days with breakfast sessions, state-of-the-art lectures, symposia and ever-popular case discussions.

The MSGH Oration will be delivered by Professor Colm O'Morain from Ireland, and the Panir Chelvam Memorial Lecture by Professor Kang Jin Yong from the United Kingdom.

We are fortunate that this year's GUT meeting falls on World Digestive Health Day (WDHD) on 29th May. We have planned a half-day public forum with various topics to educate and interact with the public.

Please take some time to see the sites around Kuala Lumpur. The venue for the meeting is in the heart of Kuala Lumpur near the magnificent Twin Towers and breath-taking view of KL Tower.

I hope you have a pleasant stay in Kuala Lumpur and will enjoy the meeting.

Dr L Sanker V

11th MSGH Distinguished Orator
Professor Colm O'Morain

Citation by Dato' Dr Andrew Chua

Professor Colm O'Morain received his medical degree from University College Dublin in 1972. From 1972 to 1975 he held the position of Intern Senior House Officer and Registrar at the Mater Misericordaie Hospital. Following his Gastroenterology Fellowship in CHU, Nice, 1975 to 1977, he was appointed Senior Registrar at Northwick Park Hospital, London.

Professor O'Morain obtained an MSc in Biochemistry in 1982, and a Diploma in Immunology and an MD Thesis from the National University of Ireland, also in 1983, and a DSc from the University of London in 1998.

He became a Fogarty Fellow at the Albert Einstein College of Medicine, New York, where he worked from 1983 until 1985. He was appointed Director of Clinical Studies, Trinity College, Dublin, in 1988. In 1991, he took up his current position of Academic Head of Department at the Meath/Adelaide Hospitals, Trinity College, and Professor of Gastroenterology at Trinity College, Dublin.

Professor O'Morain is a member or a past member of many academic institutions. He is a former Secretary Treasurer and President of the Irish Society of Gastroenterology (from 1988 to 1992) and was elected Vice President of the Association of the European and Mediterranean Gastroenterological Societies in 1995 and President in 1997 to date. He is a member of the UEGF council and of their public affairs committee. He is on the Scientific Committee of the European Cancer Prevention Group, European Helicobacter pylori Study Group, Gastro Surgical Club and International Organisation of Inflammatory Bowel Disease. He is on the Gastroenterology Committee of the Medical Research Council of Ireland, elected a Fellow of the Royal College of Physicians of Ireland in 1986, and has been an elected member of the Council of the British Society of Gastroenterology from 1993 to 1996. He is an Irish representative of the European Union Specialist Section of Gastroenterology. He is a founder member of the European Board of Gastroenterology, a group founded to harmonise training throughout the member states. He was elected Fellow of the American College of Gastroenterology in 1998.

Professor O'Morain was elected on the governing council of the Irish Medical Organisation and on Irish Affairs Committee of the Medical Defence Union from 1995 until 1998. He is a member of the Bockus International Society of Gastroenterology and the European Representative of OMGE, the World Organisation of Gastroenterology.

Professor O'Morain is on the Editorial Board of eight peer review journals and has published over 200 peer review articles. He has also authored and co-authored four books. His research interests are in Helicobacter pylori and inflammatory bowel disease.

8th Panir Chelvam Memorial Lecturer
Dr Kang Jin Yong

Citation by Dr L Sanker V

Dr Kang is a Consultant Gastroenterologist and Honorary Senior Lecturer at St George's Hospital and Queen Mary's University Hospital in London.

He was born in Malaysia and his mother lives in Sibu, whom he visits every year.

He graduated with honours from Birmingham University in 1973. He worked at several hospitals in Birmingham and received his MRCP in 1975. He went on to train at the Royal North Shore Hospital in Sydney from 1978 to 1979 and received his FRACP. He worked at the Kuching General Hospital as a medical specialist from January 1980 to April 1981 and subsequently moved to work in Singapore in May 1981. He was appointed as a Lecturer at the National University of Singapore and later was appointed Associate Professor and Head of Gastroenterology Unit from 1987 to 1995. It was during this period of time that Jin-Yong came up with numerous seminal publications in GUT, Gastroenterology and other leading journals on his observations on gastrointestinal disease in the Far East and has from that time, positioned himself as the leading authority in peptic ulcer disease, dyspepsia, helicobacter pylori infection and gastric cancer in the Asian-Pacific region. His work culminated in him receiving his MD (Doctor of Medicine) degree from the University of Singapore in 1990. Subsequently, Jin-Yong worked towards a further doctoral degree and obtained his PhD from the National University of Singapore in October 1996.

He then moved back to the United Kingdom and joined the James Paget Hospital in Norfolk from 1995 to 1999, and subsequently moved to St George's and Queen Mary's University Hospitals.

His has 179 publications as of January 2011. His research interests and publications range from oesophageal reflux disease, peptic ulcer disease, helicobacter pylori, hepatitis B & C, liver abscesses, inflammatory bowel disease and irritable bowel syndrome and pancreatic cancer.

He is a reviewer for several journals including the prestigious BMJ (British Medical Journal), GUT, BJS (British Journal of Surgery) and Alimentary Pharmacology and Therapeutics.

He has talked in Malaysia in 1996 (15 years ago) during 'Stomach 1996' held in Kuala Lumpur on Functional Dyspepsia and H Pylori and NSAID related peptic ulcer symposia.

He claims to have no hobbies or interesting achievements, but looking at his accomplishments across the globe in a short span of time, we can see that every bit of his time is spent on research, reviews and publications. However, he has time for football and cricket and is an avid supporter of the Tottenham Hotspur's and the Surrey Cricket Club!

We are honoured to have Dr Kang Jin Yong delivering the Panir Chelvam Memorial Lecture on "East-West Differences in Gastrointestinal Diseases".

Programme At A Glance

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Daily Programme

27TH MAY 2011 [FRIDAY]

0730 – 0820 REGISTRATION

0830 – 0950 **S1: IBD SYMPOSIUM** — Sabah Room

Chairpersons : **Jayaram Menon / Ida Hilmi**

- Optimizing standard therapy use of second line therapy
  Ooi Choon Jin
- Indications on the use of biological in UC and Crohns *[page 25]*
  Ling Khoon Lin
- Difficult to treat IBD – When and how surgery is indicated?
  Akhtar Qureshi

0950 – 1030 **L1: 11TH MSGH ORATION** — Sabah Room

Chairperson : **L Sanker V**

CRC – The emerging cancer in the 21st Century
Colm O'Morain
Citation: *Andrew Chua*

1030 – 1100 TEA

1100 – 1220 **Young Investigator's Award Presentations** *[page 42-47]* — Sabah Room

Coordinator: *Tan Huck Joo / Mazlam Zawawi*

1220 – 1420 **LUNCH SATELLITE SYMPOSIUM** (EISAI) — Sabah Room

"PARIET in functional dyspepsia including important of acid and motility"

Chairperson : **Goh Khean Lee**

Overview; Pathogenesis of functional dyspepsia including importance of acid and motility *[page 26-27]*
Hiroto Miwa

1430 – 1550 **C1: CASE DISCUSSION** — Sabah Room

Chairpersons : **Ramesh Gurunathan, P Kandasami**
Panelists: *Philip Chiu, See Teik Choon, Ooi Choon Jin*

1550 – 1630 **L2** — Sabah Room

Chairpersons : **Mrs Kew Siang Tong / Abraham George**

Immunology in IBD for clinicians *[page 28]*
Ling Khoon Lin

1630 – 1800 **TEA SATELLITE SYMPOSIUM** (BAYER) — Sabah Room

Chairperson : **Goh Khean Lee**
Luigi Bolondi

1900 – 1930 TEA

Daily Programme

28TH MAY 2011 [SATURDAY]

0730 – 0820 — MEET-THE-EXPERT BREAKFAST SESSIONS (1 – 4)

- Masstricht 4 *Colm O'Morain* — Kelantan Room

Moderator : **Andrew Chua**

- Radiological therapy for liver metastases from colorectal cancer *[page 29]* — Penang Room

See Teik Choon

Moderator : **Bong Jan Jin**

- Optimizing HBV treatment reduces the risk of hepatocellular carcinoma *[page 30]* — Perak Room

Kao Jia-Horng

Moderator : **L Sanker V**

- Differentiating TB from Crohn's disease – Practical approach *Ooi Choon Jin* — Pahang Room

Moderator : **Ong Tze Zen**

0830 – 0950 — C2: CASE DISCUSSION — Sabah Room

Chairpersons : **Bong Jan Jin, Sanjiv Mahadeva**

Panelists: *Chan See Ching, See Teik Choon*

0950 – 1030 — L3: 8TH PANIR CHELVAM MEMORIAL LECTURE — Sabah Room

Chairperson : **Ramesh Gurunathan**

East-West differences in gastrointestinal diseases *[page 31]*

Kang Jin Yong

Citation: *L Sanker V*

1030 – 1100 — TEA

1100 – 1220 — S2: VIRAL HEPATITIS AND FIBROSIS — Sabah Room

Chairpersons : **Jason Chin, Shashi Kumar Menon**

- Predictors of long term outcome in chronic viral hepatitis

Lui Hock Foong

- Non-invasive assessment of liver fibrosis *[page 32]*

Sanjiv Mahadeva

1220 – 1420 — LUNCH SATELLITE SYMPOSIUM (NOVARTIS) — Sabah Room

"Optimizing long term patient treatment outcome with telbivudine"

Chairperson : **Kao Jia-Horng**

Kao Jia-Horng, George K K Lau

1430 – 1510 — L4 — Sabah Room

Chairpersons : **Ong Tze Zen, Chin Kin Fah**

Tumor metabolism and the use of new markers for GI cancer *[page 33]*

Sybille Mazurek

1510 – 1630 — S3: TREATMENT OUTCOME IN HP — Sabah Room

Chairperson : **Tan Huck Joo, Jeeta Muthumanikam**

- Factors determining treatment success *[page 34]*

Hiroto Miwa

- New treatment regimens for helicobacter pylori infection *[page 35]*

Kang Jin Yong

1630 – 1700 — TEA

1700 – 1800 — **MSGH AGM** — Sabah Room

1930 – 2230 — **MALAYSIA NIGHT** — Sarawak Room

Daily Programme

29TH MAY 2011 [SUNDAY]

0730 – 0820 — MEET-THE-EXPERT BREAKFAST SESSIONS (5 – 7)

- M2-PK – New biomarkers for CRC screening – Practical applications *[page 36]* — Kelantan Room

Sybille Mazurek

Moderator : **Muhammad Radzi Abu Hassan**

- Surgical options for hepatocellular carcinoma *[page 37]* — Johore Room

Chan See Ching

Moderator : **Razman Jarmin**

- Best treatment option for HP in 2011 — Pahang Room

Hiroto Miwa

Moderator : **Sanjiv Mahadeva**

0830 – 0950 — S4: COLORECTAL CANCER SCREENING — Sabah Room

Chaipersons : **Muhammad Radzi Abu Hassan, April Roslani**

- Overview – Why should it be carried out?

Colm O'Morain

- Screening for colorectal cancer – Methods and schedules *[page 38]*

Yeoh Khay Guan

- Barrier to mass population screening

Akhtar Qureshi

0950 – 1030 — L5 — Sabah Room

Chaipersons : **Robert Ding, Rosemi Salleh**

Stratifying and strategizing treatment for HCC *[page 39-40]*

Luigi Bolondi

1030 – 1100 — TEA

1100 – 1220 — S5: PORTAL HYPERTENSION – TREATMENT ISSUES — Sabah Room

Chaipersons : **Ooi Eng Keat, K Ganesalingam**

- Ascites

Luigi Bolondi

- Medical and endoscopic therapy for varices

Lui Hock Foong

- Transjugular portosystemic shunt *[page 41]*

See Teik Choon

1220 – 1330 — LUNCH

1330 – 1530 — PUBLIC FORUM – WORLD DIGESTIVE HEALTH DAY 2011 — Sabah Room

1330 – 1400	REGISTRATION
1400 – 1420	What to do with dyspeptic symptoms? *Mazlam Zawawi*
1420 – 1440	Colon cancer – Number 1 killer! *Muhammad Radzi Hassan*
1440 – 1500	Travel vaccination and your health *L Sanker V*
1500 – 1530	COFFEE / TEA

Moderators / Chairpersons

Abraham George
Johor Specialist Hospital, Johor Bahru, Johor

April Roslani
University Malaya Medical Centre, Kuala Lumpur

Bong Jan Jin
Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur

Jason Chin
Gleneagles Intan Medical Centre, Kuala Lumpur

Chin Kin Fah
University Malaya Medical Centre, Kuala Lumpur

Andrew Chua
Ipoh Specialist Centre, Ipoh, Perak

K Ganesalingam
Sime Darby Medical Centre, Petaling Jaya, Selangor

Goh Khean Lee
University Malaya Medical Centre, Kuala Lumpur

Ida Hilmi
University Malaya Medical Centre, Kuala Lumpur

Jayaram Menon
Hospital Queen Elizabeth, Kota Kinabalu, Sabah

Jeeta Muthumanikam
University Malaya Medical Centre, Kuala Lumpur

Mrs Kew Siang Tong
International Medical University, Seremban, Negeri Sembilan

Mazlam Zawawi
Ampang Puteri Specialist Hospital, Ampang, Selangor

Muhammad Radzi Abu Hassan
Hospital Sultanah Bahiyah, Alor Setar, Kedah

Ong Tze Zen
KPJ Kajang Specialist Centre, Kajang, Selangor

Ooi Eng Keat
Gleneagles Medical Centre, Penang

P Kandasami
International Medical University, Seremban, Negeri Sembilan

Ramesh Gurunathan
Sunway Medical Centre, Petaling Jaya, Selangor

Razman Jarmin
University Kebangsaan Malaysia Medical Centre, Kuala Lumpur

Robert Ding
Island Hospital, Penang

Rosemi Salleh
Hospital Raja Perempuan Zainab II, Kota Bharu, Kelantan

Sanjiv Mahadeva
University Malaya Medical Centre, Kuala Lumpur

L Sanker V
Selangor Medical Centre, Selangor

Shashi Kumar Menon
Kuala Lumpur Hospital, Kuala Lumpur

Tan Huck Joo
Sunway Medical Centre, Petaling Jaya, Selangor

Faculty Bio-Data

Akhtar Qureshi

Dr Qureshi graduated with honours degree from the Royal College of Surgeons in Ireland in 1987. He subsequently trained in Ireland and England completing his basic, higher and advanced surgical training. In 1996 Dr Qureshi returned to Malaysia to join the Universiti Kebangsaan Malaysia where he headed the colorectal unit, training local postgraduates. He subsequently moved to the International Medical University as Professor and Head of Surgery in 1999. Dr Qureshi was the chairman of the national committee on colorectal cancer screening guideline consensus. He is a founding member and past-president of the Malaysian Society of Colorectal Surgeons and has been instrumental in developing colorectal surgery as a sub-speciality in Malaysia. Dr Qureshi has an interest in both clinical surgery and research, with over 100 scientific publications on surgical issues with numerous local and international papers. He has a special interest in colorectal diseases. He has been an invited speaker at numerous local and international meetings. He is also an examiner for the FRCS exams, and an external examiner for several of the local universities. He is currently consultant general and colorectal surgeon at Sunway Medical Centre, Petaling Jaya.

Luigi Bolondi

Professor Luigi Bolondi graduated in1974 at the University of Bologna. He became Professor of Internal Medicine at University of Bologna since 2000. He is the Chief of Division of Internal Medicine, Policlinico S Orsola-Malpighi, Bologna, Italy since 1997 and the Chief of Department of Diseases of the Digestive System and Internal Medicine since 2007. He is the Director of Advanced Course of Internal Ultrasonography at University of Bologna. He is President of Medical-Surgical Society of Bologna since 2006. He is also the Professor of postgraduate courses of internal medicine, gastroenterology and geriatrics, University of Bologna, and Professor of University Master of Palliative Treatments in Oncology. He has six monographs (three international monographs), more than 200 articles in international scientific journals, and 49 chapters in international monographs. He is a member of the editorial board of Hepatology (1993-1996), Journal of Clinical ultrasound, Journal of Hepatology and associate editor of European Journal of Ultrasound.

Bong Jan Jin

Associate Professor Bong Jan Jin is the current head of hepato-biliary-pancreatic (HPB) unit at the UKM Medical Centre, Kuala Lumpur. He graduated from the University of Leeds in 1996 and completed his basic-surgical training at the teaching hospitals in Leeds, England. He also undertook a postgraduate research project leading to the award of Doctorate of Medicine (MD) under the supervision of Professor Michael J McMahon at the Leeds General Infirmary. He then joined the higher surgical training programme for specialists at the prestigious North-Thames division of the London Deanery. During his tenure as a specialist registrar, he gained excellent experience under the guidance of many world-class surgeons in London, including Professor Williamson at the Hammersmith, Professor Mallago at the University College Hospital, Professor Davidson at the Royal Free Hospital, and Mr David Rosin at St Mary's hospital. After completion of his training (C.C.T.), he spent another year at the Hammersmith Hospital as a HPB clinical fellow. He returned to Malaysia in 2009 to join the Department of Surgery, UKM. In January 2010, he became the head of HPB unit at the UKMMC. Amongst the many pioneering skills, Mr Bong had performed the first laparoscopic hepatectomy in the country, and developed the HPB unit into a surgical unit capable of handling complex HPB resections.

Faculty Bio-Data (cont'd)

Chan See Ching

Dr Chan graduated as dental surgeon in 1985 and obtained his FRACDS in1988 and FHKAM (Dental Surgery) in 1993. Later, he graduated from the Faculty of Medicine, University of Hong Kong in 1995 and completed his postgraduate degree in FRCSEd and FRCHK in 1999. He obtained his FCDSHK (Oral & Maxillofacial Surgery) in 2000, FHKAM (Surgery) in 2002, Master of Surgery in 2005 and PhD (Small-for-Size Graft Injury in Adult Living Donor Liver Transplantation) in 2011. He is Consultant Hepato-Biliary-Pancreatic Surgery & Liver Transplantation Unit at the University of Hong Kong Medical Center, Queen Mary Hospital since August 2007 till present. He is also Honorary Clinical Associate Professor, Department of Surgery, University of Hong Kong Medical Center since December 2007. He was awarded State Scientific and Technological Progress (SSTA) First-class Award from the National Office for Science and Technology Awards (NOSTA) for his work in Right Liver Adult-to-Adult Live Donor Liver Transplantation in 2005. He is a reviewer for various international hepatology and liver transplantation journals and editorial board of Hepatobiliary & Pancreatic Diseases International. He has published more than 85 original articles in peer review journals.

Philip Chiu Wai Yan

Professor Chiu graduated from the Faculty of Medicine, The Chinese University of Hong Kong in 1994. He obtained his FRCS (Edinburgh) and FRCHK in 1998, followed by his MD degree in 2009. He was trained under Professor Haruhiro Inoue in Japan for minimally invasive surgery and Professor Tom R DeMeester for GERD, esophagectomy and esophageal motility disorder. He is currently Professor of Surgery in the Department of Surgery, Prince of Wales Hospital, The Chinese University of Hong Kong. Professor Chiu is also the Vice President of the Hong Kong Society of Upper GI Surgeons. He has 30 publications in leading journals.

