The year of 2013 has been a good year for The Hong Kong Society of Gastroenterology.

To continue promotion of advancement in gastroenterology in Hong Kong, this Society organized the 32nd Annual General Meeting cum Scientific Meeting held on 14 March 2013, the 15th Joint Annual Scientific Meeting on 31 August 2013, and a scientific symposium on 6 September 2013.

Two issues of the Society’s newsletter containing scientific updates, highlights of events, Society news, and major meetings were published during the year.

Research grants were allocated for a research project to be completed in 2 years.

On behalf of the Society, I wish to express my gratitude to all who have contributed or supported the Society: Dr On-On Chan for organizing the 2013 Annual General Meeting cum Scientific Meeting, Dr Wai Cheung Lao for organizing the 2013 Joint Annual Scientific Meeting, Prof Justin Wu for editing the newsletters, Prof Ronnie Fass, Dr Mitsuhiro Fujishiro, Dr Grace Wong, Dr Siew Ng, and Dr Sing Lam for their contributions towards the scientific updates in this Newsletter, and all fellows and members who have attended the scientific meetings. Last but not least, our friends from pharmaceutical industry who have sponsored the meetings.

The next newsletter will be published in June 2014.

Best wishes for a merry Christmas and a happy new year.

Oesophageal Motility

There have been rapid advances in the field of oesophageal motility disorders (OMD), particularly in diagnostics. Impedance devices have enabled measurement of bolus transit (BT), while high-resolution manometry (HRM) has greatly improved the accuracy of diagnosis. Impedance-manometry, which simultaneously measures motility and BT, shows normal BT in most OMD patients, half with diffuse oesophageal spasm and ineffective motor disorder; but in none with achalasia or scleroderma (Figure 1).1 However, HRM is expensive and requires considerable expertise to perform and interpret. There is a concern that the new Chicago Classification, which redefines OMD based solely on these ultra-sensitive tests, is overcomplicated and may result in under- or over-diagnosis. Furthermore, there is little evidence that disease entities discerned by HRM have any pathophysiological basis, nor of any clinical benefit accruing from increased sensitivity.

Unfortunately, progress in diagnosing OMD has not been matched by therapeutic advances, which have stagnated for decades; the mainstays remain lifestyle modification, anti-reflux medications, warm water with meals, peppermint oil, diltiazem, nitrates, and pain modulators.2 Treatment options in achalasia include: medications; botulinum toxin; pneumatic dilatation; and surgical or endoscopic myotomy. In a randomised study, pneumatic dilatation and myotomy had similar success rates.2 Data suggest that Heller myotomy is better than pneumatic dilatation in aperistaltic achalasia (Chicago Type 1), while achalasia patients with aperistalsis plus oesophageal pressurisation (Chicago Type 2) do well with all therapeutic options. Conversely most therapeutic modalities worsen the prognosis of achalasia associated with spastic contractions (Chicago Type 3). First-line options in spasm include anti-reflux medications or smooth muscle relaxants; botulinum toxin can improve dysphagia.
Prevention of Hepatocellular Carcinoma in Patients with Chronic Hepatitis B

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Preventing hepatocellular carcinoma (HCC) due to chronic hepatitis B virus (HBV) infection involves primary, secondary and tertiary interventions. In primary prevention, universal vaccination against HBV reduced the incidence of HCC in Taiwan by 69%.1

HBV load significantly increases the risk of HCC above a threshold of 2,000 international units (IU) HBV DNA copies/ml.2 Lamivudine therapy reduces the risk by approximately 50% versus placebo.3 Newer, more potent antivirals, including adefovir and tenofovir, incur much less drug resistance than lamivudine; however, it is not yet known whether they similarly reduce the risk of HCC.

HCC has a median detectable sub-clinical period of around 3 years, with a tumour-doubling time of approximately 6 months. Six-monthly surveillance by ultrasound and alpha fetoprotein (AFP) is therefore recommended to facilitate early detection and treatment. Surveillance improves survival, even after adjusting for lead-time bias.4 However, the sensitivity and specificity of AFP is highly dependent on the cut-offs used5; in practice, AFP levels above 20 should be further investigated, for example, by imaging, to confirm HCC.

HCC is treated according to the clinical stage (Table 1).6 However, there is a high recurrence rate, even among patients treated surgically, with median 5-year survival of no better than 50–70%.

Interferon reduces HCC recurrence following curative surgery, but has a high discontinuation rate due to poorly-tolerated side effects.7 Oral anti-viral agents are not only better tolerated than interferon, but reduce recurrence by 40% and mortality secondary to liver failure by more than 80%.8 The latest Asia Pacific Association for the Study of the Liver guidelines recommend considering oral nucleoside analogue treatment, either before or after curative treatment, for all HCC patients with HBV DNA >2,000 IU/mL.9 Results are awaited of ongoing investigations into whether sorafenib or other targeted therapies prevent post-surgery recurrence, or can be used as adjuvants.

Table 1. HCC treatment according to clinical stage

<table>
<thead>
<tr>
<th>Disease status/stage</th>
<th>Uncomplicated, single HCC</th>
<th>Advanced sclerosis, portal hypertension or liver failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very early</td>
<td>• Surgical resection</td>
<td>• Liver transplant</td>
</tr>
<tr>
<td>Early</td>
<td></td>
<td>• Local ablative therapy if transplant is not possible</td>
</tr>
<tr>
<td>Intermediate</td>
<td>• Chemoembolisation</td>
<td></td>
</tr>
<tr>
<td>Advanced</td>
<td>• Targeted therapies, eg. sorafenib</td>
<td></td>
</tr>
<tr>
<td>Terminal</td>
<td>• Symptomatic treatment only</td>
<td></td>
</tr>
</tbody>
</table>

References
Endoscopic Treatment of Early Gastrointestinal Cancer

Since debuting 40 years ago,1,2 endotherapy of early gastrointestinal (GI) cancer has become increasingly practiced. It is now more common than gastrectomy,1 partly because it has become possible to detect early GI cancer in more than half of cases. Major endoscopic resection methods include polypectomy, strip biopsy,3 endoscopic mucosal resection with cap (EMRC),4 and endoscopic submucosal dissection (ESD).5

Surgery is unnecessary for pre-malignant GI lesions, which should, however, be monitored. Indications for endotherapy include: high possibility of malignancy; high possibility of en bloc resection; and little chance of lymph node metastasis. Small lesions are best resected by strip biopsy or EMRC with ESD reserved for lesions that are not amenable to EMR because they are either too big to resect en bloc, or have ulcerative changes. Surgical local resection is used if ESD is not possible, but nodal dissection is indicated if there is a possibility of lymph node metastasis. Current Japanese guidelines for endotherapy of gastric, oesophageal and colorectal cancer are fairly conservative (Table 1).6,9

Piecemeal resection has a high recurrence rate, whereas ESD enables extremely high en bloc resection rates in gastric cancer, even for lesions <1 cm, with significantly higher recurrence-free survival than strip biopsy or EMR. Very good ESD survival outcomes have been reported in stomach,1,3 oesophageal,1,3 and colorectal cancers.13 In a Japanese case series, ESD proved superior to EMR and enabled more accurate histopathological evaluation of early gastric cancer. Outcomes with different ESD devices are similar16; however, second-generation devices may reduce procedure time without jeopardising en bloc resection rates.18

Recent developments in endotherapy include laparoscopic and endoscopic cooperative surgery and non-exposed endoscopic wall-inversion surgery (NEWS),17 which enables full-thickness resection of the gastric wall without transmural communication and has applications in treating GI stromal tumours or other early cancers not amenable to ESD.

Table 1. Indications for endoscopic surgery in Japanese guidelines

<table>
<thead>
<tr>
<th>Stomach cancer6</th>
<th>Eosophageal cancer6</th>
<th>Colorectal cancer10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard</strong></td>
<td>Absolute</td>
<td><strong>Standard</strong></td>
</tr>
<tr>
<td>Mucosal, intestinal type, U1, ≤2 cm</td>
<td>m1/m2, spread in area &lt;2/3 of the circumference</td>
<td>Mucosal or sm1, ≤2 cm</td>
</tr>
<tr>
<td><strong>Extended</strong></td>
<td>Relative</td>
<td><strong>Extended</strong></td>
</tr>
<tr>
<td>Mucosal, intestinal type, U1, any size; or U1*, ≤3 cm</td>
<td>m1/m2, spread in area &gt;2/3 of the circumference</td>
<td>Mucosal or sm1, &gt;2 cm</td>
</tr>
<tr>
<td>sml, intestinal type, ≤3 cm</td>
<td>m3/sm1</td>
<td></td>
</tr>
<tr>
<td>Mucosal, diffuse type, U1, ≤2 cm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

U1*, ulceration negative/positive; m1, carcinoma in situ; m2, invasive cancer limited to the proper mucosal layer; m3, invasive cancer into the mucosal muscle; sml, invasive cancer <200 μm (oesophagus), <500 μm (stomach), or <1000 μm (colorectum) into the submucosa

References

Cancer Prevention and Surveillance in Ulcerative Colitis

Chronic inflammatory bowel disease (IBD) is emerging in the Asian populations.7 Patients with IBD have a sixfold increased risk of colorectal cancer (CRC) compared with the general population,22 and CRC associated with IBD occurs at a younger age and is more aggressive.4 Inflammation appears to be the main driver for cancer, and the risk of malignancy correlates with the duration of disease25 and the severity and extent of ulcerative colitis (UC). In particular, patients with post-inflammatory polyps, scarred tubular colon, or strictures have a greatly increased risk of CRC.89
In non-randomised studies, 5-aminosalicylic acid (5-ASA) was shown to protect UC patients from dysplasia and cancer;\(^\text{16}\) the greatest benefit is seen in those with disease duration of more than 10 years.\(^\text{11}\) All 5-ASAs appear to have comparable efficacy in this regard. The optimal dose is \(\geq 1.2\) g/day. Low-dose ursodeoxycholic acid (URSO) (13–15 mg/kg/day) is often used for chemoprophylaxis in UC patients with primary sclerosing cholangitis;\(^\text{17}\) new data suggest that high dose URSO (28–30 mg/kg/day) may increase their risk of neoplasia.\(^\text{21}\)