Kang Jin Yong

Dr Kang is a graduate from the University of Birmingham. He trained in Gastroenterology at the General Hospital, Birmingham and the Royal North Shore Hospital, Sydney. In 1981 he joined the National University of Singapore as a Lecturer in Medicine and subsequently became Consultant Gastroenterologist and Associate Professor of Medicine. He then emigrated to Britain in 1995, and became a Consultant Gastroenterologist at the James Paget Hospital in Norfolk. Since 1999 he has been Consultant Gastroenterologist and Honorary Senior Lecturer at St George's Hospital and Queen Mary's University Hospital, Roehampton. He is a Fellow of the Royal College of Physicians of London, and Edinburgh, Royal Australasian College of Physicians and Academy of Medicine, Singapore. He is also a member of Oesophageal Section Committee of the British Society of Gastroenterology. Dr Kang's clinical interests include dyspepsia, gastro-oesophageal reflux disease, other oesophageal conditions, irritable bowel syndrome, inflammatory bowel disease and colorectal cancer screening. He has published more than 170 scientific papers in peer review journals.

Faculty Bio-Data (cont'd)

Kao Jia-Horng

Professor Kao graduated from the College of Medicine at the National Taiwan University in 1987 before going on to obtain a PhD from the Graduate Institute of Clinical Medicine in 1994. He undertook postgraduate training at the National Taiwan University Hospital between 1986 and 1992 and has been an Attending Physician in the Department of Internal Medicine and Division of Gastroenterology since 1992. He is currently Professor of Medicine and Director of Graduate Institute of Clinical Medicine at the National Taiwan University. He is also an Executive Council Member of the Asian Pacific Association of the Study of the Liver (APASL) and the President of APASL 2012. Professor Kao is the Editor of the *Journal of Gastroenterology and Hepatology* as well as the Associate Editor for *Hepatology International*, and sits on the editorial board of the *Journal of Hepatology*, *Journal of Infectious Diseases*, *Recent Patents on Anti-Infective Drug Discovery* and the *Clinical Journal of Gastroenterology*. He has published more than 280 articles in leading journals.

George K K Lau

Professor George Lau is Honorary Clinical Professor, Faculty of Medicine, The University of Hong Kong. He is also the Honorary Professor, Institute of Hepatology, University College London, United Kingdom and the 302 Military Hospital, Beijing. Professor Lau has a distinguished career in the research of chronic hepatitis B virus (HBV) infection. He has pioneered work in adoptive clearance of HBV infection and the use of pre-emptive lamivudine to prevent HBV reactivation after chemotherapy. He provides the first evidence in humans that transfer of hepatitis B core antigen-reactive T cells is associated with resolution of chronic HBV infection. Professor Lau is recognized as an international leader in clinical trials for anti-HBV treatment, and he is the principal investigator of pegylated interferon α-2a for the treatment of chronic Hepatitis B (CHB). The results of such work have led to the registration of pegylated interferon α-2a by the EU and US Food and Drug Administration in 2005 and represent a landmark for the treatment of chronic HBV infection. Professor Lau has more than 300 publications in scientific journals. Professor Lau has been the Associate Editor for both Journal of Hepatology and Liver international, and serves as a reviewer for over 20 international journals. He is also on the editorial board of numerous renowned journals. He has served as the 19th President of APASL for the period 2008-09.

Ling Khoon Lin

Dr Ling graduated from the National University of Singapore in 1993. He obtained his post-graduate degree in 1996 and started his gastroenterology training in 1997 in Singapore General Hospital. He underwent further training at the University of Oxford from 2001-2005. While in Oxford, he completed a PhD in colon cancer immunology. His current interests include inflammatory bowel diseases, treatment of resistant *Helicobacter pylori*, and the immunology of gastric pre-malignant and malignant lesions. Due to his distinguished achievement in research, he was awarded National Medical Research Council Clinician Scientist Award in 2009.

Faculty Bio-Data (cont'd)

Lui Hock Foong

Dr Lui graduated from the National University of Singapore in 1990. He completed his post-graduate training in Internal Medicine with the Ministry of Health, Singapore, before leaving for the United Kingdom for his advanced specialty training. He embarked on his advanced specialist training in Gastroenterology and Hepatology with the Lister Postgraduate Institute in 1995, training at the Royal Infirmary of Edinburgh, the Scottish Liver Transplant Unit and the Chelsea and Westminster Hospital (London). He returned to Singapore in 2000, working at the Singapore General Hospital, and was Senior Consultant Physician & Gastroenterologist, before leaving for private practice at his present practice at Gleneagles Hospital in 2006. He remains a Visiting Consultant with Singapore General Hospital, where he runs the Liver Cirrhosis and Portal Hypertension Clinic, is part of the Liver Transplantation team, supervises portal hypertension and cirrhosis research and conducts postgraduate teaching. He is the Chairman of the National Foundation of Digestive Disease, the secretary of the Chapter of Gastroenterology of the Academy of Medicine, Singapore, and a member of the Asia Pacific Association for the Study of the Liver Working Party on Portal Hypertension.

Sybille Mazurek

Professor Mazurek graduated with Diploma in Biology from the University of Giessen in 1990. She then became a postdoctoral fellow in the Institute for Biochemistry and Endocrinology, Faculty of Veterinary Medicine, University of Giessen, Germany and subsequently became a postdoctoral fellow in the Department of Clinical and Experimental Tumor Research, University of Bern, Switzerland. Professor Mazurek is the Head of Tumor Metabolism, ScheBo Biotech AG, Giessen, Germany. She is also a Professor at the University of Giessen. Her main research interest is tumor metabolism.

Hiroto Miwa

Professor Hiroto Miwa graduated from Kagoshima University Medical School (Japan) in 1982 and obtained his PhD at Juntendo University Medical School (Japan) in 1988. He is currently Professor of Medicine and Chairman, Division of Upper Gastroenterology, Department of Internal Medicine and Director of Endoscopy Center, Hyogo College of Medicine. Professor Miwa is a leader in dyspepsia. He has published extensively on the subject. He is in the editorial board of a few renowned gastroenterology journals such as World Journal of Gastroenterology, American Journal of Gastroenterology, Journal of Gastroenterology, etc.

Faculty Bio-Data (cont'd)

Colm O'Morain

Professor Colm O'Morain graduated from the University College Dublin in 1972 and did his Gastroenterology Fellowship in CHU, Nice, and Northwick Park Hospital, London. He is the Dean of the Faculty of Health Sciences, Trinity College Dublin from 2007. He has been the President of the Association of the European and Mediterranean Gastroenterological Societies since 1997. He sits on the Scientific Committee of the European Cancer Prevention Group, European *Helicobacter pylori* Study Group, Gastro Surgical Club and International Organisation of Inflammatory Bowel Disease. He is also on the Gastroenterology Committee of the Medical Research Council of Ireland. He is a Fellow of the Royal College of Physicians of Ireland and American College of Gastroenterology. He is an Irish representative of the European Union Specialist Section of Gastroenterology. Professor O'Morain is a founder member of the European Board of Gastroenterology, The European Society of Digestive Oncology and The European Helicobacter Pylori Study Group. Professor O'Morain is on the Editorial Board of eight peer review journals and has published over 300 peer review articles. He has also authored and co-authored four books. His research interests are in *Helicobacter pylori*, colorectal cancer prevention and inflammatory bowel disease.

Ooi Choon Jin

Associate Professor Ooi Choon Jin obtained his MBBS from National University of Singapore in 1989. He continued his postgraduate training in Singapore before becoming a clinical and research fellow at the Center for the Study of Inflammatory Bowel Diseases at Massachusetts General Hospital and Harvard Medical School from 1998-2000. Dr Ooi is currently Associate Professor at the Duke-NUS Graduate Medical School Singapore and Clinical Associate Professor at the Yong Loo Lin School of Medicine at National University of Singapore. He is the Head and Senior Consultant in the Department of Gastroenterology and Hepatology and the Director of the Inflammatory Bowel Disease Centre, Singapore General Hospital. He is currently the Treasurer of the Asia Pacific Association of Gastroenterology (APAGE). His main interest is basic and clinical research in Inflammatory Bowel Disease and small bowel endoscopy. He also had various publications in international journals in this area.

Ramesh Gurunathan

Dr Ramesh obtained his MBBS in 1993 and later his Masters in General Surgery from UKM in 2000 and Fellowship from the Royal College of Surgeons in Ireland. He had his early training in Upper GI Surgery from Sanjay Gandhi Post-Graduate Institute, India and in Malaysia. He received further training in Upper GI Surgery in Queen Alexandra Hospital, Portsmouth, England. He has various publications in local and international journals, and is actively involved in research activities. He has also published a chapter entitled "Laparoscopic Surgery of the Upper GI Tract" and also is a reviewer for The International Journal of Medicine and Medical Sciences. Dr Ramesh is currently a Consultant Upper GI Surgeon in Sunway Medical Center. He is also the Chairman for the Upper GI Surgery speciality sub-committee in the National Specialist Registry and Chairman for the Malaysian Upper GI Surgical Club. His main interest is in esophagogastric cancers and its early detection.

Faculty Bio-Data

Sanjiv Mahadeva

Dr Sanjiv Mahadeva is Consultant Gastroenterologist and Professor in the Faculty of Medicine, University of Malaya. He trained in the United Kingdom and obtained the Certificate of Completion of Specialist Training (CCST) in Gastroenterology and Hepatology in 2003. After returning to Malaysia, he joined the academic unit of Gastroenterology at University Malaya Medical Centre. He has an active interest in a wide range of topics including therapeutic endoscopy, functional gastrointestinal diseases, chronic liver disease and enteral access for nutrition. He is a committee member of various national and international professional organisations, including the ASEAN Fibroscan Club, a focus group of clinicians involved in Fibroscan research. He is currently the Secretary of Malaysian Society of Gastroenterology and Hepatology and the President of Parental and Enteral Society of Malaysia.

See Teik Choon

Dr See graduated from University College Dublin in 1993. He obtained his FRCS in 1997 and FRCR in 2002. He is currently a Consultant Interventional Radiologist at the Cambridge University Hospitals. His main interests are oncological intervention including radiofrequency ablation, chemo-embolisation, and radio-embolisation. He also has extensive experience in hepatobiliary intervention including portal vein embolization and TIPSS; vascular intervention and imaging including aortic diseases and stent grafting, angiogenesis and revascularization. He had numerous publications in international journals and had authored in radiology books, chapters and reviews.

Yeoh Khay Guan

Dr Yeoh is currently Associate Professor and Senior Consultant in the Department of Gastroenterology, National University of Singapore. He is also the Vice Dean in the Yong Loo Lin School of Medicine. Dr Yeoh's research interest is in the early detection of gastric and colorectal cancers, by screening and the use of molecular markers. He is currently the Lead Principal Investigator of the Singapore Gastric Cancer Consortium. He also chairs the National Colorectal Cancer Screening Committee of the Health Promotion Board, Ministry of Health, Singapore. He has published over 100 peer review papers in international journals and was awarded the Emerging Leader Lectureship award for his research by the Journal of Gastroenterology & Hepatology Foundation in 2006.

Previous MSGH Meetings – Overseas Invited Faculty

The Stomach '96 (Co-organized with the College of Surgeons)

3rd – 6th July 1996, Kuala Lumpur

Stephen G Bown	UNITED KINGDOM	Adrian Lee	AUSTRALIA
Sydney C S Chung	HONG KONG	Roy E Pounder	UNITED KINGDOM
Teruyuki Hirota	JAPAN	Robert H Riddell	CANADA
Richard H Hunt	CANADA	Henry M Sue-Ling	UNITED KINGDOM
David Johnston	UNITED KINGDOM	Nicholas J Talley	AUSTRALIA
J Y Kang	UNITED KINGDOM	Guido N J Tytgat	NETHERLANDS
S K Lam	HONG KONG	Cornelis J H Van De Velde	NETHERLANDS

Penang International Teaching Course in Gastroenterology

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

23rd – 26th July 1997, Penang

Anthony Axon	UNITED KINGDOM	Michael Larvin	UNITED KINGDOM
John Dent	AUSTRALIA	Christopher Liddle	AUSTRALIA
R Hermon Dowling	UNITED KINGDOM	Lim Seng Gee	SINGAPORE
Greg Holdstock	UNITED KINGDOM	J J Misiewicz	UNITED KINGDOM
Kees Huibregtse	NETHERLANDS	James Neuberger	UNITED KINGDOM
P W N Keeling	IRELAND	Thierry Poynard	FRANCE
Dermot Kelleher	IRELAND	Jonathan Rhodes	UNITED KINGDOM
Fumio Konishi	JAPAN	Nib Soehendra	GERMANY
John Lambert	AUSTRALIA		

Second Western Pacific Helicobacter Congress

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

Masahiro Asaka	JAPAN	Peter Malfertheiner	GERMANY
Douglas E Berg	USA	Kenneth E L McColl	SCOTLAND
Kwong-Ming Fock	SINGAPORE	Hazel M Mitchell	AUSTRALIA
David Forman	UNITED KINGDOM	Pentti Sipponen	FINLAND
David Y Graham	USA	Joseph J Y Sung	HONG KONG, CHINA
Stuart L Hazell	AUSTRALIA	Rakesh Tandon	INDIA
Richard Hunt	CANADA	Guido N J Tytgat	NETHERLANDS
Shiu-Kum Lam	HONG KONG, CHINA	Shu-Dong Xiao	CHINA
Adrian Lee	AUSTRALIA		

Gastroenterology 1999

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

Francis K L Chan	HONG KONG, CHINA	Peter Malfertheiner	GERMANY
Sydney S C Chung	HONG KONG, CHINA	Colm O'Morain	IRELAND
John Dent	AUSTRALIA	Seng-Hock Quak	SINGAPORE
Rikiya Fujita	JAPAN	Nicholas J Talley	AUSTRALIA
Mohammed Al Karawi	SAUDI ARABIA	Neville D Yeomans	AUSTRALIA
Mohammad Sultan Khuroo	SAUDI ARABIA		

Previous MSGH Meetings – Overseas Invited Faculty (cont'd)

GUT 2000

24th – 26th August 2000, Melaka

Anthony Axon	UNITED KINGDOM	David Mutimer	UNITED KINGDOM
Geoffrey C Farrell	AUSTRALIA	Han-Seong Ng	SINGAPORE
Vay Liang W Go	USA	Thierry Poynard	FRANCE
Humphrey J F Hodgson	UNITED KINGDOM	Francis Seow-Choen	SINGAPORE
Peter Katelaris	AUSTRALIA	Jose D Sollano	PHILIPPINES
Lim Seng-Gee	SINGAPORE	Guido N J Tytgat	NETHERLANDS
Anthony I Morris	UNITED KINGDOM	Michael Wolfe	USA

Gastro 2001 (With the participation of the American Gastroenterological Association)

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

Aziz Rani	INDONESIA	Pinit Kullavanijaya	THAILAND
Chung Owyang	USA	Shiu-Kum Lam	HONG KONG, CHINA
Sydney S C Chung	HONG KONG, CHINA	Peter Malfertheiner	GERMANY
Andrew Clouston	AUSTRALIA	James M Scheiman	USA
John Dent	AUSTRALIA	Mahesh P Sharma	INDIA
Kwong-Ming Fock	SINGAPORE	Gurkirpal Singh	USA
Robert N Gibson	AUSTRALIA	Jose D Sollano	PHILIPPINES
Richard Hunt	CANADA	J L Sweeney	AUSTRALIA
Y K Joshi	INDIA	Rakesh Tandon	INDIA
Joseph Kolars	USA	Benjamin C Y Wong	HONG KONG, CHINA
Wen-Hsin Koo	SINGAPORE	Shu-Dong Xiao	PR CHINA
Edward Krawitt	USA		

GUT 2002

27th – 30th June 2002, Penang

Wan-Cheng Chow	SINGAPORE	Tore Lind	SWEDEN
Anuchit Chutaputti	THAILAND	Barry James Marshall	AUSTRALIA
David Forman	UNITED KINGDOM	Han-Seong Ng	SINGAPORE
Lawrence Ho Khek Yu	SINGAPORE	C S Pitchumoni	USA
Peter Katelaris	AUSTRALIA	Herbert J Tilg	AUSTRIA
James Y W Lau	HONG KONG, CHINA	John Wong	HONG KONG, CHINA

GUT 2003

28th – 31st August 2003, Kuching, Sarawak

Francis K L Chan	HONG KONG, CHINA	Teerha Piratvisuth	THAILAND
Mei-Hwei Chang	TAIWAN	Roy Pounder	UNITED KINGDOM
W G E Cooksley	AUSTRALIA	Eamonn M M Quigley	IRELAND
Kok-Ann Gwee	SINGAPORE	Jose D Sollano Jr	PHILIPPINES
Humphrey J O'Connor	IRELAND	Joseph Sung	HONG KONG, CHINA
Colm O'Morain	IRELAND	Khay-Guan Yeoh	SINGAPORE

Previous MSGH Meetings – Overseas Invited Faculty (cont'd)

GUT 2004

24th – 27th June 2004, Penang

Sydney C S Chung	HONG KONG, CHINA	Peter W R Lee	UNITED KINGDOM
Geoffrey C Farrell	AUSTRALIA	Masao Omata	JAPAN
Ronnie Fass	USA	Teerha Piratvisuth	THAILAND
David Fleischer	USA	Mario Rizzetto	ITALY
Kwong-Ming Fock	SINGAPORE	Russell W Strong	AUSTRALIA
Jia-Qing Huang	CHINA	Benjamin C Y Wong	HONG KONG, CHINA
Shiu-Kum Lam	HONG KONG, CHINA		

GUT 2005

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

Raymond Chan Tsz-Tong	HONG KONG, CHINA	Peter Malfertheiner	GERMANY
Meinhard Classen	GERMANY	Kenneth McColl	IRELAND
Anthony Goh	SINGAPORE	Graeme Young	AUSTRALIA
Gerald Johannes Holtmann	AUSTRALIA	Yuen Man-Fung	HONG KONG, CHINA

GUT 2006

20th – 23rd June 2006, Hilton Kuala Lumpur, Malaysia

Peter Gibson	AUSTRALIA	Ng Han Seong	SINGAPORE
Lawrence Ho Khek Yu	SINGAPORE	Ooi Choon Jin	SINGAPORE
Gerald Johannes Holtmann	GERMANY	Fred Poordad	USA
Lim Seng Gee	SINGAPORE	Francis Seow-Choen	SINGAPORE
Irvin Modlin	USA	Nimish Vakil	USA
Anthony Morris	UNITED KINGDOM	John Wong	HONG KONG, CHINA
Nageshwar Reddy	INDIA		

GUT 2007

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

Ronnie Fass	USA	Charlie Millson	ENGLAND
Marc Giovannini	FRANCE	G V Rao	INDIA
Robert Hawes	USA	Marcelo Silva	ARGENTINA
Richard Hunt	CANADA	Nib Soehendra	GERMANY
Finlay Macrae	AUSTRALIA	Daniel Wong	SINGAPORE
Norman Marcon	USA	Hironori Yamamoto	JAPAN
Amit Maydeo	INDIA	Khay-Guan Yeoh	SINGAPORE

Previous MSGH Meetings – Overseas Invited Faculty (cont'd)

GUT 2008

21st – 24th August 2008, Shangri-La Hotel, Kuala Lumpur, Malaysia

Anuchit Chutaputti	THAILAND	Davide Lomanto	SINGAPORE
Peter Bytzer	SWEDEN	Lui Hock Foong	SINGAPORE
Henry Chan Lik Yuen	HONG KONG, CHINA	Govind K Makharia	INDIA
Sydney C S Chung	HONG KONG, CHINA	Prateek Sharma	USA
David Y Graham	USA	Rajvinder Singh	AUSTRALIA
Lawrence Ho Khek Yu	SINGAPORE	Mitchell Shiffman	USA
Pali Hungin	UNITED KINGDOM	Sundeep Punamiya	SINGAPORE
Rupert Leong	AUSTRALIA		

GUT 2009

14th to 16th August 2009, Awana Porto Malai, Pulau Langkawi, Kedah, Malaysia

Geoffrey Farrell	AUSTRALIA	Irvin Modlin	USA
Fock Kwong Ming	SINGAPORE	Fabio Pace	ITALY
Peter R Galle	GERMANY	Rungsun Rerknimitr	THAILAND
Christopher Khor	SINGAPORE	Joseph Sung Jao Yiu	HONG KONG, CHINA
George K K Lau	HONG KONG, CHINA	Daniel Wong Wai Yan	UNITED KINGDOM
Lim Seng Gee	SINGAPORE	Yeoh Khay Guan	SINGAPORE
Lo Chung Mau	HONG KONG, CHINA		

Conference Information

CONGRESS VENUE

Shangri-La Hotel Kuala Lumpur
11 Jalan Sultan Ismail, 50250 Kuala Lumpur, Malaysia
Tel : (603) 2026 8488 Fax : (603) 2032 1245

REGISTRATION

The operating times are:

27th May 2011 (Friday)	0730 to 1700 hrs
28th May 2011 (Saturday)	0730 to 1700 hrs

IDENTITY BADGES

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

ENTITLEMENTS

Full registrants will be entitled to:

- Malaysia Night
- All scientific sessions
- All satellite symposia
- Conference bag and materials
- Coffee / Tea
- Lunches
- Admission to the trade exhibition area

MEET-THE-EXPERT BREAKFAST SESSIONS

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

MALAYSIA NIGHT @ 28TH MAY 2011, SATURDAY

The Malaysia Night will be held at the Sarawak Room, Shangri-La Hotel, Kuala Lumpur, Malaysia.