Conventional UC surveillance, which involves multiple random biopsies and histopathological confirmation, is not effective.\(^\text{9}\) Most dysplasia is visible under white-light endoscopy (WLE).\(^\text{14,15}\) and technical advances such as confocal laser endomicroscopy\(^\text{16}\) can help to detect abnormal areas and confirm lesions. Low-grade dysplasia is hard to differentiate in the setting of chronic inflammation. Randomised studies showed that dye-spray with indigo carmine or methylene blue together with targeted biopsies have up to five-fold higher diagnostic yield compared to WLE with random biopsy for the detection of dysplasia.\(^\text{16-18}\) Thus, international guidelines currently recommend chromoendoscopy with targeted biopsies for surveillance in IBD.\(^\text{20}\) Surveillance is recommended for UC patients who have had extensive colitis for more than 8 years, or left-sided colitis for more than 15 years (Table 1). Pan-proctocolectomy is indicated for patients with high-grade dysplasia or multi-focal dysplasia, whereas well-demarcated, isolated flat or raised lesions can potentially be resected by ESD or EMR, with regular follow-up surveillance.\(^\text{21}\)

**Table 1. Risk assessment and surveillance for patients with ulcerative colitis**

<table>
<thead>
<tr>
<th>Colonoscopy findings</th>
<th>Risk for neoplasia</th>
<th>Follow-up colonoscopy</th>
</tr>
</thead>
<tbody>
<tr>
<td>No active disease</td>
<td>Low</td>
<td>5 years</td>
</tr>
<tr>
<td>Left-side colitis</td>
<td>Intermediate</td>
<td>3 years</td>
</tr>
<tr>
<td>Crohn’s colitis &lt;50%</td>
<td>High</td>
<td>1 year</td>
</tr>
<tr>
<td>Mild active disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-inflammatory polyps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Familial CRC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Severe active disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-inflammatory polyps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stricture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dysplasia</td>
<td></td>
<td></td>
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<tr>
<td>Primary sclerosing cholangitis</td>
<td></td>
<td></td>
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<tr>
<td>Familial CRC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**References**


**Overview of Crohn’s Disease in the Hong Kong Chinese population: a Hospital-based Study (Summary of Thesis 2012)**

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**Background**

Crohn’s disease (CD) is a chronic and relapsing inflammatory disease affecting any part of the gastrointestinal tract. It is known to be more common among Caucasians.\(^\text{1}\) However, several recent reports have shown a rising trend of CD in Asian countries.\(^\text{2,3}\)

The studies on risk factors, phenotypic characteristics and treatment efficacy regarding CD in the western countries have been carried out extensively in the past. Differences between Chinese CD and Caucasian CD have been reported in literatures. Better understanding of these aspects can therefore help us to establish a suitable management guideline applicable to our population. In this study, the demographics, clinical features, treatments and outcomes of Chinese CD patients under the care of two local regional hospitals, Queen Elizabeth Hospital (QEH) and Pamela Youde Nethersole Eastern Hospital (PYNEH), will be studied and analyzed.
Methods
Study Design and Patient Selection
This study was conducted retrospectively by analysis of hospital records. All Chinese CD patients with follow-up in QEH or PYNEH from January 2000 to December 2010 were recruited. QEH and PYNEH are public regional hospitals and serve around total 1.1 million people in Kowloon Central Cluster (KCC) and Hong Kong East Cluster (HKEC) respectively, representing about 16% of Hong Kong population. All patients previously recorded with a diagnosis of CD were identified by using the Clinical Data Analysis and Reporting System (CDARS) from both the in-patient and out-patient database of the Hospital Authority. They were longitudinally studied from the time of initial diagnosis till December 2010 or until they defaulted follow-up, died or had follow-up in other hospitals or private sectors. Non-Chinese patients or those with alternative diagnosis were excluded from the study.

Definitions
Diagnosis - The diagnosis of CD was made in accordance with the Lennard-Jones criteria, which is based on the clinical, endoscopic, histological and radiological findings. Infectious enterocolitis was excluded by stool culture, Ziehl-Neelsen staining and mycobacterial cultures of intestinal biopsies. The diagnosis of CD had to be of at least 6 months duration.

Disease Phenotype - The phenotype of CD was determined by histopathology, imaging, endoscopy and/or intra-operative findings at maximal disease extent or severity during follow-up period. Montreal classification of inflammatory bowel disease was applied to classify patients according to the age at diagnosis (A1: < 16 years; A2: 17-40 years; A3: > 40 years), location of disease (L1: ileal; L2: colonic; L3: ileocolonic; L4: isolated upper disease), and disease behavior (B1: non-stricturing, non-penetrating; B2: strictureing; B3: penetrating; piperianal disease modifier).

Disease Activity - As majority of cases did not document Crohn’s Disease Activity Index (CDAI) to assess the therapeutic outcome, the severity of CD was determined according to the patient’s clinical status. Individuals were classified as in symptomatic remission (usually corresponding to CDAI<150) when they were asymptomatic or without any symptomatic inflammatory sequelae. Patients who were considered to have mild-moderate disease (usually corresponding to CDAI 150-220) were ambulatory and able to tolerate oral feeding without dehydration, systemic toxicity, abdominal tenderness, painfull mass, intestinal obstruction, or >10% weight loss. Patients with moderate-severe disease (usually corresponding to CDAI > 220-450) were those with more prominent symptoms such as fever, significant weight loss, abdominal pain or tenderness, intermittent nausea or vomiting, or significant anemia. Those who had persistent symptoms despite the introduction of conventional steroids or biologics as outpatients, or presenting with high fever, persistent vomiting, evidence of intestinal obstruction, significant peritoneal signs, cachexia or presence of abscess were considered to have severe-fulminating disease (usually corresponding to CDAI >450). The disease activity at maximal severity was recorded. An episode of disease relapse after diagnosis of CD was determined as a significant increase in disease activity clinically (+/biochemically) that required a higher dose of medication or addition of new medication(s) or even surgical intervention for treatment.

Steroid Dependent - Patient who failed to tail down prednisolone to less than 10mg/day or budesonide 3mg/day within 3 months, or disease relapse within 3 months upon steroid withdrawal.

Treatments and Outcomes
All patients were evaluated by gastroenterologists for decision of treatment. Prescription of 5-aminosalicylics (5-ASA), corticosteroid, immunomodulators (azathioprine, 6-mercaptopurine and methotrexate, etc), and anti-tumor necrosis factor-a (anti-TNF a) agents was based on the international guideline and individual physician’s decision. Surgery was offered when disease was not under control with medical therapy or when complications occurred. Patients who required surgical therapy were managed under the joint care of surgeons and gastroenterologists.

Data Collection
The medical notes, laboratory investigations, endoscopic, radiological and operation records of each studied patient were reviewed. The demographic data including (1) age at diagnosis, (2) sex, (3) place of diagnosis, (4) length of follow up in QEH or PYNEH, (5) smoking history and (6) family history of inflammatory bowel disease were recorded. The number of new cases in each year from 2000 to 2010 was recorded to calculate the annual incidence rate.

Regarding disease-specific data, the (1) presenting symptoms, (2) Montreal classification of CD (3) disease severity, (4) extra-intestinal manifestations, (5) baseline laboratory results, (6) presence or absence of anti-neutrophil cytoplasmic antibody (ANCA), (7) histological, endoscopic and radiological findings, (8) treatment modalities and related side-effects, (9) number of relapse and related hospitalization, (10) disease-related complications, (11) surgical interventions and (12) mortality were reviewed.

Statistical Methods
Information about the population, including sex and age distribution, in both KCC and HKEC catchment areas was retrieved from the population register conducted by the Census and Statistics Department of Hong Kong in 1996, 2001 and 2006. The crude incidence rate of CD by sex was calculated by the total number of new cases in that year divided by the combined number of residents in both catchment areas. The age-adjusted incidence rates were also calculated. The year of diagnosis of CD was used to determine incidence rates instead of the year of symptom onset in order to avoid recall bias. The incidence rates were expressed as number of patients per 100,000.

Continuous variables were expressed as mean ± standard deviation or median (range). Factors associated with steroid dependency and bowel resection were analyzed. Comparison of categorical variables was performed by χ² test or Fisher’s exact test. Student’s t test was used to compare continuous variables. Clinical variables with p-value < 0.1 by univariate analysis were entered as predictors into a stepwise logistic regression analysis to control for confounders and to determine their independent association. The cumulative probabilities of clinical outcomes including primary bowel resection and mortality were calculated by Kaplan-Meier survival method. All p-values were 2-tailed, and p < 0.05 was considered statistically significant. All statistical analyses were performed using SPSS 18.0 statistical software (SPSS, Chicago, IL).

Results
Demographics
125 Chinese CD patients were followed up in either QEH or PYNEH between January 2000 and December 2010 (Table 1). 72 of them (57.6%) were male (M:F = 1.31). 104 patients (83.2%) were non-smoker. Only one patient had one first-degree relative (son) with CD diagnosed at 20s.