Delegates can bring their families and guests at RM120 per person. Trade personnel are welcomed to join the function at RM120 per person.

Dress: Smart Casual

Entrance strictly by invitation card only.

SPEAKERS AND PRESENTERS

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

The Speaker Ready Room is located in the Sabah Ante-Room and the operating times are:

27th May 2011 (Friday)	0730 to 1700 hrs
28th May 2011 (Saturday)	0730 to 1700 hrs
29th May 2011 (Sunday)	0730 to 1100 hrs

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

Conference Information (cont'd)

POSTERS

Posters will be displayed at the Ballroom Foyer, Shangri-La Hotel from 0830 hrs on 27th May 2011 till 1300 hrs on 29th May 2011.

The Organising Ccommittee bears no responsibility for the safekeeping of posters. Any posters not collected by the close of the poster session will be discarded.

PHOTOGRAPHY & VIDEOTAPING POLICIES

No photography or videotaping of the presentations is permitted during the scientific sessions.

MOBILE PHONES

For the convenience of all delegates, please ensure that your mobile phone is put on 'Silence' mode during the conference sessions.

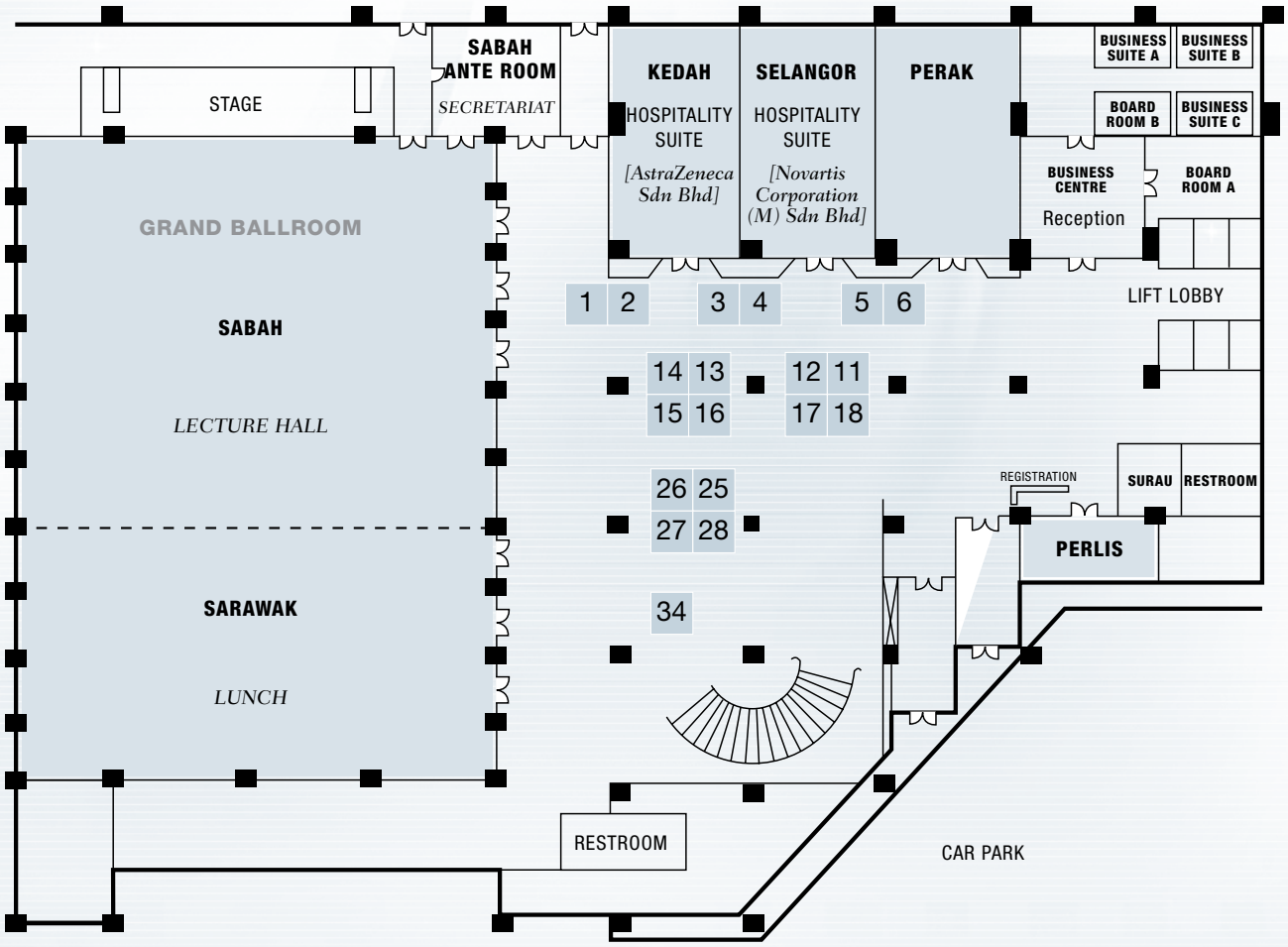
LIABILITY

The Organising Committee will not be liable for personal accidents, loss or damage to private properties of participants during the conference. Participants should make own arrangements with respect to personal insurance.

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.

Function Room & Trade Exhibition



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Acknowledgements

The Organising Committee of the
GUT 2011 – Annual Scientific Meeting of the Malaysian Society of Gastroenterology & Hepatology
expresses its deep appreciation to the following for their support and contribution
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Eisai (M) Sdn Bhd

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INDICATIONS ON THE USE OF BIOLOGICAL IN UC AND CROHNS

Ling Khoon Lin

Department of Gastroenterology, Singapore General Hospital, Singapore

The biological agents currently approved for use in Crohn's disease and ulcerative colitis are antibodies which block the action of tumour necrosis factor alpha(TNFa), and an antibody antagonistic to integrin a4 which blocks the migration of leukocytes to the gastrointestinal tract. Of the three FDA approved anti-TNFa antibodies, infliximab and adalimumab are available in Singapore and Malaysia. The current indications for anti-TNFa treatment in Crohn's disease include severe inflammatory luminal disease which is steroid refractory or dependent and fistulising Crohn's disease. Anti-TNFa maintenance therapy in patients who initially responded to induction therapy has been shown to be useful to maintain disease remission. Anti-TNFa treatment is indicated in the treatment of patients with moderate to severe ulcerative colitis who are refractory to conventional treatment. Maintenance therapy has also been shown to be useful in patients who respond to initial induction therapy. Infliximab is useful in the treatment of hospitalised patients with acute severe colitis who have failed intravenous steroids. It has been shown to be as effective as intravenous cyclosporine in this situation. Natalizumab is an anti-integrin a4 antibody which is currently only indicated in patients with Crohn's disease who have failed conventional and anti TNF therapy and in whom other treatment modalities are contraindicated. It may cause the significant adverse effect of JC virus reactivation, PML and subsequent death.

OVERVIEW; PATHOGENESIS OF FUNCTIONAL DYSPEPSIA INCLUDING IMPORTANCE OF ACID AND MOTILITY

Hiroto Miwa

Division of Upper Gastroenterology, Department of Internal Medicine, Hyogo College of Medicine, Nishinomiya, Japan

Dyspepsia refers to symptoms centered in the upper abdominal region, such as stomachache, heartburn, feeling bad after eating, and heavy feeling in the stomach. Many patients complain of dyspepsia despite the absence of an obvious organic cause such as ulcer, esophagitis, or cancer. Functional dyspepsia (FD) is a chronic condition in which patients have symptoms thought to originate in the gastroduodenal regions in the absence of any organic, systemic or metabolic disease that may explain the symptoms. However, the patients do not necessarily always manifest symptoms, and their symptoms sometimes wax and wane. This is because these symptoms do not appear to come from permanent gastrointestinal tract dysfunction. Visceral symptoms are manifested as a reflection of individual responses to foreign stimuli, including physical and emotional stress. Nevertheless, researchers have searched for and successfully identified several physiological disorders that might explain such symptoms. Among such pathophysiological factors, gastrointestinal dysmotility and visceral hypersensitivity are considered key factors that directly induce symptoms. Other factors, which may enhance and/or modulate physiological dysfunctions caused by the key factors, may also be involved, but they are not central players.

Gastrointestinal dysmotility, including food maldistribution, impaired accommodation, impaired antral contractility, and delayed gastric emptying, is one of the key players. Its involvement in the pathogenesis of FD has been well studied and reported from the West as well as the Asian countries. Although the association between gastrointestinal dysmotility and visceral symptoms has not been well recognized except impaired accommodation, this is a target of medical management. As well, though only a few studies of visceral hypersensitivity have been reported from the Asian countries, its importance for symptom development is well recognized. The problem is that there is only a few medicines that work on the visceral hypersensitivity.

H. pylori infection is the factor that shows large differences among various geographic regions and ethnicity. The prevalence of H. pylori infection is higher and in Asian countries than in Western countries. Meta-analysis of eradication treatment of this infection showed definite but not large effect of the treatment.

Excessive acid is also thought as one of the important etiologic factors. Applying the 0.1M hydrochrolide solution (pH 1) into the stomach and/or duodenum causes the symptoms both in health and FD, suggesting that the acid is causal factor of dyspepsia. In addition, the clinical trials for efficacy of proton-pump-inhibitor in the West have shown the importance of acid suppression treatment. Accordingly, the acid suppression treatment by PPI is regarded as one of first line treatments for this condition. However, the results of clinical trials in Asia did not necessarily provide the consistent results. Further studies on efficacy of acid suppression treatment are required.

The importance of psychosocial factors in the pathogenesis of FD is well known. Psychological factors modulate gastric motility and/or visceral sensitivity. Recent studies have successfully demonstrated that psychological stress, including anxiety or anger, alters such physiological functions of the upper GI tract, indicating that psychological factors are involved in FD symptom expression. Furthermore, reports demonstrating the effectiveness of sulpiride or anti-anxiety agents on symptom improvement strongly support this finding. Modulation of physiological functions by psychological factors needs further study.

Besides these factors, genetic and/or environment in the childhood, food and life style, inflammation and immunity are thought to be involved in the pathogenesis of FD. As discussed above, the pathophysiology of FD is thought to involve multiple factors, and those factors interact and cause changes in physiological function that lead to the symptoms of FD. The question is, how are the factors related? Those relationships are extremely complex, yet they finally modulate motility and/or visceral hypersensitivity that are directly linked to symptoms. There are many clinicians who would cite psychosocial factors as pathogenic factors equivalent in importance to motility disorders and visceral hypersensitivity, I think that rather than causing symptoms themselves, psychological factors cause symptoms by powerfully modifying physiological functions.

L2

IMMUNOLOGY IN IBD FOR CLINICIANS

Ling Khoon Lin
Department of Gastroenterology, Singapore General Hospital, Singapore

The inflammatory bowel diseases (IBD), ulcerative colitis and Crohn's disease are chronic inflammatory diseases of the gastrointestinal tract with differing clinical presentations and histology. While the exact pathogenic mechanisms of these diseases are not known, UC and CD are thought to arise from the interaction of genetic, environmental, microbiological and immunological factors. Evidence from both animal models and human studies has demonstrated the importance of the innate and adaptive immune system in IBD pathogenesis. NOD2/CARD15, the first gene IBD gene to be identified, is a pattern recognition protein which regulates the manner in which the immune system interacts with bacteria. Other genes eg IL23R and TNFSF15 are proteins which influence the way lymphocytes differentiate and function. Pharmaceutical companies have been quick to make use of our expanding knowledge of immunology to develop antibodies and small molecules which target specific immune pathways. They have made biological agents which either bind inflammatory cytokines produced by immune cells, block the downstream signalling of these cytokines, block the activation of immune cells or block the migration of immune cells to the gut. As our knowledge of immunology increases, we and our IBD patients can look forward to more drugs which target different pathways in the gut inflammatory response.

MEET-THE-EXPERT BREAKFAST SESSION 2

RADIOLOGICAL THERAPY FOR LIVER METASTASES FROM COLORECTAL CANCER

See Teik Choon

Radiology Department, Addenbrooke's Hospital, Cambridge University Hospitals NHS Foundation Trust, Cambridge, United Kingdom

Liver metastases are seen in 15–25% of patients with colorectal cancer at presentation and nearly 50% of the patients will ultimately develop liver metastases during the course of their diseases. Hepatic resection remains the only potentially curative therapy but this is only possible in less than 25% of patients with liver metastases. In some patients with limited liver reserve pre-operative portal vein embolization aims to induce compensatory hypertrophy of the future liver remnant and therefore improve resectability. Non-surgical therapeutic options for patients with liver-isolated disease include systemic chemotherapy, radiotherapy and radiological guided therapy (or interventional oncology). The role of interventional oncology is expanding due to significant improvement in imaging techniques (ultrasound, CT, MRI and fluoroscopy) and refinement of interventional radiology. Currently, the armamentariums of interventional oncology in colorectal cancer patients with liver metastases include local ablative therapy (e.g. percutaneous alcohol injection, radiofrequency ablation, microwave therapy, laser photocoagulation and cryotherapy) and transarterial regional therapy (e.g. hepatic artery chemotherapy infusion, transarterial chemo-embolisation and selective internal radiation therapy/SIRT). RFA is the most commonly used ablative therapy and currently there is adequate evidence on its safety and efficacy. The use of transarterial chemotherapy is not universal and its comparison with systemic chemotherapy has not been adequately resolved. SIRT is now emerging as a highly potential option in patients with liver only metastases which are non-resectable and non-ablatable. The technique delivers 90Yttrium microspheres into the hepatic arterial system giving local radiation therapy and potentially some degree of embolization effect. Current evidence on safety issue is adequate and although its efficacy appears favourable further studies are needed to establish survival benefits. Given the spectrum of radiological guided interventions available, a multidisciplinary team approach is highly essential in selecting the best option for individual patient.

MEET-THE-EXPERT BREAKFAST SESSION 3

OPTIMIZING HBV TREATMENT REDUCES THE RISK OF HEPATOCELLULAR CARCINOMA

Kao Jia-Horng

Graduate Institute of Clinical Medicine, Hepatitis Research Center, and Department of Medical Research, National Taiwan University College of Medicine and National Taiwan University Hospital, Taipei, Taiwan

Hepatitis B virus (HBV) is highly infectious and remains a global health problem. Worldwide, approximately 2 billion of the population has been infected with HBV, and 400 million of them are chronic carriers of the virus. The infection causes significant morbidity and mortality, ranging from acute or fulminant hepatitis to end-stage liver disease and hepatocellular carcinoma (HCC). HBV infection is prevalent in Asia, Africa, Southern Europe and South America, where the infection mostly occurs in perinatal period or early childhood and the prevalence of hepatitis B surface antigen (HBsAg) in the general population ranges from 2% to 20%. In the past decade, several hepatitis B viral factors such as serum HBV DNA level, genotype and naturally occurring mutants have already been identified to influence liver disease progression and HCC development in HBV carriers. Several easy-to-use scoring systems based on clinical and viral characteristics are developed to predict HCC risk in HBV carriers and may facilitate the communication between practicing physicians and patients in clinical practice. In addition, the role of non-viral factors in HBV-related HCC has also been increasingly recognized. On the basis of these emerging data, it is recommended that HBV carriers should be screened and monitored to identify those who have a higher risk of liver disease progression and require antiviral treatments. Currently, two types of antiviral therapy are widely available for CHB: standard or pegylated interferon alpha (IFN) with immune modulatory effects and five nucleos(t)ide analogues (NAs) with direct antiviral effects, including lamivudine, telbivudine, entecavir, adefovir dipivoxil and tenofovir disoproxil fumarate. Several case-control studies and meta-analyses indicated that IFN or long-term NA treatment can significantly reduce the development of long-term complications including decompensated cirrhosis, liver-related death or HCC in CHB patients. In conclusion, we have witnessed the substantial progress in the prevention and treatment of chronic HBV infection. The interruption of possible transmission routes, wide use of antiviral treatments in conjunction with universal hepatitis B immunization shall lead to the global control and even eradication of hepatitis B in the foreseeable future.

L3 : 8TH PANIR CHELVAM MEMORIAL LECTURE

EAST-WEST DIFFERENCES IN GASTROINTESTINAL DISEASES

Kang Jin Yong
Department of Gastroenterology, St George's Hospital, London, United Kingdom

Geographical and ethnic differences in disease frequency, over time, provide valuable insight into the interplay between genetic and environmental influences in disease causation. In the West, Helicobacter-associated peptic ulcer came into prominence in the last century and subsequently declined, with a concomitant increase in gastro-oesophageal reflux disease (GORD). Up to 30 years ago GORD was uncommon in the East but its frequency has since risen, as in western countries, possibly relating to increasing BMI and the decline in H pylori infection.

Eosinophilic oesophagitis, first described in 1992, is now a major cause of food bolus obstruction and dysphagia in the West and appears to be an increasing problem. To date, eosinophilic oesophagitis is uncommon in oriental countries and it would be interesting to see if the East catches up with the West in this respect.

Although coeliac disease (CD) was first described many centuries ago, the role of wheat in its causation was only recognised during the Second World War when Dutch children with CD improved with wheat in short supply. Gluten in wheat interacts with HLA DQ2 or DQ8 to activate an immune response and induce small intestinal mucosal damage. CD was originally thought to occur mainly in white Europeans. Although under-diagnosed in the past, CD is now known to be just as common in USA and the Middle East. It is rare among Chinese and Japanese, with only 9 cases described to date. DQ2 occurs in 5-10% of Chinese and DQ8 in 10% of Japanese. With increasing wheat consumption in coming decades, CD may become more prevalent in the Orient and present both a major challenge and an opportunity to intervene in a potentially massive pandemic.

NON-INVASIVE ASSESSMENT OF LIVER FIBROSIS

Sanjiv Mahadeva

Department of Medicine, University of Malaya, Kuala Lumpur, Malaysia

Hepatic fibrosis occurs in response to chronic liver injury in almost all patients. Regardless of the cause, the response to liver injury includes collapse of hepatic lobules, formation of fibrous septae, and hepatocyte regeneration with nodular formation. Originally thought of as irreversible, hepatic fibrosis is now recognized as a dynamic process with the potential for significant resolution. New molecular insights into fibrogenesis and fibrosis regression offer potential targets for antifibrotic therapy and increase the need for noninvasive means to measure changes in fibrosis.