The median age of all CD patients at diagnosis was 29 years (range: 10-84 years). The distribution of age at diagnosis was shown in Figure 1. The study cohort was followed for a total of 10268 patient-months with a median follow-up duration of 68 months. 27 patients had loss to follow-up, 9 patients (7.2%) defaulted, 9 patients (7.2%) were referred out and 9 patients (7.2%) died.
Table 1. Demographics and clinical characteristics of Crohn’s disease patients

<table>
<thead>
<tr>
<th>Patient Characteristics (n=125)</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>72 (57.6%)</td>
</tr>
<tr>
<td>Female</td>
<td>53 (42.4%)</td>
</tr>
<tr>
<td>Place of follow-up</td>
<td></td>
</tr>
<tr>
<td>QEH</td>
<td>67 (53.6%)</td>
</tr>
<tr>
<td>PYNEH</td>
<td>58 (46.4%)</td>
</tr>
<tr>
<td>Median duration (month) from symptom onset to diagnosis [range]</td>
<td>6 [1-144]</td>
</tr>
<tr>
<td>Median duration (months) of follow-up in QEH / PYNEH [range]</td>
<td>68 [2-300]</td>
</tr>
<tr>
<td>Median age (year) at diagnosis [range]</td>
<td>29 [10-84]</td>
</tr>
<tr>
<td>A1</td>
<td>17 (13.6%)</td>
</tr>
<tr>
<td>A2</td>
<td>71 (56.8%)</td>
</tr>
<tr>
<td>A3</td>
<td>37 (29.6%)</td>
</tr>
<tr>
<td>Disease Location</td>
<td></td>
</tr>
<tr>
<td>L1</td>
<td>19 (15.2%)</td>
</tr>
<tr>
<td>L2</td>
<td>27 (21.6%)</td>
</tr>
<tr>
<td>L3</td>
<td>79 (63.2%)</td>
</tr>
<tr>
<td>L4</td>
<td>35 (28.0%)</td>
</tr>
<tr>
<td>Disease Behaviour</td>
<td></td>
</tr>
<tr>
<td>B1</td>
<td>59 (47.2%)</td>
</tr>
<tr>
<td>B2</td>
<td>40 (32.0%)</td>
</tr>
<tr>
<td>B3</td>
<td>26 (20.8%)</td>
</tr>
<tr>
<td>&quot;p&quot;</td>
<td>41 (32.8%)</td>
</tr>
<tr>
<td>Disease Severity</td>
<td></td>
</tr>
<tr>
<td>Mild to moderate</td>
<td>38 (30.4%)</td>
</tr>
<tr>
<td>Moderate to severe</td>
<td>49 (39.2%)</td>
</tr>
<tr>
<td>Severe to fulminant</td>
<td>38 (30.4%)</td>
</tr>
<tr>
<td>Extraintestinal Manifestations</td>
<td>11 (8.8%)</td>
</tr>
</tbody>
</table>

Figure 1. Age distribution at CD diagnosis

Figure 2. The crude incidence rate by sex of CD in KCC and HKEC from 2000 to 2010

Figure 3. The overall age-adjusted incidence rate of CD in KCC and HKEC from 2000 to 2010

Epidemiology

93 patients in this study cohort were diagnosed to have CD between January 2000 and December 2010. The crude incidence rates from 2000 to 2010 showed that there was a slight male predominance (Figure 2). Figure 3 showed the yearly age-adjusted incidence rate of CD. There was no particular trend observed.
Clinical Characteristics

Presenting symptoms
The median time from symptom onset to diagnosis was 6 months (range: 7 days to 2 years). The major presenting symptoms included abdominal pain (90.6%), diarrhea (58.9%), weight loss (52.4%), anemia (50.8%) and per-rectal bleeding (43.5%). Other presentations included fever (26.6%), perianal disease (12.1%), oral ulcer (7.3%), abdominal mass (7.3%), intestinal obstruction (7.3%) and intestinal perforation (4%).

Diagnosis
All patients underwent colonoscopy. 113 patients (90.4%) had successful intubation of ileocaecal valve. Oesophago-gastro-duodenoscopy (OGD) was performed in 75 patients (60.0%). 108 patients (86.4%) had small bowel imaging (CT enteroclysis in 40.0%, small bowel enema or follow-through in 76.8%, capsule endoscopy in 3.2%). Majority of patients (80.0%) were diagnosed to have CD based on the findings of endoscopy and imaging studies. The rest (20.0%) had the diagnosis confirmed after surgical bowel resection. 7 patients had laparotomy with bowel resection done at presentation for making diagnosis. 4 patients had small bowel perforation, 1 had caecal perforation, 7 had small bowel stricture and 1 had colonic stricture complicating with intestinal obstruction which required emergency laparotomy and bowel resection. The other reasons for surgery at presentation included repair of enteric fistula in 2 patients, one suspected bowel perforation, one suspected appendicitis and one suspected small bowel tumor.

Disease phenotype
Majority of patients (56.8%) diagnosed to have CD between 17-40 years of age (A2). 79 patients (63.2%) had ileocolonic involvement (L3). 27 patients (21.6%) had colonic involvement (L2) while 19 patients (15.2%) had ileal involvement (L1). As a disease modifier, 35 patients (28.0%) had disease involvement proximal to terminal ileum (L4). Among these patients, most (29 out of 35) had ileocolonic involvement (L3), 5 had ileitis and 1 had Crohn’s colitis. None of them had isolated L4 involvement.

59 patients (47.2%) had non-stricturing, non-penetrating disease (B1). 40 patients (32.0%) had stricture disease (B2) while 26 patients (20.8%) had penetrating disease (B3). 41 patients (32.8%) had perianal diseases (p) including perianal fistulas, strictures or abscesses (Figure 4).

Figure 4. Disease behaviour of CD

Extraintestinal manifestation
11 patients (8.8%) had extra-intestinal involvement, with joint involvement being most common (4 with peripheral arthritis, 3 with sacroiliitis and 1 with ankylosing spondylitis). 4 patients had skin involvement. 3 of them had erythema nodosum (2 also had peripheral arthritis) and one patient had pyoderma gangrenosum. One patient had primary scleroderma confirmed by magnetic resonance cholangiopancreatography (MRCP). None of them had eye involvement.

Treatments and Outcomes

Medications
120 patients (96.0%) were given oral 5-ASA, 19 patients (15.2%) were given rectal 5-ASA, 4 patients (3.2%) were given topical steroid enema. 91 patients (72.8%) received oral steroid for induction of remission and 30 of them (24.0%) became steroid-dependent. After multivariate analysis, patients with either strictureing or penetrating disease behavior were shown to have significantly higher chance of becoming steroid dependent (p=0.01) (Table 2).

Table 2. Multivariate analysis for factors associated with steroid dependence in CD patients

<table>
<thead>
<tr>
<th>Covariates</th>
<th>Odds Ratio (95% CI)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>1.54 (0.48-4.96)</td>
<td>0.467</td>
</tr>
<tr>
<td>Disease behavior</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B2 vs B1</td>
<td>8.11 (1.73-37.84)</td>
<td>0.008</td>
</tr>
<tr>
<td>B3 vs B1</td>
<td>6.66 (1.46-30.28)</td>
<td>0.014</td>
</tr>
<tr>
<td>B2 vs B3</td>
<td>1.27 (0.28-5.25)</td>
<td>0.791</td>
</tr>
<tr>
<td>L4</td>
<td>0.93 (0.27-3.29)</td>
<td>0.916</td>
</tr>
<tr>
<td>ESR</td>
<td>1.02 (1.00-1.04)</td>
<td>0.056</td>
</tr>
<tr>
<td>CRP</td>
<td>1.01 (1.00-1.03)</td>
<td>0.059</td>
</tr>
</tbody>
</table>

91 patients (72.8%) were given azathioprine or 6-mercaptopurine (6-MP) as maintenance therapy. 63 of them (69.2%) had reasonable disease control during observation period. 10 patients (11.0%) required permanent cessation of treatment due to azathioprine-related toxicities. The rest (19.8%) failed to achieve disease remission despite given therapeutic dose of azathioprine (1.5-2.5mg/kg/day). They were switched to maintenance steroid, biological agents or others immunomodulating medications including thalidomide, methotrexate or cyclosporine. Total 17 patients had to suspend azathioprine due to one or more treatment-related side effects including myelosuppression (12), infection (5) and drug-induced hepatitis (2). 3 patients with myelosuppression tolerated azathioprine with reduced dose (1-1.5mg/kg/day) and remained in disease remission. Original dose of azathioprine was resumed in the patient with psosas abscess and one of the patients with CMV colitis after infection controlled. Another patient with herpes zoster infection resumed on azathioprine with reduced dose (1mg/kg/day). One patient who developed drug-induced hepatitis was able to resume azathioprine at a lower dose (1mg/kg/day). For the 10 patients who could not tolerate azathioprine, 4 patients continued with 5-ASA with mild to moderate disease activity. The rest of them had received maintenance steroid, methotrexate, cyclosporine, thalidomide or biologics, depending on their clinical conditions, response to treatment and physicians’ decisions.