While tremendous progress has been made in improving the accuracy of serum markers of hepatic fibrosis, they cannot yet supplant direct analysis of the liver. The ideal fibrosis marker is one that is specific, biologically based, noninvasive, easily repeated in all patients, correlates well with disease severity and outcome, and is not confounded by co-morbidities or drugs. There are currently four commercial serum marker systems that have been most extensively validated: the Fibrospect (Prometheus Corp), the Fibrotest (marketed in the United States by Labcorp), Hepascore (Quest Diagnostics), and the European Liver Fibrosis Study Group panel (not available in the United States), which uses a diagnostic algorithm and assays developed by Siemens Healthcare Diagnostics. Despite advances, no serum test has emerged as the perfect marker of fibrosis; all the serum tests have limitations:

- They typically reflect the rate of matrix turnover, not deposition, and thus tend to be more elevated when there is high inflammatory activity. In contrast, extensive matrix deposition can go undetected if there is minimal inflammation.
- None of the molecules are liver-specific, so that concurrent sites of inflammation may contribute to serum levels.
- Serum levels are affected by clearance rates, which may be impaired either due to sinusoidal endothelial cell dysfunction or impaired biliary excretion.
- They are surrogates, not biomarkers.

A novel technique based upon elastography has emerged as a promising approach for staging hepatic fibrosis. The technique rapidly and noninvasively measures the mean hepatic tissue stiffness. Using a probe (Fibroscan, Echosens, Paris, France), which includes an ultrasonic transducer, a vibration of low frequency (50 Mhz) and amplitude is transmitted into the liver. Fibroscan measures liver stiffness of a volume that is approximately a cylinder of 1 cm diameter and 5 cm long, which is 100 times greater in size than a standard liver biopsy, and thus may be more representative of the entire hepatic parenchyma. This technology fulfills many features desirable of noninvasive assessment of hepatic fibrosis. It is quick, inexpensive, reproducible, painless, and examines a large mass of liver tissue thereby reducing sampling error.

Elastography can also be performed with MRI. The technique involves placing a probe to the back of the patient, which emits low frequency vibrations through the liver which can be measured by the MRI spin echo sequence. MRI-elastography (MRE) had similar test characteristics to ultrasound-based elastography in one report. MRE also has the advantage of scanning the entire liver and thus does not depend upon an acoustic window. Both ultrasound and MR elastography have limitations in specific patient populations and the appropriate combination of these technologies awaits further studies.

L4

TUMOR METABOLISM AND THE USE OF NEW MARKERS FOR GI CANCER

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The stepwise progression of colorectal carcinogenesis (adenoma carcinoma sequence) is accompanied by characteristic genetic and metabolic alterations. A huge number of different genetic markers (e.g. mutations in the K-ras, APC and p53 genes, as well as abberant DNA methylation patterns) are under investigation either as single markers or multipanel marker assays. Currently available for routine use are a second generation stool DNA test that detects the methylated vimentin gene which encodes a filament protein involved in the cytoskeleton, and a blood DNA test that detects the methylated Septin 9 gene which encodes a GTP-binding protein.

M2-PK – the dimeric form of the glycolytic pyruvate kinase isoenzyme type M2 - is an established metabolic biomarker for colorectal neoplasia. As a major regulator of the Warburg effect it favors the channeling of glucose carbons into the synthesis of cell building blocks in all tumor cells.

The DNA tests are based on DNA extraction, bisulfite treatment in the case of methylated markers, and PCR analysis. Fecal M2-PK is a protein detectable either by a CE-approved ELISA or CE-approved point of care rapid test (POCT).

The mean published sensitivities for detection of CRC are 53% for methylated vimentin (3 studies, n = 156), 65% for methylated Septin 9 (3 studies, n = 349) and 80% for M2-PK (12 studies; n = 704). The mean published sensitivity of M2-PK for adenoma > 1cm is 44% (5 studies, n = 117); however, no statistically robust data are available for vimentin or Septin 9 in adenoma. In asymptomatic control groups the mean published positivity rates were 9.3% for methylated vimentin (3 studies, n= 358), 11.7% for methylated Septin 9 (3 studies, n = 517) and 8.2% for M2-PK (7 studies, n = 10,616).

M2-PK and the DNA tests are superior to the established guaiac FOBT (mean published sensitivities 31% for CRC (2 studies, n = 55) and 14% for adenoma > 1cm (2 studies, n = 357) for guaiac FOBT), and to immunological FOBTs when utilising tests with similar positivity rates, i.e. iFOBT with positivity rate of 7.1% - sensitivity for advanced adenoma: 26.9% (n=130). When compared with each other, the sensitivity of M2-PK for CRC and adenoma is superior to that of methylated vimentin and Septin 9.

FACTORS DETERMINING TREATMENT SUCCESS

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H.pylori is a unique bacterium that causes a range of organic diseases in the stomach, and by its eradication treatment we can reduce the risk of various diseases such as peptic ulcers, chronic and acute gastritis, and gastric neoplasms including MALT lymphoma and gastric cancer. With this background, the eradication treatment for this infection has become popular. Indeed, we can cure the infection effectively with well-designed eradication regimens, yet we still have 10-20% of the cases with unsuccessful treatment results.

Why do we fail to eradicate *H.pylori* infection? There are many reports available regarding the predictive factors for successful treatment. Bacterial factors, as well as several host risk factors are known to affect cure rates. Among the bacterial factors, antimicrobial resistance is crucial and especially impact of clarithromycin (CAM) resistance in PP-IAC regimen has been reported. Metronidazole resistance in PPI-AM regimen is also important but the eradication success is not simply associated with the result of the susceptibility test. Regarding the host factors, compliance of the regimen drug seems most important factor. Several reports suggested that polymorphism of the gene encoding the CYP2C-19 enzyme for PPI metabolism has impact on the eradication rate. However, its role does not seem so crucial in PP-based triple therapies. It may largely affect the result only in the second line PPI based dual treatment (PPI-A). Besides the compliance and the polymorphisms, effect of smoking, age, degree of gastritis are considered as candidates to affect the treatment success, but their impact may not be large.

In my presentation, I would like to summarize the predictive factors for the eradication success from both bacterial and host factors.

NEW TREATMENT REGIMENS FOR HELICOBACTER PYLORI INFECTION

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Helicobacter pylori infection differs from most other infections in several respects. Although the bacterium may be sensitive to various antibiotics in vitro, eradication is difficult to achieve consistently and requires the use of combination antibiotics plus a proton pump inhibitor (PPI). Local antibiotic sensitivity data are not readily available to clinicians. The success or otherwise of eradication therapy is often not documented.

The first widely accepted regimen, the one-week triple therapy, including a PPI and two antibiotics, usually amoxicillin plus clarithromycin or metronidazole, used to have success rates ≥90%. However, with increasing bacterial resistance to clarithromycin and metronidazole, eradication rates of ≤80% are more the norm now. Sequential therapy: PPI for 10 days, plus amoxicillin for the first five and metronidazole and clarithromycin for the last five, gives eradication rates ≥ 90%, significantly superior to those of classical triple therapy in the presence of clarithromycin or metronidazole resistance. Modifications include concomitant therapy, with PPI+three antibiotics all given for 10 days; hybrid sequential therapy, with PPI and amoxicillin given for 10 days, metronidazole and clarithromycin for the last five; and prolongation of the treatment to beyond 10 days. Disadvantages include a complicated regimen which may reduce compliance.

The original bismuth triple therapy has in recent years been modified by the addition of a PPI. Problems include a relatively high rate of adverse effects and a complicated regimen. A recently developed 3-in-1 preparation combining bismuth, tetracycline and metronidazole, is associated with eradication rates ≥ 90% and an improved side-effect profile.

Other approaches after unsuccessful first or second line therapy include alternative agents such as levofloxacin, rifabutin, furazolidone and Escabet. Longer treatment durations and more frequent dosing schedules of PPIs and antibiotics are other possibilities.

MEET-THE-EXPERT BREAKFAST SESSION 5

M2-PK – NEW BIOMARKERS FOR CRC SCREENING – PRACTICAL APPLICATIONS

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Tumor cells have a special metabolic demand for the synthesis of cell building blocks. The glycolytic enzyme pyruvate kinase (PK) is a major regulator of this metabolic requirement of tumor cells. During tumorigenesis the tissue specific PK isoenzymes disappear and M2-PK is overexpressed. M2-PK determines whether glucose is used for energy regeneration (highly active tetrameric form) or channeled into synthetic processes (nearly inactive dimeric form). In tumors, the dimeric form predominates due to direct interaction with different oncoproteins.

M2-PK is released from colorectal polyps and colorectal carcinoma (CRC) into the patient´s stool and can be quantified in just 4 mg of stool with a CE-approved ELISA or rapid test (POCT).

A literature search identified twelve independent published studies incorporating a total of 704 samples from CRC patients and eight studies with altogether 554 samples from patients with adenoma. In these studies the mean sensitivities of fecal M2-PK were 80% for CRC, 25 % for adenoma < 1 cm, 44% for adenoma > 1 cm and 51% for adenoma with unspecified diameter. In four studies with head to head comparison with gFOBT a mean of 47% of adenoma > 1cm tested positive with fecal M2-PK whereas the gFOBT detected only 27%. In a study with head to head comparison of fecal M2-PK with four different iFOBTs the sensitivities for advanced neoplasia were: 27.3% for M2-PK and 7.3%, 8.5%, 18.9% and 20% respectively for the different iFOBTs (all measured in the first bowel movement after medication).

In seven studies, 10,616 asymptomatic people in total were tested for fecal M2-PK, which demonstrated a mean positivity rate of 8.2%. In one study with 2,787 participants the authors estimated a specificity of 97.4% based on a prevalence of 0.5% for CRC and 18% for colorectal adenoma.

Fecal M2-PK reflects a specific metabolic feature of proliferating cells which helps to preselect individuals with CRC or polyps, and high-risk patients (e.g. with undiagnosed inflammatory bowel disease), for colonoscopy. In contrast to fecal occult blood tests (FOBTs), fecal M2-PK detects bleeding and non-bleeding tumors and adenoma.

The dimeric form of M2-PK is also increased in the blood of patients with CRC and other tumors. An important application of the plasma M2-PK ELISA is for patient follow-up in order to monitor success or failure of therapy.

SURGICAL OPTIONS FOR HEPATOCELLULAR CARCINOMA

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Hepatocellular carcinoma (HCC) is a primary parenchymal cancer of the liver. Currently, only one-fifth of HCC patients are suitable for liver resection, the mainstay of surgical treatments for HCC, at presentation of the disease. Only half of the patients, except those with early tumor stage, will survive after liver resection. Adequate functional liver reserve is essential for even short-term survival.

With improvement in tumor surveillance for viral hepatitis carriers, HCC identified at early stages is amenable to liver transplantation. This radical surgical extirpation of HCC provides the best chance of cure with long-term survival over 80%. Not only is tumor clearance complete, the cirrhotic liver, a premalignant organ, is replaced. The success of liver transplantation for HCC depends on careful selection of recipients. Potential recipients should be patients with a low chance of extrahepatic spread. Contrary to the common belief that HCC with microvascular invasion is a contraindication to liver transplantation, HCC patients with tumors within the 'Up-to-7' criteria have a 5-year survival rate of 80% irrespective of such invasion. On the other hand, liver resection for the same lesions only entails dismal survival. Salvage transplantation, however, has low applicability and a higher recurrence rate.

Living donor liver transplantation potentially provides more liver grafts for transplantation, but it causes the donors inevitable risk. This risk is, however, lowered by the application of the left liver as graft with accumulation of experience in handling the left liver which is often small for size. Lowering the donor risk without increasing the recipient risk improves the donor/recipient risk/benefit ratio, and hence substantiates liver transplantation as a primary treatment for potentially resectable HCC. However, this is an ethical challenge which has to be validated by clinical data.

For patients with tumors beyond acceptable criteria for liver transplantation or resection, ablative therapies by radiofrequency (RFA), microwave, and high-intensity focused ultrasound (HIFU) are often feasible options. Microwave ablation is faster and can treat HCC up to 7 cm in size. HIFU is non-invasive but this procedure often takes hours to complete and requires general anaesthesia of the patient. These treatments are now carried out under clinical trial settings and producing promising results.

SCREENING FOR COLORECTAL CANCER – METHODS AND SCHEDULES

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What screening tests should be used? On a population basis, the screening test of choice is the modern faecal immunochemical test (FIT) which has superior performance characteristics to the traditional faecal occult blood test. FIT is specific for human hemoglobin and does not require dietary restriction or preparation. It should be performed on two separate stool specimens. On an individual level, the selection of a screening test should be the result of informed choice based on personal preference and discussion with the physician. Some individuals may prefer colonoscopy which offers the advantage of prevention of cancer by removal of adenomatous polyps, as opposed to faecal tests which primarily detect cancers. The recent guidelines from the American College of Gastroenterology (ACG) advocate that tests which prevent cancer such as colonoscopy are preferred over stool tests which principally detect cancer but may miss polyps.

How frequently should we screen? Starting from the age of 50 years, FIT should be performed annually. Some research has explored whether biennial testing is satisfactory. Colonoscopy is recommended at an interval of 10 years if the preceding examination is normal.

Does risk-stratification offer any advantages? The standard screening guidelines make uniform recommendations, despite substantial evidence that risk in the population is uneven. For instance, higher risk is associated with increasing age, male gender, certain ethnicities, family history, and smoking. The Asia-Pacific Colorectal screening score (APCS) which has been validated in multi-ethnic Asian population was recently published (Gut 2011). Subjects with a high risk score had 4 times the risk of advanced neoplasia compared to those with average risk. Risk stratification may potentially be helpful in making screening more cost-effective.

L5

STRATIFYING AND STRATEGIZING TREATMENT FOR HCC

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In western countries the BCLC staging system is currenty used since it provides elements for the best treatment choice, especially in the early stages, as well as elements for prognostic estimation (Bruix and Sherman., 2005) and has been validated in several centres. According to the BCLC proposal, HCC can be classified as follows:

- The very early HCC, whose diagnosis is possible only after surgery, includes cirrhotic patients with well preserved liver function and a well differentiated HCC, less than 2 cm in size. It corresponds to the "carcinoma in situ" of Japanese Authors (Takayama et al., 1998) who further differentiated it in "distinct" type (locally invasive) and "indistinct" type (not invasive). These tumors are the best candidates to curative treatments.
- The early HCC refers to HCCs within the Milan criteria (a single HCC less than 5 cm or 3 HCC nodules less than 3 cm each, Mazzaferro et al., 1996) in patients with preserved liver function (Child-Pugh class A or B) and are candidate to curative treatments with a 5 years survival rate of 50-75%. Early HCC, however, covers a heterogeneous group of HCCs with different biological behaviour and different survival rates after treatments.
- The Intermediate stage HCC includes large, multifocal HCCs in patients with Child-Pugh class A or B liver function, but still without cancer-related symptoms and no macrovascular invasion or extrahepatic spread. These patients are candidate for transarterial chemo-embolization (TACE). When untreated, the one- and two- years survival rate vary widely, being respectively 10-72% and 8-50% in the different series due to the wide heterogeneity of the HCC population included in this group (Llovet and Bruix, 2003).
- The advanced stage HCC refers to patients with mild cancer-related symptoms and/or vascular invasion or extrahepatic spread. Survival rates are 29% at 1 year, 16% at 2 years, 8% at three years. Until very recently, no treatment showed proven survival benefit and these patients were therefore candidates for therapeutic trials.
- The end-stage HCC is characterized by an extensive tumor involvement, depressed physical status and/or liver function (Child-Pugh class C). These patients have a life expectancy less than 3-6 months and should be treated only with symptomatic therapy.

Treatment strategy is tailored on the basis of the extent of tumour burden, liver function, physical status and treatment efficiency. Treatment options for HCC can be divided in curative, which achieve complete response in a high proportion of patients and are expected to improve survival, and palliative, which are not aimed to cure, but in some cases can obtain good response rate and even improve survival.

Early diagnosis and improvements in local treatment of HCC (RF Thermal ablation and transarterial chemoembolization (TACE) positively impacted survival of HCC patients in the early and intermediae stage. However a consistent percentage of patients still cannot be treated at the time of diagnosis or develop

contraindications to treatments during the course of the disease. Thus, the awareness that HCC is the leading cause of death in compensated cirrhosis has led to explore new approaches targeting molecular abnormalities specific to HCC. New target therapies directed against molecules involved in the pathogenesis of cancer were recently reported as safe and effective in several tumors.

Sorafenib, an oral multikinase inhibitor entered phase II clinical development for the treatment of advanced HCC following encouraging observations in prelinical and phase I trials. The promising results in the phase II study led to a randomised, placebo-controlled, double blind phase III study, the SHARP trial (Llovet et al., 2008). This study, based on a total of 602 patients, 303 on placebo and 299 on Sorafenib 400mg b.i.d, provided the evidence of a moderate efficacy and a manageable toxicity demonstrating a survival increase and a longer time to radiologic progression in patients with advanced HCC in Child-Pugh class A treated with Sorafenib in comparison with placebo. The efficacy of Sorafenib in advanced HCC has been further confirmed in eastern patients in the Asian-Pacific study (2008).

Other target molecules have been proposed for the treatment of HCC or are actually under clinical investigation. Among these there are small molecules and antibodies blocking different molecular targets: EGFR, VEGF, mTOR, which are currently at different stages of validation in phase I, II and III clinical trials. None of them, however, has yet reached the definite demonstration of efficacy on hard end-points, as overall survival, in large case series.

According to the available data and the current clinical experience, the indication to Sorafenib treatment is well established in Child A patients having advanced HCC with or without extrahepatic spread and vascular involvement. Other settings where the indication is actually under evaluation are: 1) intermediate HCC (according to BCLC classification) in combination to TACE: most of patients at this stage were included in the SHARP trial and contributed to the significant result of this study; 2) Child B patients with advanced HCC: most patients in Child B have been treated in phase II and other studies, as well as in current clinical practice and the efficacy treatment and the frequency of adverse events seems to be similar to that of Child A patients, except perhaps for bilirubin increase; 3) Adjuvant setting after surgical or loco-regional treatment, and in combiunation with conventional treatments: these perspectives are currently under investigation in clinical trials, as well as combinations with other molecuar-targeted agents and second line treatments in patients progresing under Sorafenib.

TRANSJUGULAR PORTOSYSTEMIC SHUNT

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The main goal of transjugular intrahepatic portosystemic shunt (TIPSS) is to reduce porto-systemic pressure. Its' use is well recognised in the treatment of complications of portal hypertension including multiple episodes of variceal bleeding, refractory acute variceal haemorrhage despite adequate endoscopic therapy, and refractory ascites. Other expanding indications include bleeding gastric varices, refractory hepatic hydrothorax, Budd-Chiari syndrome, hepatopulmonary syndrome, and protein-losing enteropathy due to portal hypertension. Shunt related complications include hepatic encephalopathy and heart failure. Encephalopathy can usually be controlled with medical therapy although stent reduction may be required in some cases. Patients with significant heart failure, valvular disease, or pulmonary hypertension are poor candidates for TIPSS. Specific procedural related complications are capsular perforation, extrahepatic portal vein puncture and biliary tree or hepatic artery injury. In the past in-stent stenosis is common but significantly higher primary patency rates and lower restenosis rates have been shown with the use of a stent graft as a shunt compared to a bare metal stent. Duplex sonography is commonly used to follow-up shunt patency and additional tipsogram/venogram may be required with a view for re-intervention if appropriate. A multidisciplinary team approach involving particularly the hepatologist and interventional radiologist is required to achieve a favourable outcome.