7 patients received anti-TNF α therapy (Table 3).
Table 3. Use of biologics in CD patients

<table>
<thead>
<tr>
<th>Case</th>
<th>Sex/Age</th>
<th>Phenotype</th>
<th>Medications used before biologics</th>
<th>Biologics used</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case 1</td>
<td>M10</td>
<td>A1L3A4B1</td>
<td>Steroid Azathioprine Methotrexate</td>
<td>Infliximab, Adalimumab</td>
<td>Loss initial response to infliximab, despite doubling the dose. Stopped after 12 doses and switch to adalimumab towards the end of study period.</td>
</tr>
<tr>
<td>Case 2</td>
<td>F18</td>
<td>A2L3B1</td>
<td>5-ASA Steroid</td>
<td>Infliximab</td>
<td>Good response but stopped infliximab after 6 doses due to financial reason. Remained in disease remission on azathioprine.</td>
</tr>
<tr>
<td>Case 3</td>
<td>F30</td>
<td>A2L3A4B2</td>
<td>Steroid Azathioprine 6-MP</td>
<td>Infliximab</td>
<td>Loss initial response to infliximab despite doubling the dose. Stopped after 8 doses. Remained in disease remission on oral methotrexate.</td>
</tr>
<tr>
<td>Case 4</td>
<td>M58</td>
<td>A3L3A4B3</td>
<td>Steroid Azathioprine Thalidomide</td>
<td>Infliximab</td>
<td>Given 6 doses after first operation. Complicated with intra-abdominal abscess and disseminated infection required second operation. Patient finally succumbed.</td>
</tr>
<tr>
<td>Case 5</td>
<td>M62</td>
<td>A3L3A4B1</td>
<td>Steroid Azathioprine Methotrexate</td>
<td>Infliximab, Adalimumab</td>
<td>Loss initial response to infliximab despite doubling the dose. Stopped after 12 doses and switch to adalimumab. Remained in remission.</td>
</tr>
<tr>
<td>Case 6</td>
<td>M33</td>
<td>A2L3B2p</td>
<td>5-ASA Steroid Azathioprine</td>
<td>Infliximab</td>
<td>Good response with closure of fistula. Stopped after 3 doses due to financial reason. Remained in remission on azathioprine, thalidomide and budesonide.</td>
</tr>
<tr>
<td>Case 7</td>
<td>F16</td>
<td>A1L3A4B3p</td>
<td>Steroid</td>
<td>Infliximab</td>
<td>Good initial response with closure of fistula. Complicated with pulmonary tuberculosis infection. Infliximab stopped after 4 doses and put on 5-ASA for maintenance.</td>
</tr>
</tbody>
</table>

Relapse and related hospitalization
The median number of CD relapse was 1 (range 0-6) and 70 patients (56.0%) had at least one CD relapse during the follow-up period. A total of 138 episodes of CD relapse were identified (69 mild to moderate, 50 moderate to severe, 19 severe to fulminant). The cumulative relapse rates were 25% at 1 year, 49% at 5 year and 65% at 10 years after diagnosis. 94 episodes (68.1%) of CD relapses required hospitalization.

Complications
82 patients developed complications during the study period (Table 4). Common complications included enteral stricture (32%), abscess formation (31.2%) and enteric fistula (17.6%). None of the patients developed colorectal carcinoma or gastrointestinal tract lymphoma. Patients with L4 disease had a significantly higher rate of complications ($p<0.001$), including abscess development ($p=0.001$), enteric fistula formation ($p=0.000$) and bowel perforation ($p=0.005$).