Young Investigator's Award

YIA 01

THE ROLE OF CYP2C19 PHARMACOGENETIC POLYMORPHISM ON THE RESPONSE OF ESOMEPRAZOLE IN THE TREATMENT OF GASTROESOPHAGEAL REFLUX DISEASE (GERD)

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BACKGROUND

Esomeprazole is one of the proton pump inhibitor that is widely used to treat gastroesophageal reflux disease (GERD). PPIs are extensively metabolized in the liver, and the rate of metabolic inactivation is determined by genetic polymorphisms of CYP2C19. The plasma concentration of PPIs after oral ingestion were significantly lower in entensive metabolizers (EMs) namely normal homozygotes and heterozygotes compared to poor metabolizers (PMs) namely mutant homozygotes.

OBJECTIVE

To determine whether CYP2C19 genotypes affect clinical response to esomeprazole therapy in Malay GERD patients, also to determine the prevalence of PMs among Malay GERD population.

METHODS

Subjects comprised individuals who met study criteria of clinical diagnosis of GERD, from Jan 2010 till June 2010. All enrolled patients received esomeprazole 40 mg daily for 4 weeks. Baseline endoscopy was done. Blood samples were taken for genotyping analysis and weekly esomeprazole level throughout treatment duration. The clinical response was assessed by a validated GERD questionnaire (interview method) before and after the treatment.

RESULTS

Thirty-six subjects were enrolled. 15 subjects had two wild type alleles, 18 had one mutant allele and 3 had two mutant alleles. All subjects had significant symptoms improvement after treatment and not influence by of mutant alleles with paired T-test statistical analysis. All the subjects demonstrated clinical improvement with the treatment.

CONCLUSIONS

We estimate the prevalence of PMs among Malay GERD in this studied population is 8.3%. Response to esomeprazole among Malay GERD patients is not influenced by CYP2C19 genetic polymorphism. These results suggest that CYP2C19 genotype testing may not be useful in PPIs therapy in GERD.

YIA 02

THE VALUE OF CARLSSON-DENT QUESTIONNAIRE IN DIAGNOSIS OF GASTROESOPHAGEAL REFLUX ESOPHAGITIS IN MALAYSIAN PATIENTS WITH DYSPEPSIA

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BACKGROUND

Many modalities of diagnostic tools are available for Gastroesophageal Reflux Disease (GERD) diagnosis ie, symptom-based, endoscopy, proton pump inhibitor (PPI) test and 24 hour pH monitoring. There is no data regarding the value of a structural questionnaire in the diagnosis of gastroesophageal reflux esophagitis (GERE) in Malaysian patients.

AIM

To determine usefulness of Carlsson-Dent questionnaire (CDQ) in diagnosis of GERE in Malaysian patients compared with endoscopy as gold standard.

METHODOLOGY

All patients attending medical clinic with dyspepsia by Rome II critieria and patients with heartburn and/or regurgitation were recruited from March to April 2011, completed CDQ and underwent oesophagogastroduodenoscopy.

RESULTS

A total of 45 patients with 22 female (48.9%), 19 (42.2%) Malays, 16 (35.6%) Chinese, and 10 (22.2%) Indians were recruited. Mean age was 48.8 years (range 50, SD=13.9).

In 33 with positive CDQ score, 8 (17.8%) had reflux esophagitis detected by endoscopy. The GERE diagnosis by CDQ was confirmed in 8 of 33 patients (24%). CDQ had detected 6 out of 8 GERE confirmed by endoscopy and the sensitivity of CDQ was 75%.

DISCUSSION

Only 24% of patients with GERE diagnosed by CDQ were confirmed by endoscopy in our study. This is compatible with data reported by Hung et al showing a poor performance of CDQ in the area with low prevalence of GERD. Carlsson and colleagues developed a self-administered questionnaire with a sensitivity of 92% and specificity of 19% in diagnosis of GERD. Our reported sensitivity was lower due to our lower prevalence rate, different care setting and perception of the patients. However, it was an overestimation due to our focus on only patients with erosive reflux esophagitis.

CONCLUSION

Carlsson-Dent questionnaire had a high sensitivity in picking up GERE in Malaysian patients. It over diagnosed GERE if the score of 4 or greater was used as positive test compared to endoscopic esophagitis.

YIA 03

AN EVALUATION OF ACETAMINOPHEN-PROTEIN ADDUCTS IN MALAYSIAN PATIENTS WITH ACETAMINOPHEN OVERDOSE – A PILOT STUDY

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BACKGROUND

The metabolism of Paracetamol or Acetaminophen (APAP) in Asians are thought to differ from Caucasians. A biomarker for APAP induced hepatotoxicity may be one method of evaluating this difference

METHODS

A dual-centre, prospective study of patients presenting with APAP overdose was conducted. Clinical, demographic data and laboratory parameters were obtained. Serial blood samples were taken to measure the presence and level of APAP protein adducts, a marker for hepatotoxicity, detected by liquid chromatography tandem mass spectrometry (HPLC-MS/MS).

RESULTS

46 patients (median age 27 years, 84.8% female, ethnic division: Malay 26.1%,Chinese 34.8% and Indian 39.1%) were recruited from June 2010 to March 2011. 54.3 % (n=25) had an APAP dose of > 10 g and median time from APAP ingestion to N-Acetylcysteine administration was 6.50 hours. 8 (17.4%) patients had an abnormal ALT (i.e. ALT > 65 IU/L) and only 1 (2.2%) patient had hepatotoxicity (peak ALT > 1000 IU/L). APAP protein adducts were identified in all 46 patients with APAP overdose, with peak values detected within 20 hours post overdose and a linear decline of levels over time. Median peak levels of APAP protein adducts were lower in patients with a normal ALT (1325 ng/mL), higher in patients with an abnormal ALT (2880 ng/mL) and highest in the single patient with hepatotoxicity in this cohort of patients (4140ng/mL), p=0.03.

CONCLUSION

APAP protein adducts were identified in APAP overdose patients, using a new laboratory technique. A relationship between peak APAP adducts and hepatotoxicity was observed, but a larger sample size is required to examine this relationship further.

YIA 04

PATIENT SATISFACTION OF OUTPATIENT GASTROSCOPY IN UNIVERSITY MALAYA MEDICAL CENTRE ENDOSCOPY UNIT

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OBJECTIVE

Patient satisfaction is an indicator of performance in health care providers. The aim of this study is to assess patient satisfaction of outpatient gastroscopy in our centre. Our secondary aim is to find any significant difference in response between on site and phone back interview.

METHODS

Our study population involved all patients who had attended the endoscopy unit for outpatient gastroscopy from July 2010 to Jan 2011. The recruitment was based on consecutive sampling. Every patient was interviewed twice except the phone-back non-responders. First interview was an on-site interview after the procedure. Second interview was a phone-back interview, performed few days after the procedure using the same questionnaire. The modified GHAA-9 questionnaire was used. Each question scored using ordinal five value Likert scale (poor, fair, good, very good and excellent). The answer will be dichotomized to 'favorable' and 'unfavorable' responses. We use multivariate analysis to identify the independent predictors to overall satisfaction. We also compare the mean score for each question answered on site to the mean score for each question answered during phone-back interview using Wilcoxon Signed ranked test.

RESULTS

Seven hundred patients were interviewed. The mean age was 55 years, (47% male, 53% female). The overall satisfaction score was 96%. The independent predictors for overall satisfaction were waiting time for appointment ($p=0.017$), waiting time at endoscopy suite ($p<0.001$), physicians manner ($p<0.001$), adequacy of explanation ($p=0.001$) and discomfort during procedure ($p=0.001$). The most frequent dissatisfactions were waiting time for appointment (44.1%), waiting time at endoscopy suite (26.1%) and discomfort during procedure (23%). Five hundred and ninety four patients (84.9%) responded to phone interview, 511 patients answer all questions. Mean total score for two groups were 23.0 (SD ±3.75) for on-site interview and 22.9 (SD ±3.53) for phone-back interview. There was no significant difference of median scores for overall satisfaction between the two groups ($p=0.371$).

CONCLUSION

We found that, among the independent predictors to overall satisfaction, the main unfavorable responses were mainly regarding waiting time for appointment and at endoscopy room as well as patient discomfort during procedure. There was no significant difference between overall satisfactions during on site survey versus telephone back survey.

YIA 05

LONG-TERM NASOGASTRIC TUBE FEEDING IN ELDERLY STROKE PATIENTS – AN ASSESSMENT OF NUTRITIONAL ADEQUACY AND BARRIERS TO GASTROSTOMY FEEDING

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BACKGROUND

Feeding via Percutaneous Endoscopic Gastrostomy (PEG) is advised in patients with persistent dysphagia following stroke disease, but this recommendation is rarely practised locally. The nutritional status of these patients and barriers to gastrostomy feeding are not clear.

OBJECTIVES

This study aims to assess the nutritional adequacy of stroke patients on long term naso-gastric feeding and the attitudes to gastrostomy among clinicians and care-givers in our local population.

METHODOLOGY

A prospective comparison of nutritional parameters between stroke patients (>60 years old) on long-term naso-gastric (NG) feeding and an age-and-sex matched controls was performed. Selected clinicians and carers of patients were interviewed to assess their knowledge and barriers to gastrostomy feeding.

RESULTS

140 patients (70 NG, 70 oral) were recruited between September 2010 and February 2011. Malnutrition was significantly greater in the NG compared to the oral group (SGA grade C 38.6% NG vs 0% oral, $p<0.001$; TST males 10.7 + 3.7 mm NG vs 15.4 + 4.6 mm oral, $p<0.001$; MAMC males 187.9 + 40.4 mm NG vs 228.7 + 31.8 mm oral, $p<0.001$). 45 (64.3%) patients on long-term NG feeding reported complications, mainly consisting of dislodgement (50.5%), aspiration of feed content (8.6%) and trauma from insertion (4.3%).

11/ 20 (55%) clinicians from different specialities would routinely recommend a PEG. All neurologists (100%) would recommend a PEG, whilst the response was mixed among non-neurologists. Among carers, lack of information (47.1%) was the commonest reason stated for not choosing a PEG.

DISCUSSION AND CONCLUSION

Patients post stroke on long term NG feeding remain malnourished. Lack of recommendation by clinicians appears to be a major barrier to PEG feeding in these patients.

Poster Presentations

PP 01

RETAINED OR PRIMARY COMMON BILE DUCT STONE? : A CASE REPORT

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INTRODUCTION

Common bile duct stone can be classified into primary which originate from CBD and secondary; migrating from gallbladder into the CBD. Stones that manifest within 2 years post cholecystectomy are classified as retained stone and more than 2 years as recurrent stone arise de novo in CBD. Gradual and progressive obstruction occur with minimal symptoms and subsequently the stone accommodate to the CBD . This case report will highlight the nontypical symptoms in choledocholithiasis. The question of whether the stone were retained or primarily from CBD arised.

CASE REPORT

A 77 year-old female, 3 years post open cholecystectomy, presented with severe epigastric pain of 2 weeks duration. She was never jaundice and afebrile on presentation. There was mild tenderness at epigastrium.

Her biochemical parameter only showed high ALP (177) with normal bilirubin and amylase levels. Hepatobiliary ultrasound noted an impacted common duct calculus with proximal dilatation of intra/extrahepatic ducts.

During her admission, she developed sepsis secondary ascending cholangitis. Subsequently, patient underwent emergency Common Bile Duct Exploration. Intra-operatively, a large common bile duct stone, 2x4cm, with proximal dilated ducts was found and extraction of stone was done. T tube catheter inserted. Evaluation of the biliary trees was incomplete as surgery was complicated with bleeding from adhesions.

Patient had good post-operative recovery. T tube cholangiogram showed multiple stones at intrahepatic duct, largest measuring 2cm. Patient however refused for further intervention and was discharged with plans to further follow up symptoms.

DISCUSSION

Majority of CBD stone will present with jaundice. Surprisingly, with a large CBD calculus, this patient's symptoms were of chronic pain without any history of jaundice. The stones likely to be retained stones which had lead to long standing partial obstruction and accommodation of the stone within the CBD. The possibility of a primary CBD stone should be considered in view of the multiplicity of stones, involving extrahepatic and intrahepatic ducts with possible recurrent infection of the biliary tract and occured 3 years post-cholecystectomy.

PP 02

CASE REPORT OF CHRONIC INTESTINAL PSEUDO-OBSTRUCTION SECONDARY TO SYSTEMIC LUPUS ERYTHEMATOSUS

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INTRODUCTION

Chronic intestinal pseudo-obstruction is a rare condition in which a patient presents with features of intestinal obstruction (either small bowel, large bowel or both) which suggests an underlying mechanical cause but subsequent investigations are unable to diagnose an actual anatomical lesion to explain the fact.

CASE REPORT

We report a man who presented to us with abdominal distension where imaging and investigations diagnosed him as chronic intestinal pseudo-obstruction. Subsequent history, serologies and histology of the small bowel confirmed the underlying cause of his intestinal pseudo-obstruction as active systemic lupus erythematosus.

DISCUSSION

The many postulations of the pseudoobstruction pathophysiology is myriad and can be explained by the dysfunction of the visceral smooth muscle, the central , autonomic or enteric nervous system. Among the causes of intestinal pseudoobstruction, SLE is known to be one of the uncommon ones. There have been very few reported cases of histopathologic findings in SLE chronic intestinal pseudo-obstruction due to its rarity. The full thickness ileal biopsy of this patient showed degenerative changes in the muscularis mucosa, represented by vacuolated eosinophilic myocytes and spaced out atrophied muscle bundles by fibrous tissue. There were no significant changes to the mucosa and submucosal layer, nor changes suggestive of mesenteric vasculitis. This suggests that the pathophysiology of chronic intestinal pseudo-obstruction related to systemic lupus erythematosus is due to a form of intestinal myopathy which may be immune related. Therefore, in all cases of pseudoobstruction, systemic lupus erythematosus should be looked for if there is history or serology to suggest its presence, as it is a treatable form of disease. Otherwise, treatment with motility agents are unlikely to succeed.

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PP 03

PERITONEAL TUBERCULOSIS

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INTRODUCTION

Peritoneal tuberculosis (PT) is due to development of Mycobacterium tuberculosis in the peritoneum. Clinically it develops in subacutely where evolution may take several weeks to months. Blood investigations and Tuberculin test have low diagnostic value. Adenosine deaminase level in ascites may help in diagnosis and introduce empirical treatment. Definitive diagnosis can be achieved by biopsy taken at laparotomy or laparoscopy.

CASE

23 year-old Malay gentleman presented with 4 months history of abdominal mass associated with early satiety, night sweats and loss of appetite and weight. Abdominal examination showed central abdominal mass which was multilobulated and non mobile. There were multiple inguinal lymphadenopathies. ESR was 70mm/H and the biopsy of the inguinal nodes showed reactive changes. CECT of the abdomen showed multiple lymphadenopathies with central necrosis suggestive of TB. However, the patient was was not keen for open biopsy. Anti TB was not started due to unsubstantiated evidence of active TB infection. Diagnostic laparoscopy was agreed and showed multiple small nodular lesions on the peritoneal surface. A small omental biopsy was taken and sent for histopathology and PCR. The histopathological examination showed chronic granulomatous inflammation but the Ziehl-Neelson stain showed no acid-fast bacilli. The PCR was positive for MTB complex. The patient was started on the recommended regime of anti TB drug.

DISCUSSION

PT represents 1 – 2% of all localization of TB and about 31-58% of abdominal localizations. It is associated with PTB in 3.5% of cases. The diagnosis should be guided by history and examination. PT is vague and may represent differential diagnoses of lymphoma and carcinomatosis peritonei thus empirical treatment of TB difficult to be given. The dosage of ADA is quick reproducible and may be used routinely in endemic countries. Definitive diagnosis is by tissue biopsy. Treatment of the condition is 6 months of anti TB drugs.

PP 04

GASTROINTESTINAL STROMAL TUMOURS (GIST) : 6 YEARS EXPERIENCE FROM HOSPITAL RAJA PEREMPUAN ZAINAB II, KOTA BHARU, KELANTAN

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Gastrointestinal Stromal Tumour (GIST) is the most common mesenchymal tumor of the gastrointestinal tract and can present with wide spectrum of clinical presentations. From our experience in the past 6 years (2005-2010), 21 patients were diagnosed to have GIST with the age range from 41 to 88 years old (mean 61.0 years). There was slight male predominance in our series (male : female 13:8). Majority of our patients presented with gastrointestinal bleeding (mostly upper gastrointestinal bleed), abdominal pain and abdominal mass. Five of the patients underwent emergency operation due to gastrointestinal bleeding, peritonitis or intestinal obstruction. Tumours were mostly found in the stomach and small bowel. Other locations were rectum, duodenum and mesentery. GIST was confirmed based on histopathology of the biopsy sample or surgically resected specimen, followed by immunochemistry. Eight samples were reported to be malignant GIST or high risk group and four were benign or low risk group. 15 samples had CD 117 staining and all of them had immunopositivity towards CD 117.

PP 05

RAPUNZEL SYNDROME : THE FORGOTTEN ENTITY

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A trichobezoar is a mass of cumulated hairs within the gastrointestinal tract. It originates from the combination of the word “trich” and “bezoar”, with the former means hair in Greek and the latter means poison antidote in Arabic or Persian. It may present as an isolated gastric mass, as an extension into the small intestines (Rapunzel Syndrome) or as an independent fragmented mass in the small intestines. This condition is more common in women especially adolescent girls. It results from compulsive pulling out of hair (trichotillomania) and then swallowing the hair (trichophagia). Patient frequently have accompanying co-morbid mood and anxiety disorder require comprehensive psychiatric or psychologic evaluation for obsessive compulsive syndrome. The insidious development of the trichobezoar accounts for the delayed presentation and large size at the time of diagnosis. In this report, we describe a 11 years old girl with trichobezoar of the stomach with extension to the small intestines. A review of clinical presentation, physical examination, investigations and management were discussed. A knowledge of this rare condition in childhood and strong clinical suspicious is important in making a correct preoperative diagnosis, as it carries risk of mortality mainly through gastrointestinal bleeding, intestinal obstruction and perforation.

PP 06

PREVALENCE AND CLINICAL CHARACTERISTICS OF ACETAMINOPHEN-INDUCED HEPATOTOXICITY AMONG ADULTS IN A MULTI-ETHNIC ASIAN POPULATION

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BACKGROUND

Paracetamol or Acetaminophen (APAP) is not a common cause of acute liver failure (ALF) in Asia, unlike in Western populations. Clinical data on APAP-induced hepatotoxicity among Asians is lacking.

METHODS

A retrospective medical records review of adult APAP overdose over a five-year duration from 2005 to 2009 was performed in University Malaya Medical Centre (UMMC) and Kuala Lumpur General Hospital (GHKL). Baseline demography data and information on APAP overdose and outcome were recorded.

RESULTS

Data on 1083 patients (median age 23 years, 82.1% female, ethnic groups: Malays 40.8%, Chinese 20.3% , Indian 34%) were available. 10.2% had psychiatric co-morbidity, 6.2% had drug (2%) or alcohol (4.2%) co-ingestion and median time to presentation to hospital was 4.5 hours and 859 (79.3%) patients received N-acetyl-cysteine (NAC). 77/ 1083 (7.1%) patients with APAP overdose developed hepatotoxicity(peak ALT > 1000 IU/L) and 156 (14.4 %) cases had an INR > 1.5. No patients developed ALF or suffered mortality (0%) and the median hospital stay was 3 days. Independent predictors for hepatotoxicity among Malaysian patients with APAP overdose were APAP dose > 10g (OR 2.90, p =0.001),time of APAP ingestion to hospital presentation > 24 hours (OR 7.41, p < 0.001)and time of APAP ingestion to NAC administration > 24 hours (OR 10.44).

CONCLUSION

Prevalence of APAP induced hepatotoxicity in a multi-ethnic Asian population was low at 7.1%. Mortality and morbidity were non-existent despite high doses of APAP ingestion and delayed presentations to hospital.

PP 07

A PROSPECTIVE STUDY ON DETECTION OF CARRIER STATE FOR SALMONELLA TYPHI IN A RANDOMISED POPULATION UNDERGOING LAPAROSCOPIC CHOLECYSTECTOMIES IN TUANKU JA'AFAR HOSPITAL, SEREMBAN

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INTRODUCTION

Enteric fever is endemic in most tropical and subtropical developing countries. It is estimated that after an episode of acute typhoid fever, approximately 3% of adults become asymptomatic chronic billiary carriers. Detection of carriers therefore is a major importance in the control of typhoid fever.

OBJECTIVES

1. To detect S.typhi taken from gallbladder as an indicator of carrier state
2. To measure various classes of IgG and IgA antibodies to the 50Kd OMP and Vi antigen in the above individuals ser
3. To compare culture with PCR in the detection of S.thphi from bile
4. To study whether positive S.thphi in the bile correlates to specific antibodies (of various classes) to the 50Kd and /or the Vi antigen

METHODOLOGY

102 patients undergoing a cholecystectomy were included in this study. 5ml of bile is aspirated from the gall bladder. About 2 ml added into a sterile bottle containing 10ml of tryptone soya broth. The remaining bile fluid is placed into a plain sterile bottle. The tryptone soya broth containing the bile fluid is incubated at 35 – 37° C. After incubation, a drop of the tryptone soya broth is subcultured onto various media. Patients serum is tested for various classes of antibodies against the 50kD antigen and the Vi antigen.

RESULTS

Of the 102 patients recruited in this study; 3 (2.9%) had grown Salmonella typhi in the bile culture. The most common organism isolated was E coli in 4(3.9%) patients. The Vi antigen titres obtained in the serum were statistically significant when cross tabulated with patients who received previous vaccination ($p = 0.001$) and those who had typhoid fever before ($p = 0.005$) using the Pearson Chi- square test. However the serum antigen titres were <1:40 in the three patients who cultured Salmonella typhi in the bile. Among them, two did not know if they had typhoid fever in the past and one had typhoid as a child.

DISCUSSION

Chronic carriers of Salmonella typhi in the bile do not need to have a high antibody titre in the blood. Immunochromatography method may be more functional for the detection of carrier status to initiate early treatment.

PP 08

AN AUDIT ON OESOPHAGOGASTRODUODENOSCOPY (OGDS) PERFORMED IN AMPANG HOSPITAL

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BACKGROUND

In Ampang Hospital, the 1-consultant-gastroenterologist endoscopy unit offers post consultation gastroscopy. The number of elective OGDS has increased to 750 procedures per year.

AIM

To audit the gastroscopy referrals in Ampang Hospital.

METHODOLOGY

All outpatient patients, referred by their physician for gastroscopies after proper consultation with a gastroenterologist from 1st February 2010 to 25th April 2011, were audited. The gold standard was the American Society of Gastrointestinal Endoscopy's (ASGE) guidelines of 2000.

RESULTS

Out of the total 237 patients audited, 147 (62.0%) were males and 90 (38.0%) were females. Mean age was 53.4 years (range 72, SD=15.2). 118 (49.8%) were Malays, 86 (36.3%) Chinese, 30 (12.7%) Indians and others comprised 3 (1.2%).

Based on ASGE guidelines, the most common reason for referral was "persistent upper abdominal symptoms despite an appropriate therapy" (84 patients, 35.1%), followed by 70 (29.3%) with "suspected esophageal varices", 27 (11.3%) with " persistent esophageal reflux symptoms", 24 (10.0 %) with "presumed chronic gastrointestinal (GI) blood loss leading to iron deficiency anemia", and 20 (8.4%) with " overt upper GI bleed". All patients met the guidelines.

The common findings on OGDS were endoscopic gastritis (including erosive and haemorrhagic gastritis) in 24% of patients, esophageal or gastric varices (23.6%), peptic ulcers (20.7%), and portal hypertensive gastropathy (10.5%). Only 9 patients (3.8 %) had normal findings.

DISCUSSION

Our study shows all of the referrals for gastroscopy fulfilled the ASGE's guidelines. Nevertheless, R Anil et al. reported 4.3% of their 300 patients did not meet the guidelines with open access gastroscopy. Diagnostic yield of this traditional post consultation gastroscopy is very high as expected and comparable with the overall diagnostic yield of 69% reported by Kingston et al.

CONCLUSION

A wide range of indications were observed. However, all indications conform to guidelines and produce high diagnostic yield.

PP 09

NON-SPECIFIC APHTHOID ULCERS DUE TO ORAL SODIUM PHOSPHATE SOLUTION

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BACKGROUND

Oral sodium phosphate solution is increasingly used as a colonic cleansing agent for colonoscopy. In screened patients, it is safe, well tolerated and efficacious. These solutions have been associated with aphthoid colonic ulcers in up to 25% of patients. These colonic mucosal abnormalities which mimic inflammatory bowel disease associated with oral sodium phosphate solutions have been documented in Hospital Tuanku Ja'afar, Seremban.

CASE REPORT

A 16 year old Indian girl was admitted with a history of left iliac fossa pain, per rectal bleeding, vomiting and constipation for 3 days on 7/7/2009. On examination there was tenderness over the left iliac fossa, left lumbar and suprapubic region. After preparing her with oral sodium phosphate solution, she had a colonoscopy done on 8/7/2009 which showed multiple small aphthous like ulcers at the sigmoid colon 30-35 cm from the anal verge and patient was treated as sigmoid colitis and started on metronidazole for one week. Histopathology showed non-specific colitis. Patient was reviewed in the out-patient clinic and a repeat colonoscopy was done on 14/12/2009 which showed grossly normal with multiple yellowish small nodules at sigmoid mucosa and histopathology showed chronic colitis. In the outpatient clinic in February 2010 patient again had a single episode of per rectal bleeding, and she was treated as ulcerative colitis and started on mesalazine 500mg bd. She was referred to the Gynaecology team and there was no gynaecology abnormality. In April 2010 patient was admitted with per rectal bleed and left iliac fossa pain and on examination patient had a midline anal fissure. A repeat colonoscope in September 2010 in Selayang General Hospital was normal till the terminal ileum, with no aphthous ulcers or inflammation. There was no evidence of Inflammatory Bowel Disease and Mesalazine was stopped. Currently patient is well and is on a routine follow up.

CONCLUSION

Non-specific aphthoid-like mucosal lesions can occur in patients who receive oral sodium phosphate for colonic preparation. These lesions are endoscopically similar to those seen in Crohn's disease, and can cause diagnostic dilemmas and treatment difficulties. The endoscopist must be familiar with the possibility of these benign self-limiting aphthoid ulcers occurring with the employ of oral sodium phosphate solution in bowel cleansing prior to colonoscopy to avoid misdiagnosis.

PP 10

CAMERON EROSIONS : AN UNUSUAL CAUSE OF GASTROINTESTINAL BLEEDING

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BACKGROUND

Cameron erosions can be a cause of gastrointestinal bleeding. We report a case of Cameron erosions presenting as overt obscure gastrointestinal bleeding.

CASE REPORT

A 23 year-old soldier presented with recurrent episodes of hematemesis to several hospitals over a period of one-and-half year. He underwent seven times esophago-gastro-duodenoscopy which revealed hiatus hernia with reflux esophagitis. He had direct laryngoscopy, rigid bronchoscopy and barium swallow, all of these investigations showed normal findings. He was treated with proton pump inhibitors but the hematemesis still occur. Blood investigations revealed no evidence of anemia and the coagulation profile were normal. He was referred to psychiatric assessment but it was not helpful. Finally, the diagnosis of Cameron erosion was made and he was referred to upper gastrointestinal surgeon for surgical intervention.

DISCUSSION

Cameron erosions are linear gastric ulcers or erosions on the mucosal folds at the diaphragmatic impression in patients with a large hiatus hernia. The clinical relevance of Cameron erosion is due to their potential complications such as gastrointestinal bleeding (acute, chronic and obscure) and anemia. Acute upper gastrointestinal bleeding, occasionally life-threatening, occur in up to one third of cases. Concomitant acid-peptic diseases are seen in a majority of individuals, especially reflux esophagitis and its complications. Mechanical trauma, ischemia, and acid mucosal injury may play a role in the pathogenesis of Cameron erosions. The current therapy concept includes the surgical reconstruction of the hiatus together with gastric fundoplication in combination with the proton pump inhibitor therapy.

CONCLUSION

Endoscopists should look for Cameron erosions as the cause of obscure gastrointestinal bleeding especially in the presence of hiatus hernia.

PP 11

CLINICO-EPIDEMIOLOGY OF LIVER CIRRHOSIS PATIENTS TREATED AT HOSPITAL TENGKU AMPUAN RAHIMAH KLANG

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INTRODUCTION AND OBJECTIVE

Liver cirrhosis is defined histologically as a diffuse hepatic process characterized by fibrosis and the conversion of normal liver architecture into structurally abnormal nodules. The prevalence rate of liver cirrhosis in Malaysia is 15 in every 10,000 population. The distribution of underlying etiology vary regionally, with viral hepatitis being much higher compare to the European countries. The aim of this study was to evaluate the clinico-epidemiology data of liver cirrhosis, including the etiology, complication and treatment among patients in HTAR, an 864 bedded government tertiary hospital in the state of Selangor.

METHODOLOGY

Retrospective analysis was performed on both inpatient and outpatient attending gastroenterology clinic with a diagnosis of liver cirrhosis from June 2010 to March 2011. A comprehensive data collection form and database with details of patients' demography, etiology, disease monitoring and treatment was used to in this study.

RESULTS

A total of 129 patients with liver cirrhosis were treated during this period. 4 patients were excluded due to insufficient data for analysis. There were 94 (75.2%) males and 31 (24.8%) females in this study. 55 (44.0%) patients were Indians, followed by 46 (36.8%) were Malays, 22 (17.6%) Chinese and 2 (1.6%) others. Severity of liver cirrhosis is classified according to Child's-Pugh classification with 40 patients (32.0%) have Child's A, 32 patients (25.6%) Child's B and 53 patients (42.4%) have Child's C. The commonest etiology of liver cirrhosis was alcoholic liver disease, 60 patients (48.0%) was diagnosed to have liver cirrhosis due to alcohol overuse. 31 patients(24.8%)) has viral hepatitis, of which 15 patients(12.0%) has hepatitis B, 10 patients(8.0%) has hepatitis C and 6 patients(4.8%) has co-infection of hepatitis B and C. Other etiology of liver disease include autoimmune hepatitis, 5 patients (4.0%), drug induced hepatitis, 1 patient (0.8%) . 28 patients (22.4%) have unknown etiology (include those patients still under investigation). Most of the patients have developed decompensated liver cirrhosis. Ascites being the commonest complication were noted in 72 patients (57.6%), follow by esophageal varices, 57 patients (45.6%), history of spontaneous bacteria peritonitis in 26 patients (20.8%) and hepatic encephalopathy in 14 patients (11.2%). UGIB is not uncommon among these patients, with non-variceal UGIB in 10 patients (8.0%) and variceal UGIB in 7 patients (5.6%) . Out of the 125 patients, 5 patients (4.0%) had developed hepatoma (3 patients in Child's C cirrhosis, 1 patient in Child's B and 1 patient in Child's A cirrhosis.

DISCUSSION AND CONCLUSION

Clinico-epidemiology data has show alcohol as the commonest etiology of liver cirrhosis in HTAR. This could be due to the higher percentage of Indian population with local cultural and social-economy variety in this region. Most of the liver cirrhosis patients presented late to our care with almost half of them in Child's C cirrhosis. Furthermore, most of these patients had developed decompensated liver cirrhosis like ascites, esophageal varices, spontaneous bacteria peritonitis and hepatic encephalopathy.

PP 12

PORTAL HYPERTENSIVE ENTEROPATHY DIAGNOSED BY CAPSULE ENDOSCOPY IN A CASE OF OBSCURE OVERT GASTROINTESTINAL BLEEDING

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INTRODUCTION

In cirrhotic patients, mucosal abnormalities are usually found in the stomach. But in rare cases portal enteropathic changes can also be found in the duodenum, jejunum and distal ileum. We present a case of portal hypertensive enteropathy in a cirrhosis patient shown by capsule endoscopy.

CASE PRESENTATION

We report the case of a 50 year old Indian female with Obscure Overt Gastrointestinal Bleeding. She has a past history of Child's A Liver Cirrhosis of unknown etiology, Diabetes, Hypertension and Ovarian Carcinoma for which she underwent a total abdominal hysterectomy and bilateral salpingo-oophorectomy followed by adjuvant chemotherapy in 2010. She was admitted with anemia which required multiple transfusions and complained of passing dark blood per rectum. An upper endoscopy revealed non bleeding grade I esophageal varices and colonoscopy showed vascular ectasia in the ascending colon for which she underwent argon plasma coagulation. Her symptoms did not resolve so she underwent capsule endoscopy. Capsule endoscopy revealed mucosal hyperemia and snake skin like enteropathic changes and fresh blood in the ileum and jejunum. She had a double balloon enteroscopy that confirmed the above findings. She was taken over by the surgical team for a small bowel resection but her symptoms had resolved following a period of close observation. She is planned for a resection if her symptoms reoccur.

CONCLUSION

Portal hypertensive enteropathy is a recognized potential source of bleeding in portal hypertension, as evident in this case. This used to be a rare entity but with the advent of capsule endoscopy it is becoming more widely recognized.

PP 13

TRANSESOPHAGEAL ENDOSCOPIC ULTRASOUND GUIDED FINE NEEDLE ASPIRATION (EUS-FNA) OF MEDIASTINAL AND CELIAC LYMPH NODES

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AIM

To evaluate the yield of EUS guided FNA of lymph nodes in the mediastinum and celiac axis done in Hospital Sultanah Bahiyah from January 2006 till December 2010

METHOD

Transesophageal ultrasound–guided biopsy was performed in 91 patients with lymph nodes at the mediastinum and celiac axis. All patients who underwent EUS-FNAC of mediastinal and celiac Lymph nodes from January 2006 until December 2010 were prospectively evaluated.

RESULTS

EUS-FNAC were performed on 91 patients in which 64 cases (70.3%) were from the mediastinal lymph nodes and 27 cases (29.7%) were from celiac lymph nodes. Diagnostic material was obtained in 67 out of 91 cases (73.6%). In 1 case, non-representative biopsy material was found in the specimen (1.5%). 3 cases showed reactive lymph nodes (4.5%) and 4 cases showed inflammatory changes suggestive of abscess (6%). Histologic analysis of the biopsy specimens established malignancy in 47 out of 67 patients (70.1%). In 3 cases out of 67 cases (4.5%) atypical cells were seen but the diagnosis were not able to be ascertain. 8 cases showed to have granulomatous lesions (11.9%) and 1 case (1.5%) showed to have abundant fungal organism (mucor).

None of the patients had complications related to the procedure.

DISCUSSION

In this study our overall yield is 73.6% . Definitive diagnosis was obtained In 94% of cases (n=63) in which 70.1% was malignant (n=47), 11.9% was of granulomatous lesions (n=8), 6% was inflammation/abscess (n=4), 4.5% was reactive lymph nodes (n=3) and 1.5% showed fungal infection (n=1).

CONCLUSION

Endoscopic ultrasound–guided biopsy provides a minimally invasive approach of lesions in the mediastinum and gastroesophageal junction and thus avoiding invasive procedures such as mediastinoscopy. The procedure has good positive yield with considerable impact on the therapeutic strategy in the patient management.

PP 14

PERCUTANEOUS ULTRASOUND GUIDED LIVER BIOPSY IN HOSPITAL SULTANAH BAHIYAH

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BACKGROUND

Liver biopsy is a useful clinical tool for diagnosing and treating liver disease. Liver histology still remains the gold standard for diagnosis and assessment of liver inflammation, necrosis and fibrosis.

OBJECTIVES

The aim of the study is to evaluate the safety and sample adequacy of the liver biopsy done in this hospital.

METHODS AND MATERIALS

Patients who underwent liver biopsy from 2008 and 2010 were audited retrospectively. All the biopsy was done under ultrasound guidance with the help of radiologist. The biopsy was done using spring loaded cutting biopsy needle with triggering mechanism (Magnum BARD, 14 G needle)

RESULTS

During the study period, there were 149 liver biopsy performed. Mean age was 44.7.years old. 93 (62.4%) of them were males and 56 (37.6%) were females. The indications for liver biopsy were categorized into 4 groups: i) grading and staging of hepatitis C (n=70, 47%), ii) grading and staging of hepatitis B (n=36, 24.1%), iii) abnormal liver function test e.g . raise transaminases, alkaline phosphatase and bilirubin (n=42, 28.2%) and evaluation of focal liver lesion (n=1, 0.7%). The mean specimen length was 11 mm (range 2mm-20 mm). Technical success rate, defined as ability to get adequate sample size for proper histology evaluation was 92.6 % (n=138). Out of 11 cases that failed, 6 of them (54.5%) had liver specimen less than 5 mm. The remaining cases were unable to get the liver tissue. There was no serious adverse event reported.

CONCLUSION

Percutaneous ultrasound guided liver biopsy is a safe procedure with high success rate in our centre.

PP 15

IATROGENIC COLONIC PERFORATIONS DURING COLONOSCOPY: INCIDENCE, MANAGEMENT AND OUTCOME IN A MALAYSIAN TERTIARY HOSPITAL

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OBJECTIVE

To determine the incidence of iatrogenic colonic perforation in our hospital, examine the management of these cases and evaluate their outcomes.

METHOD

Retrospective study of medical records of all patients with iatrogenic colonic perforation related to colonoscopy performed at the Endoscopy Unit, University of Malaya Medical Centre over a 5-year period from January 2005 till December 2010.

RESULT

A total of 7,104 colonoscopies were performed during the study period. Eleven (0.15%) were complicated by perforation. Ten cases occurred during diagnostic colonoscopy. These perforations were at either the recto-sigmoid junction or the sigmoid colon. In the only case where perforation occurred following therapeutic colonoscopy, the site of perforation was at the descending colon where polypectomy was performed. Endoscopic clipping was attempted in seven of the nine cases where perforation was noticed immediately and was successful in five. The two patients who failed endoscopic clipping and the remainder four patients underwent immediate surgery with good outcome. Mean duration of hospital stay was not different in patients successfully treated by endoscopic clipping compared with surgery.

DISCUSSION

It seems worthwhile to attempt endoscopic clipping if the perforation was not too large, detected immediately in the setting of good bowel preparation, easily accessible and well visualized. Patient whose perforation has been successfully sealed endoscopically should be treated with intravenous antibiotics and watched closely for any signs of peritonitis which would suggest failure of endoscopic clipping and the need for surgery. Endoscopic clipping may avoid surgery in select patients but should not delay surgery when the need arises. Large perforation not amenable to endoscopic clipping, poor bowel preparation with high likelihood of peritoneal contamination or site of perforation that is difficult for endoscopic clipping are candidates for surgical management.

CONCLUSION

Our iatrogenic colonoscopic perforation rate is relatively high at 0.15% but still within the range reported by other institutions over recent years. Our experience with endoscopic clipping in the management of iatrogenic colonoscopic perforation has been good in terms of avoiding the need for surgery in otherwise elderly patients with various co-morbidities who are at increased risk of adverse outcome from surgery. Patients who were not suitable or failed endoscopic clipping had good outcome with immediate surgery when perforation is diagnosed early.

PP 16

AUTOIMMUNE HEPATITIS IN A MALAYSIAN TERTIARY UNIVERSITY HOSPITAL

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INTRODUCTION

Autoimmune hepatitis (AIH) is a rare immune mediated chronic inflammatory destruction of liver parenchyma. With out treatment, it will progress to cirrhosis and eventual liver failure. The prevalence and characteristic of AIH is not known in Malaysia.

METHODS

We aimed to evaluate the characteristic of patients with AIH presented to a tertiary university teaching hospital. This is a restrospective study with review of patients' records from the clinical notes and computerized hospital record system. The biopsies were reviewed by experience histopathologists. The diagnostic criteria of AIH were based on the revised International Autoimmune Hepatitis Group score.

RESULTS

Eleven patients were diagnosed to have AIH from 2002 to 2010. Mean age of patients were 49.2 years (range 23-60). There were 5 female and 6 male patients. Racial distribution consists of 8 Malays followed by 2 Chinese and 1 Indian. Most patients complaint of jaundice (63.6%), followed by tea colored urine (45.5%). Two patients complaint of loss of appetite, pale stool and nausea. Only one patient complained of arthralgia, myalgia and loss of weight. Three patients were asymptomatic with mild deranged liver function and were referred for further investigation. Eight patients had jaundice on examination. Only one patient had stigmata of chronic liver disease when presented. Two patients have concomitant autoimmune disease, with Hashimoto thyroiditis and discoid lupus respectively. The mean alanine transferase, bilirubin, alkaline phosphatase, albumin and IgG level was 743.6 U/L, 116.5 umol/L, 152.4 U/L, 39.5 g/L and 2613.5 mg/dL. Anti-nuclear (ANA) and anti-smooth-muscle antibody (ASMA) were found in nine and five patients respectively. Three patients were noted to have both ANA and ASMA. Liver biopsy was performed in 10 patients. Intrephase hepatitis, plasmacytic infiltration and rosetts formation were noted in 72.7%, 81.8% and 36.4% of the liver biopsy respectively. No ductal changes were noted in these biopsies. Viral hepatitis was not detected in the patients. A mean duration of 169 days is required before the diagnosis is made. Three patients were given monotherapy of corticosteroid. Combination therapy of corticosteroid and azathioprine were given to 6 patients. Treatment was not initiated in two patients. Relapse of AIH only occur in two patients and responded well to reintroduction of corticosteroids.

CONCLUSION

AIH is a disease that requires recognition. In our center, AIH commonly presented as acute hepatitis and older age group. From our review, it response well to treatment and relapse are uncommon. A construction of nation-wide registry is needed to better study the incident and prevalence of this rare condition in Malaysia.

KEY WORDS

Autoimmune Hepatitis, Immunoglobulin, Anti-nuclear antibody

PP 17

AN AUDIT ON THE USE OF INTRAVENOUS PROTON PUMPS INHIBITORS IN A TERTIARY REFERRAL HOSPITAL IN MALAYSIA

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INTRODUCTION

In 2006, the budget for proton pump inhibitors (PPIs) soared to $7 billion and 25–75% of patients receiving PPIs had no appropriate indications. Hence, the main aim of this study was to assess if the usage of IV PPIs was in accordance with hospital guidelines and the effectiveness of this intervention.

METHOD

All prescriptions for IV PPIs received were screened against hospital guidelines. Interventions for incorrect indication/dose/duration were performed. Patients' demographic data, past and current medical history and the use of IV pantoprazole were collected.

RESULTS

Data for 106 patients (mean age=60.3±18.0 years, 61.3% male, Chinese ethnicity: 47.2%) were prospectively collected. Most IV PPI prescriptions were initiated by junior doctors from the surgical [48 (45.3%)] and medical [41 (38.7%)] departments. Although the main indications for IV PPI initiation were for suspected upper gastrointestinal bleed [74 (69.8%)], only 50 (47.2%) patients had oesophagogastroduodenoscopy/surgery performed to verify the source of bleeding. IV PPI was inappropriately used in 43 (40.6%) patients, and only 3 (20.0%) and 9 (60.0%) patients with bleeding lesions were prescribed the 80mg loading dose and the high dose infusion for 72 hours, respectively. Interventions on the use of IV PPI were most effective when performed by senior doctors (100%), followed by wards pharmacists (40%), and least effective by inpatient pharmacists (0%).

CONCLUSION

Inappropriate IV PPI usage is still predominant despite the enforcement of hospital guidelines. The promotion of awareness and evidence-based prescribing through education of medical staff could result in more judicious use of IV PPI.

PP 18

MALAYSIAN GI REGISTRY : AN AUDIT OF UPPER GI ENDOSCOPY IN HOSPITAL KUALA LUMPUR FOR THE YEAR 2010

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OBJECTIVES

To audit the Upper GI Endoscopy findings of patients referred to the combined endoscopy services in Hospital Kuala Lumpur for the year 2010.

METHODS

Data was collected for all upper GI endoscopy performed from the 1st of January 2010 till the 31st of December 2010 through the Malaysian Gastrointestinal Registry (MGIR). Positive findings were defined as any endoscopic abnormalities noted in the oesophagus, stomach or duodenum. Details of the endoscopists were also analysed as both Gastroenterologists and Surgeons contribute to the combined endoscopy services.

RESULTS

A total of 3709 Upper GI endoscopies (61.9%) were done for the year 2010 in HKL encompassing 2033 males patients (54.8%) and 1676 female patients (45.2%). The bulk of the endoscopic services in HKL are shouldered by the Gastroenterologists with 2858 upper scopes done (77.1%) as compared to 754 scopes (20.3%) performed by the Surgeons. A total of 931 procedures (25.1%) were performed under emergency settings and 2778 scopes (74.9%) were performed electively. Bleeding (26.4%) and Dyspepsia (25.9%) were the main indications for Upper Endoscopy. Active bleeding was seen in 741 patients (75.7%) and 223 patients (24.3%) had Occult bleeding. Abnormal Oesophageal findings were seen in 1659 patients (44.7%) with mainly 670 cases (40.3%) of oesophagitis and 390 cases (23.5%) of oesophageal varices seen. Hiatus Hernias were also commonly found in 574 patients (15.4%). 2594 patients (69.9%) were noted to have abnormalities in the stomach which included 1700 patients (45.8%) with Gastritis, 447 (17.3%) Gastric Ulcers, 121 (4.7%) Gastric varices, 168 (6.5%) Gastric Polyps and 52 (2.0%) gastric tumours detected. Duodenal abnormalities were less frequently seen. 889 patients (24.0%) had abnormal findings in the duodenum, with 444 patients (50.0%) having duodenitis and 322 patients (37.3%) with duodenal ulcers. 288 biopsies (11.9%) of the stomach confirmed the presence of Helicobacter Pylori infections while 2137 patients (88.1%) had negative biopsies.

DISCUSSION

Hospital Kuala Lumpur is a one of the largest tertiary government hospitals in the country with a significant patient load and a sizeable workload of upper GI endoscopic procedures. The endoscopic services are shared but the majority of the upper GI endoscopies were performed by the Gastroenterologists. A quarter of Endoscopies were done under emergency for bleeders.

PP 19

MALAYSIAN GASTROINTESTINAL REGISTRY (MGIR) : AN AUDIT OF COLONOSCOPIES PERFORMED IN HOSPITAL KUALA LUMPUR FROM JANUARY 2009 TO DECEMBER 2010

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BACKGROUND

Hospital Kuala Lumpur (HKL), being one of the largest hospitals in the country with significant patient load has a central database for endoscopic procedures that is linked with the Malaysian Gastrointestinal Registry (MGIR). An audit of colonoscopy was done to have an objective view of the case mix and work processes so that the quality of services could be improved.

METHOD

All endoscopic procedures totaling 14173 cases that were performed in HKL from 1st January 2009 until 31st December 2010 were downloaded. The colonoscopies performed were filtered and analyzed using Excel and SPSS version 14.0.

RESULTS

Total of 3205 colonoscopies were performed. Mean age was 58.6 +/-15.1. The racial breakdown was Malays 1216 (38.0%), Chinese 1144 (35.8%), Indians 740 (23.1%) and others 97 (3.0%). Males were 1702 (53.1%) and females 1499 (46.8%). Elective colonoscopies were 2775 (86.6%) vs. emergency colonoscopies 421 (12.9%). Mean time taken to complete a colonoscopy was 24.4 +/- 14.5 min. Adequate bowel preparation was 2462 (76.8%). Ceacal and ileal intubations were achieved in 2445 (76.2%) of colonoscopies. 1951 (60.9%) had abnormal findings. The findings were polyps 805 (25.1%), hemorrhoids 528 (16.5%), carcinoma 202 (6.3%), colitis 160 (5.0%), ulcers 146 (4.6%) and diverticular disease 11 (0.3%). The commonest indication was gastrointestinal bleed 718 (22.4%). Therapeutic procedures were performed in 375 (11.7%) patients.

CONCLUSION

Colonoscopy completion rate of 76.2% is a crude estimate not taking into account confounding factors and needs to be corrected accordingly (bowel preparation, endoscopist and etc). This audit will allow us to evaluate our services and detect shortcomings and hence improve performance in future.

PP 20

PREDICTORS OF POLYP DETECTION RATE IN HOSPITAL KUALA LUMPUR AS A BENCHMARK FOR GOOD QUALITY COLONOSCOPY

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BACKGROUND

Colonoscopy is commonly used to screen for neoplasia. To assess the quality of colonoscopy performed in everyday practice, many indexes can be used as a benchmark. We conducted a study on the rates of polyp detection as well as the incidences of polyp in our combined endoscopic services.

METHODOLOGY

All patients who had colonoscopy performed in the combined endoscopic services form January 2009 to December 2010 were included in this study. Total of 3205 patient's data were retrieved. Incomplete colonoscopies were excluded. A total of 2442 patients were analyzed. Polyp detection rate (PDR) was taken as primary outcome. Variables compared were age, gender, race, timing of scope, endoscopist experience, bowel preparation, procedure duration and indication. A subgroup analysis was done comparing patients who had screening colonoscopy to other indications for colonoscopy. Multivariate analysis was performed on the variables.

RESULTS

A total of 2442 patients were analyzed. Mean age of patients was 61.1 +/- 14.2. The mean procedure time (MPT) taken to complete a colonosopy was 27.5 +/- 57.5min.1493 (61.1%) colonoscopies were done in less than 20 minutes while the remaining 740 (30.3%) took more than 20 minutes. Elective cases were 2185 (89.5%). Satisfactory bowel preparation was found in 2070(84.8%). Commonest lesions were polyps 649 (27%). Most of the polyps were found in sigmoid colon 220 (33.8%) followed by rectum 183 (28.1%). Commonest indication for colonoscopy was GI bleeding 549 (22.5%). Procedure time was statistically significant in determining PDR (23.0% vs. 35.1%, $p<0.001$). Subgroup analysis of indication with regards to PDR did not show any significance. Multiple linear regression confirmed procedure time as independent predictive factor ($p<0.001$). No correlation was found between MPT and number of polyps detected. No correlation between MPT and polyp size.

CONCLUSION

Reported incidence of polyp detection in the general population is 25% to 35%, similar to PDR in our center. Mean procedure time is a significant outcome predictor, which is in keeping with previous studies. Other parameters may not be statistically significant due to heterogeneity of study population.

PP 21

POLYCYSTIC LIVER DISEASE PROGRESSING TO END-STAGED LIVER FAILURE WITH PORTAL HYPERTENSION

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Polycystic Liver Disease (PLD) is a genetic disorder with heterogenous aetiologies and a range of phenotypic presentations. Its exhibit either autosomal or recessive dominant pattern of inheritance and is characterized by the progressive development of multiple cysts. It can be associated with polycystic kidney disease, especially in women. PLD can rarely cause liver failure and portal Hypertension. We presents a case of upper gastro-intestinal haemorrhage from fundal varices as a complication of polycystic liver disease.

A 54 year-old lady presented with a progressively distended abdomen and a painful mass. She was known to have autosomal-dominant Polycystic Kidney Disease for 20 years. Initial CT scans showed Polycystic Liver Disease with ruptured liver cysts and ascites. She underwent laparoscopic deroofing of the liver cysts, with marked symptomatic improvement subsequently. However, a few weeks later, she presented acutely with upper gastrointestinal haemorrhage. An urgent endoscopy revealed bleeding fundal and duodenal varices. The fundal varices were injected with Histoacryl-lipiodol endoscopically. Secondary prophylaxis with beta-blocker was commenced.

PP 22

CROSS SECTIONAL COMPARATIVE STUDY OF HELICOBACTER PYLORI INFECTION IN PATIENTS WITH PARKINSON'S DISEASE

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BACKGROUND

Helicobacter pylori (H. pylori) infection has been shown to affect oral levodopa absorption in patients with Parkinson's disease (PD). Eradication of *H. pylori* leads to significant improvement in the motor disability in these patients. Some studies have reported that PD patients tend to have a higher prevalence of *H. pylori* infection compared to controls, To date, there has been no local study on the prevalence of *H. pylori* among the PD population in Malaysia.

OBJECTIVES

To determine the frequency of *H. pylori* infection in patients with PD compared to age-matched controls in PPUKM, and to explore the effects of *H. pylori* infection on the daily levodopa requirement and PD severity (UPDRS and PDQ39) among the PD patients.

DESIGN AND METHOD

This was a cross sectional comparative study involving 29 PD patients and 23 controls. We used ^{13}C-urea breath test on all participants to identify the presence of *H. pylori* infection. Clinical data (duration of disease, number and dose of medications, sociodemographic background and lifestyle factors) were obtained from all subjects. The UPDRS and PDQ39 questionnaires were administered to the PD patients.

RESULTS

The frequency of *H. pylori* infection in the PD group was 48.3% and 21.7% in the control group ($p = 0.048$). The difference was more significant ($p = 0.012$) when we excluded relatives of PD patients who were *H. pylori* positive

There were no significant differences in the Hoehn & Yahr stages, UPDRS and PDQ39 scores between the *H. pylori* positive and *H. pylori* negative PD patients.

CONCLUSIONS

This study showed that *H. pylori* infection is significantly more prevalent in our PD population, compared to controls (48.3% versus 21.7%). It is unclear why this is so. This finding should be further validated in a larger case-control population-based study.

KEYWORDS

Parkinson's disease, *Helicobacter pylori*, prevalence, ^{13}C-Urea Breath Test

PP 23

PREVALENCE OF HELICOBACTER PYLORI INFECTION IN EPILEPSY PATIENTS IN UKMMC

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INTRODUCTION

Helicobacter pylori infection has been associated with extradigestive diseases in many studies. Epilepsy is one of the known diseases to be associated with *H. pylori*. This is the first study utilizing urea breath test to detect H. pylori in epilepsy patients in Malaysia.

OBJECTIVE

The main aim of the study was to determine the prevalence of *Helicobacter pylori* using 13C urea breath test (UBT) in epilepsy patients at UKM Medical Centre and comparing to a control group.

DESIGN AND METHODS

This is a case control study involving epilepsy subjects from the neurology clinic UKMMC from 1st of August 2010 till 28th February 2011. The subjects in the epilepsy and controlled group were matched for age and gender. The control group consists of healthy individuals with no history of epilepsy or on any acid suppression medications and antibiotics. The subjects then underwent 13C urea breath test as per protocol. Predictors such as age, race, education level, household income, house crowding (person per room), smoking, caffeinated beverages, types of epilepsy, duration of epilepsy and number of antiepileptics were analysed. The epilepsy patients were also divided into good or poor prognosis as in previous studies. Good prognosis epilepsy patients were defined as seizure free for 3 years prior enrollment in the study.

RESULTS

48 epilepsy patients and 47 control subjects were enrolled in the study. Prevalence of *H. pylori* infection in the epilepsy group was 37.5% (n=18). The prevalence of UBT positive in the epilepsy group was found to be higher in the Malay patients which was 72.9% (n=13), Chinese 16.7% (n=3) and Indian 8.4% (n=2) but the difference is not significant. We also did not find significant difference between the increase prevalence of *H. pylori* infection and the different age groups. There was however significant difference between the two groups in terms of education level (p=0.003) and household income (p=0.009). The difference could be attributed to cognitive impairment and higher dropout rates from school in the epilepsy patients. There were more smokers in the epilepsy group but there was no association between smoking and positive UBT. Moreover there was no association between positive UBT and consumption of caffeinated beverages, house crowding, duration of epilepsy and types of epilepsy in this study. Furthermore there were no significant association between the UBT results and epilepsy prognosis found in the study.

CONCLUSION

The prevalence of *H. pylori* infection in epilepsy patients by using 13C urea breath test in UKMMC is 37.5 %. It was equally prevalent in the epilepsy and control group. We did not find any significant predictors associated with the prognosis of epilepsy. Finally, further studies would be recommended with a larger sample size to make a better conclusion.

KEYWORDS

Epilepsy, *Helicobacter pylori*, 13C urea breath test.

PP 24

CLINICAL USEFULNESS OF ENDSCOPIC ULTRASOUND IN ASYMPTOMATIC PATIENTS WITH RAISED CARBOHYDRATE ANTIGEN 19-9

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KEY WORDS

Carbohydrate Antigen 19-9, Endoscopic ultrasound

INTRODUCTION

CA19-9 is a non specific tumour marker that may be raised in patients with small pancreatic lesion or biliary obstruction. EUS has been shown to be useful in detecting small pancreatic lesion which may be missed by other imaging modality.

METHODOLOGY AND AIM

We retrospectively reviewed the clinical usefulness of endoscopic ultrasound for detecting pancreatic pathology in asymptomatic patient with incidental finding of raised CA19-9 referred to our centre from 2009 to 2011. The clinical notes of patients were reviewed on the presence of symptoms, level of CA19-9, liver function test, and radiologic imaging. All the patients underwent a radial endoscopic ultrasound using an Olympus Aloka Alpha-10 system.

RESULTS

A total of eight patients (5 females and 3 males) were identified. The mean age of patients were 55.4 ±9.0 years (range 45-74). The serum CA19-9 ranges were 47-600 IU/ml with a mean value of 219.5±206.7 IU/ml. Four patients had epigastric discomfort. The mean value of *alanine transaminase* were 22.9 U/L, alkaline phosphatase 67.9 U/L, albumin 38.1 g/L, and bilirubin 14.6 umol/L respectively. Hepatobiliary ultrasound was performed in two patients with unremarkable findings. Computer tomogram were performed in 7 patients, which showed fatty liver (n=1), gallstone disease (n=1), renal cyst (n=1), prostatomegaly (n=1), bulky head of pancreas (n=2), and unremarkable (n=1). Endoscopic ultrasounds of these patients were unremarkable of pancreatic biliary lesion in all the patients with a normal CT abdomen. Two patients with bulky head of pancreas also had a normal EUS study. One patient with gallstone disease detected on CT abdomen had EUS confirmation.

CONCLUSION

In asymptomatic patients with raised CA19-9 and an unremarkable CT abdomen findings, does not offer additional information. However, our study is limited by the small sample size. A prospective study with a larger sample size is required to consolidate our findings.

PP 25

WHITE GAUZE TEST : A FAST AND EFFICIENT WAY OF BILE LEAK DETECTION

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BACKGROUND

Post-operative bile leak causes much morbidity in the surgical patients. The authors studied the use of white gauze test as a simple yet reliable method of bile leak detection.

METHODS

The aim of the study was to assess the bile leak rate post liver resection by using the white gauze method. The method involved pressing the gauze gently onto the transected liver surface and looking for the presence of yellowish bile stain on the white gauze. If present, the leaking duct is repaired under loupe magnification using fine Polydioxanone 4-0 or 5-0 sutures. The process is repeated until there is no staining of the white gauze. From January 2010 until March 2011, a total of 42 consecutive patients (28 males and 14 females) were recruited into the study. Patients who underwent laparoscopic liver resections and open radiofrequency ablation were excluded. The operative site was routinely drained and kept until post-operative day 5. No routine measurement of drain bilirubin was done unless clinically indicated.

RESULTS

In total, 16 major and 26 minor open liver resections were performed. 3 patients in this series also underwent additional biliary reconstruction. Bile leaks were intraoperatively detected through the white gauze test in 29 patients and repaired. There was no clinical evidence of postoperative bile leak in the all the patients in this study.

CONCLUSION

The white gauze test is a fast yet reliable way to assess intra operative bile leak.

PP 26

UMMC'S EXPERIENCE OF LAPAROSCOPIC ESOPHAGECTOMY FOR BENIGN ESOPHAGEAL DISEASE

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KEYWORDS
Benign esophageal disease, esophageal conduit.

Esophageal strictures are a frequent problem that gastroenterologists come upon, and they can be either malignant or benign in origin. The mainstay of treatment for benign esophageal strictures is dilatation. Although dilatation is the treatment of choice, it is not without complications. The reported rate of perforation and massive bleeding is 0.3%, but the risk is higher when complex strictures or caustic strictures are dilated. Surgery is less commonly indicated as it is associated with high morbidity and mortality. Open esophagectomy is considered as one of the most challenging gastrointestinal operations by most surgeons. However, with the advancement of minimally invasive surgical approaches, morbidity of the access incision can be reduced.

Here, we would like to share our centre's experience of laparoscopic esophagectomy for 4 patients with benign esophageal strictures (3 patients secondary to caustic agent ingestion and 1 patient secondary to achalasia cardia), including pre operative optimization of patients' nutritional status, type of conduit used and the complications that ensued.

PP 27

SLOW PROGRESS OF BARIATRIC SURGERY IN MALAYSIA : SURGEON'S OPINION

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BACKGROUND

With the worldwide epidemic of obesity, the modern method of bariatric surgery is the only proven effective and durable treatment for obesity. It has been shown that the surgical intervention offer a permanent solution to the co-morbidities associated with obesity and its sequelae. However, despite the rapid popularity of bariatric surgery in many countries, this type of surgery still not becomes very prevalent in Malaysia. The purpose of this questionnaire study was to find out the attitude, obstacle and practice of bariatric surgery among the surgeons who are offering bariatric surgery in Malaysia.

METHODS

Online questionnaire were sent to 11 surgeons who are practicing bariatric surgery, asking about their opinion regarding the practice of bariatric surgery in Malaysia.

RESULTS

Nine out of eleven surgeons responded to the questionnaires. They were grouped as upper GI surgeons and laparoscopic surgeon with advanced laparoscopic skill. Only 10 hospitals (3 private, 7 governments) offer bariatric surgery service. 66% of cases are performed in government setting. They are estimated only 12 surgeons with average 4 years of experiences routinely offer bariatric surgery in Malaysia. Most surgeons preferred gastric banding and sleeve gastrectomy, while only 3 surgeons routinely offer gastric bypass as the primary procedure of choice. The estimated total number of cases performed per year is still low, about 140 per year. The estimated procedure cost is RM 500-5000 in government hospital and RM 25,000-30,000 in private setting, depending on the type of procedure performed. Most surgeons are using BMI with comorbidities as the selection criteria. Only 2 surgeons agree to perform Metabolic surgery for lower BMI < 35 or 32 to treat type 2 DM.

CONCLUSION

Although the bariatric surgery has been prove to be cost effective treatment of obesity and associated co-morbidity especially in diabetes mellitus, the adoption of this advanced surgery is still slow in Malaysia. Currently, only hospitals with qualified and experienced laparoscopic surgeon are routinely offering this procedure. The lack of surgical training opportunity, public awareness and no insurance coverage for obesity might be the factors that hinder the progress of this surgery.

KEYWORDS

Obesity, bariatric surgery, Malaysia

PP 28

OESOPHAGEAL GIST

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Gastrointestinal stromal tumour , although the commonest mesenchymal tumour of the GI tract, are rare in prevalence if compared to adenocarcinoma and lymphomas of the GI tract. The commonest sites for GIST tumours are the stomach followed by small intestine, colon and rectum. Oesophageal GIST tumours are rare and account for less than 5 % of cases.

We hereby present a 41 year old female who presented with a 6 month history of dysphagia. An endoscopic examination revealed a submucosal tumour at the mid oesophagus which was confirmed by endoscopic ultrasound and histopathology suggested a GIST tumour. A three stage thoracoscopic/laparoscopic assissted subtotal oesophagectomy with gastric pull up was done. The surgery was complicated with the development of chylothorax. This resolved with conservative management.

This case review discusses the rarity of this condition and the technical aspects of surgical management and complications associated with it.

PP 29

INTUSSUSCEPTION OF GASTRIC POLYPS CAUSING AN INTERMITTENT, RECURRENT GASTRIC OUTLET OBSTRUCTION

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Gastric polyps are usually an incidental findings on upper endoscopy with an incidence of up to 5%. The majority of gastric polyps are asymptomatic. Symptomatic presentation may range from anemia and gastric outlet obstruction. Here we are presenting an unusual cause of gastric outlet obstruction. A 70-year-old Chinese man with background of diabetes mellitus, hypertension and renal cyst presented with recurrent vomiting of food after meal and anemia. Gatroscopy showed multiple sessile gastric antral polyps with the largest measuring 4cm. Histopathology report confirmed it as a benign hyperplastic lesion. Computed tomography showed a pyloric mass with no evidence of surrounding infiltration or distant metastasis. Inview of the size and multiplicity of these polyps, a distal gastrectomy was performed and the opened cut specimen revealed multiple small pyloric polyps, with the largest polyp , mobile and prolapsing into the pyloric opening and is likely to have caused his intermittent symptoms of gastric outlet obstruction. In this report we review the literature on endoscopic and surgical management of gastric polyps.

PP 30

A NEAR FATAL OUTCOME FOLLOWING HISTOACRYL GLUE INJECTION FOR BLEEDING OESOPHAGEAL VARICES

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Endoscopic variceal band ligation and histoacryl glue injection are common endoscopic modalities for the management of bleeding gastro-oesophageal varices.

We report a case of a near fatal pulmonary embolism of histoacryl glue following its injection to arrest variceal upper gastrointestinal bleeding.

A 49 year old male with a history of liver cirrhosis presented with a 3 day history of melaena.During OGDS, grade 2 oesophageal varices with a cherry red spot at the distal oesophagus was noted. Endoscopic variceal band ligation was performed but upon deploying the band, profuse bleeding occurred and further banding was difficult. As a form of rescue, Histoacryl was injected into the varix which successfully arrested the bleeding. However soon after this, patient developed respiratory distress requiring intubation and ventilator support. A CECT thorax revealed pulmonary embolism of the injected histoacryl glue. This report describes the subsequent outcome of the patient as well as a literature review of this uncommon complication.

KEYWORDS

Variceal Upper Gastrointestinal Bleeding, Histoacryl glue complications.

PP 31

REVIEW OF GASTRIC GISTS TREATED AT HOSPITAL TUANKU JA'AFAR SEREMBAN

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AIMS

To review our experience in managing primary gastric GISTs at our center.

METHODS

Between January 2006 and August 2010. 16 patients underwent surgical resection and their records were retrospectively reviewed. The clinical features, patient demographics, tumour characteristics and surgical intervention with outcomes were reviewed.

RESULTS

The mean age of patients was 60.1 years at presentation (median 61, range 44 - 83). The male to female ratio was 1.7:1 with half of our patients in this series Malay and the other half Chinese. The most common site was the proximal third of the stomach (cardia) and the mean diameter of tumours resected was 9.8 cm (range 4 -23 cm). Half (8 patients) had high malignant potential while 3 patients were diagnosed to have GISTs with intermediate risk and 5 patients had GISTs with low malignant potential. Fifteen patients successfully underwent Ro resection with no recurrence (mean follow – up 20 months; range 2 – 50 months) but one patient had involved margins and presented with recurrent disease 7 months after resection. Laparoscopy was an important tool for assessment of tumours deemed resectable by computed tomography (CT) scan.

CONCLUSION

The clinical outcomes of low, intermediate and high risk gastric GISTs was good if complete resection was achieved even without adjuvant imatinib mesylate.

KEYWORDS

Gastrointestinal stromal tumours, GISTs, surgical resection.

PP 32

CONTRAST WITH NON CONTRAST ENHANCED THREE DIMENSIONAL ENDOANAL ULTRASOUND IN PREOPERATIVE ASSESSMENT OF ANAL FISTULA : A COMPARATIVE STUDY

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PURPOSE OF STUDY

To compare the accuracy of non contrast three dimensional endoanal ultrasound (NC-3D-EAS) and contrast enhanced three dimensional endoanal ultrasound (CE-3D-EAS) for pre-operative evaluation of anal fistula using surgical findings as the gold standard.

MATERIAL AND METHOD

A total of 28 patients (30 primary tracks) with clinical diagnosis of anal fistula underwent pre-operative 10-MHz endoanal ultrasound. 3% hydrogen peroxide was used as contrast agent. Data set for 3D volume displayed were acquired in 3 stages: before (NC-3D-EAS), immediately (CE-3D-EAS) and 10 mintures after (delayed CE-3D-EAS) hydrogen peroxide administration. Fistula classification, internal opening, abscess cavity and secondary tracks were determined in these 3stages by an experience consultant radiologist. The 3D-EAS findings were compared with surgical findings.

RESULTS

CE-3D-EAS was more accurate than NC-3D-EAS. Agreement between the surgical finding, NC-3D-EAS and CE-3D-EAS for classification of the primary track were good (0.674) and very good (0.815). The sensitivity and specificity for NC-3D-EAS and CE-3D-EAS in detection of internal opening were 75%, 81%, 95% and 91%. The sensitivity and specificity for standard EAS and CE-EAS in detection of abscess cavity were identical, 95% and 91%. Result of CE-3D-EAS and delayed CE-3D-EAS were identical in classification of the primary track, detection of internal opening and abscess cavity. The advantage of delayed CE-3D-EAS was better delineation of the secondary track.

CONCLUSION

CE-3D-EAS significantly increases the accuracy of pre-operative anal fistula assessment, particularly in recurrent or complex anal fistula. The NC-3D-EAS is not satisfactory to differentiate recurrent fistula from scarring. Delayed CE-3D-EAS can give extra information about the extension of secondary track.

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PAIN AND TOLERANCE TO ULTRASOUND-GUIDED PERCUTANEOUS LIVER BIOPSY IN ASIAN PATIENTS WITH DIFFUSE LIVER DISEASE

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BACKGROUND

Percutaneous liver biopsy remains vital in the management of chronic liver disease but pain and tolerance among Asians is relatively unknown.

METHODS

Consecutive adult patients undergoing ultrasound (US)-guided percutaneous liver biopsy for diffuse liver disease had their worst pain sensation, post procedure, reported using a visual analogue scale (VAS) from 0 – 10. Willingness to undergo a repeat biopsy was examined 2 weeks later.

RESULTS

A total of 205 patients (median age 50 years; 43.9% female; ethnic division: Chinese 40%, Malay 41.5% and Indian 18%; liver disease: NAFLD 89%, viral hepatitis 11%) underwent USS guided liver biopsy from April 2009 to June 2010. No (i.e. 0%) complications occurred in all patients. Post procedure VAS pain scores were categorized and reported as follows: none (score 0 = 39.9%), mild (score 1 – 3 = 27.6%), moderate (score 4 – 6 = 25.1%) and severe (score 7 – 10 = 7.4%). 55 (27.1%) patients required analgesia (mostly Tramadol) for post-procedure pain, and this corresponded to the severity of pain scores (73.3% severe, 45.1% moderate and 23.2% mild, $p < 0.0001$). Independent risk factors for significant (i.e. moderate & severe) pain were explored and were identified as follows: age < 50 years (OR 3.0, 95% CI=1.4-6.3), female gender (OR 3.7, 95% CI=1.8-7.5), Malay (OR 2.7, 95% CI=1.3-5.9) and Indian (OR 2.9, 95% CI=1.1-7.4) ethnicity. Education levels, number of needle passes, BMI & waist circumference were not found to be predictive of significant pain. 60.9% of patients with significant pain compared to 82.8% of patients with no/ mild pain were willing to undergo a repeat biopsy (p=0.001)

CONCLUSION

USS-guided liver biopsy is safe and well tolerated by the majority of Asian patients. Approximately one-third of patients experienced significant pain and this was more prominent in adults who were younger, of female gender and non-Chinese ethnicity.

PP 34

HELICOBACTER PYLORI IN AN URBAN EAST MALAYSIAN COMMUNITY - EVIDENCE FOR A CHANGE IN PREVALANCE

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INTRODUCTION

Helicobacter pylori, one of the commonest bacterial pathogens in humans, associated with a wide spectrum of diseases such as gastric cancer, gastric lymphoma, gastric and duodenal ulcers. The prevalence of infection is falling in most developed countries. There is also evidence for decreasing prevalence in developing nations including Malaysia. The previous recorded prevalence of H. pylori in Sabah, East Malaysia was 55% in 2001. It was noted to be highest amongst the indigenous races.

AIMS AND METHODS

The aim of the study was to determine the epidemiology of H. pylori in the city of Kota Kinabalu in East Malaysia. This was a prospective study conducted on consecutive outpatients aged 12 to 85 attending a health clinic in the city. A total of 323 patients were recruited. The patients were required to answer the previously validated Leeds Dyspepsia Questionnaire (LDQ). All patients also had their BMI calculated. The patients then had 5ml of blood drawn for H. Pylori serology by Enzyme immunoassay (EIA) for H. pylori IgG. Chi square test was used to determine association between variables. Spearman correlation test correlation to determine correlation between variables.

RESULTS

The overall prevalence of H. pylori was 22%. H. pylori infection was significantly more prevalent among the lower income group (31.6%) than in the higher income group (17.6%) ($p<0.05$). There were no significant differences in H. pylori status with respect to gender, BMI, smoking or alcohol consumption. There was no statistical correlation between H. pylori infection and dyspepsia ($p=0.645$). Patients with heartburn symptoms had significantly higher prevalence of H. pylori ($p=0.001$). The prevalence of H. pylori was significantly higher in the Kadazan/ Dusun community (47.9%) ($p=0.044$) compared to the Malays (1.4%), Muruts (2.8%), Bajau (7%), Chinese (28.2%) and others (12.7%).

CONCLUSION

The overall prevalence of H. pylori in Kota Kinabalu, Sabah, East Malaysia has dropped from 55% in 2001 to 22.3% in 2011. The prevalence was highest amongst the indigenous Kadazan/ Dusun community. We found no correlation of H. pylori with either dyspepsia or heartburn.

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A REVIEW OF OESOPHAGEAL MANOMETRY TESTING IN A TERTIARY HOSPITAL

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INTRODUCTION

Although several modalities are available to investigate oesophageal motility disorders, manometry is the gold standard. The procedure is increasingly available in certain hospitals but the clinical utility of this investigation in this setting remains unclear. The aim in this study was to evaluate the use and outcome of oesophageal manometry in a tertiary general hospital.

METHODOLOGY

A total of 92 patients underwent oesophageal manometry in Kuala Lumpur Hospital from January 2009 till December 2010 using a high resolution manometry system. Data on these oesophageal manometry procedures were analysed, taking into account the referral pattern, indications, and results.

RESULTS

The indications of esophageal manometry were gastro-oesophageal reflux disease (preoperative assessment before fundoplication) (36 patients , 39%), dysphagia (33 patients, 36%), epigastric pain (9 patients, 9.7%), scleroderma in assessing for oesophageal dysmotility disorder (7 patients , 7.6%) , atypical chest pains (5 patients , 5.4%).

Diagnoses were made using predefined standard criteria and were as follows: normal (58 patients, 63%), non-specific motility disorder (NSMD) (13patients, 14%), 4 patients (4.3%) had hypertensive lower esophageal sphincter while 2 patients (2.1%) had hypotensive lower oesophageal sphincter. 3 patients (3.2%) had incomplete manometry due to poor tracing. Of the 33 dysphagic patients who underwent oesophageal manometry 11 patients (33%) were diagnosed achalasia cardia.

CONCLUSIONS

The experience reported here reflects the published evidence that the use of manometry is changing. It is now more commonly used for assessment before antireflux surgery and for dysphagia. and the use in the assessment of chest pain is declining. The findings confirm the importance of eliminating achalasia before inappropriate antireflux surgery.

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COMMON PRESENTATION OF A RARE CAUSE OF SMALL BOWEL OBSTRUCTION – A CASE REPORT

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INTRODUCTION

Jejunal diverticular disease is a rare disease with a prevalence of approximately 5% from post-mortem examinations1. It is commonly seen in the elderly population. It can be complicated not only by diverticulitis, but by hemorrhage, perforation, intussusception, volvulus, malabsorption, and even small bowel obstruction. The small bowel obstruction is commonly due to impacted enteroliths which normally formed de novo from these diverticula. We report a case of jejunal diverticula with enteroliths causing a small bowel obstruction.

CASE SUMMARY

A 92-year-old Chinese man presented with a 5-day history of abdominal pain, distension and vomiting. Clinically, he was dehydrated and tachycardic. The abdomen was soft, grossly distended with high-pitch bowel sounds. Per rectal examination did not show any rectal mass. A plain abdominal film revealed dilated loops of small bowel, air-fluid levels and paucity of colonic gas. There was no radio-opaque stone to suggest gallstone ileus. Ultrasound of abdomen revealed a calcified mass at the right iliac fossa with dilated bowels. The ultrasound finding of a right iliac fossa mass prompted a computed tomography (CT) scan examination which demonstrated an ileo-ileal "like" intussusception with small bowel obstruction. Laparotomy was subsequently performed and noted there were multiple jejunal diverticula with dilated loops of small bowel. However, there was no intussusception. On examination of the entire small bowel, there were three enteroliths in the multiple jejunal diverticula. The largest enterolith was impacted in the distal jejunum at 70 cm from the duodenojejunal (DJ) junction causing an obstruction. The other two enteroliths were found proximally; one was floating in the jejunum and the other enterolith was impacted in the diverticulum at 10 cm from the DJ junction. The enteroliths appeared yellowish and have various shapes and size measuring approximately 3-4 cm. All the enteroliths were removed via two enterotomies. The gall bladder was normal without stones.

DISCUSSION

Jejunal diverticulosis complicated with enteroliths is a rare pathological entity which can be associated with various life-threatening conditions. It can be formed in the diverticulum either de novo or around a central nidus that is usually a piece of undigested foods2. Those that are formed around a nidus are termed as bezoars. The main composition of enterolliths is choleic acid, an end product of bile metabolism formed as a result of acidic pH shift within a diverticulum. It can get extruded from a diverticulum and eventually, impacted into a small bowel causing an obstruction or it can erode through a diverticulum causing a perforation, abscess collection and even, feculent peritonitis.

Most of the enteroliths are radiolucent but some may undergo calcification and appear as radio-opaque stones on a plain abdominal radiograph. Ultrasound may reveal a calcified mass which was seen in this patient. However, the CT scan revealed a calcified and laminated mass within the small bowel lumen resembling

multiple layers of intussuscepted bowel walls which was subsequently misinterpreted as a small bowel intussusception.

With the evidences of small bowel obstruction and CT scan finding of intussusception, surgical intervention was indicated in this patient. However, the obstruction was due to a large impacted enterolith instead which was successfully removed through an enterotomy. For a small and fragile enterolith, it can be manually crushed and milked into the colon where it can be passed through the rectum. Bowel resection is only reserved in cases of perforated diverticulitis.

CONCLUSION

Jejunal diverticulosis is a rare benign condition that can lead to various complications necessitating surgical intervention. Although jejunal diverticulosis and its complications are difficult to diagnose clinically, and even by conventional radiological means, it should be considered as a possible source of acute abdomen in the elderly patients when more common diagnoses have been excluded.

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