Table 4. Disease Complication Rates in Relation to L4 Disease Location

<table>
<thead>
<tr>
<th></th>
<th>Total (n=125)</th>
<th>L4 (n=35)</th>
<th>Non-L4 (n=90)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total complication</td>
<td>60 (48.0%)</td>
<td>26 (74.3%)</td>
<td>34 (37.8%)</td>
<td>0.000</td>
</tr>
<tr>
<td>Abscess</td>
<td>39 (31.2%)</td>
<td>19 (54.3%)</td>
<td>20 (22.2%)</td>
<td>0.001</td>
</tr>
<tr>
<td>Intra-abdominal</td>
<td>18 (14.4%)</td>
<td>9 (25.7%)</td>
<td>9 (10.0%)</td>
<td>0.025</td>
</tr>
<tr>
<td>Abdominal wall</td>
<td>4 (3.2%)</td>
<td>4 (11.4%)</td>
<td>0 (0%)</td>
<td>0.005</td>
</tr>
<tr>
<td>Perianal</td>
<td>21 (16.8%)</td>
<td>9 (25.7%)</td>
<td>12 (13.3%)</td>
<td>0.096</td>
</tr>
<tr>
<td>Enteric stricture</td>
<td>40 (32.0%)</td>
<td>12 (34.3%)</td>
<td>28 (31.1%)</td>
<td>0.733</td>
</tr>
<tr>
<td>Bowel obstruction</td>
<td>21 (16.8%)</td>
<td>7 (20.0%)</td>
<td>14 (15.6%)</td>
<td>0.551</td>
</tr>
<tr>
<td>Enteric fistula</td>
<td>22 (17.6%)</td>
<td>13 (37.1%)</td>
<td>9 (10.0%)</td>
<td>0.000</td>
</tr>
<tr>
<td>Enteroenteric</td>
<td>12 (9.6%)</td>
<td>6 (17.1%)</td>
<td>6 (6.7%)</td>
<td>0.074</td>
</tr>
<tr>
<td>Enterocutaneous</td>
<td>9 (7.2%)</td>
<td>5 (14.3%)</td>
<td>4 (4.4%)</td>
<td>0.115</td>
</tr>
<tr>
<td>Enterovesicular</td>
<td>6 (4.8%)</td>
<td>3 (8.6%)</td>
<td>3 (3.3%)</td>
<td>0.348</td>
</tr>
<tr>
<td>Enterovaginal</td>
<td>1 (0.8%)</td>
<td>1 (2.9%)</td>
<td>0 (0%)</td>
<td>0.280</td>
</tr>
<tr>
<td>Bowel perforation</td>
<td>10 (8.0%)</td>
<td>7 (20.0%)</td>
<td>3 (3.3%)</td>
<td>0.005</td>
</tr>
<tr>
<td>Toxic megacolon</td>
<td>3 (2.4%)</td>
<td>2 (5.7%)</td>
<td>1 (1.1%)</td>
<td>0.189</td>
</tr>
<tr>
<td>GI hemorrhage</td>
<td>7 (5.6%)</td>
<td>4 (11.4%)</td>
<td>3 (3.3%)</td>
<td>0.095</td>
</tr>
<tr>
<td>Anemia</td>
<td>13 (10.4%)</td>
<td>5 (14.3%)</td>
<td>8 (8.9%)</td>
<td>0.375</td>
</tr>
<tr>
<td>Malabsorption</td>
<td>7 (5.6%)</td>
<td>4 (11.4%)</td>
<td>3 (3.3%)</td>
<td>0.095</td>
</tr>
<tr>
<td>GI tract cancer</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td></td>
</tr>
<tr>
<td>GI tract lymphoma</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td></td>
</tr>
</tbody>
</table>
Surgery
56 patients (44.8%) had at least one surgery related to CD during study period. 41 patients (32.8%) had undergone at least one bowel resection, with enterectomy in 16, colectomy in 3, and 22 patients had both. The indications for bowel resection included intestinal obstruction (15/41), bowel perforation (11/41), enteric fistula (9/41), gastrointestinal haemorrhage uncontrolled by endoscopy (6/41), abscess (6/41), diagnostic purpose (4/41) and active disease despite medication (2/41). Enteric stricturoplasties were done in 2 patients. 27 patients (21.6%) had at least one perianal surgery done. Fistulotomy was performed in 16 and fistulotomy was done in 2. 7 patients had surgical drainage of perianal abscess and 3 patients had endoscopic dilatation of anal strictures.

The Kaplan meier plot of cumulative probability of time to first bowel resection was shown in Figure 5. Around 20% of study cohort had first bowel resection done at the time of diagnosis. The cumulative probability of bowel resection was 39.5% at 10 years of diagnosis.

Discussion
Comparison with the West
Gender and Age at Diagnosis
Most epidemiological studies of Western CD patients, showed a slightly female predominance. Interestingly, reversal of sex ratio was noted in Asian studies. In this study, a slightly male predominance pattern was shown (MF = 1.3 : 1). This finding was similar to other local studies. Majority of patients in this study were diagnosed to have CD at 20s and the median age at diagnosis was 29. This data was in accordance with most local or Asian studies, which showed single peak age at diagnosis around 20s or 30s. In contrast, Western studies had shown a bimodal age distribution with a second peak between 60s and 80s after the first peak at 20s to 30s.

Incidence Rate
The reported incidence rates from studies conducted in other Asian countries ranged from 0.28 to 1.34 per 100,000. A steady increase in incidence rate of CD was observed in both Japan and South Korea with incidence rate rose from 0.01 to 1.2 per 100,000 and from 0.05 to 1.34 per 100,000 respectively. Recent meta-analyses also reported an increasing number of CD patients in mainland China. In Hong Kong, Leong et al. had shown a steady rise in incidence rate of CD from 0.3 per 100,000 in 1986 to 1.0 per 100,000 in 1991-2001. Lok et al. also reported an increase in crude incidence between 1991 and 2006 from 0.12 to 0.25 per 100,000. However, no specific trend was observed in this study. The age-adjusted incidence rate of CD per 100,000 between 2000 and 2010 ranged from 0.24 to 1.14, which was similar to other Asian studies. It was still much lower when compared with the western countries which were historically associated with higher incidence of CD.

Disease Phenotype
In the current study, majority of patients presented with typical symptoms of CD including abdominal pain, diarrhea and weight loss. The median time to diagnosis of CD was 6 months. One of the significant findings in the current study was that CD was more common between 2000 and 2010. The age-adjusted incidence rate of CD per 100,000 between 2000 and 2010 ranged from 0.24 to 1.14, which was similar to other Asian studies. It was still much lower when compared with the western countries which were historically associated with higher incidence of CD.

New Medical Treatment Modalities – anti-TNF α Infliximab
Infliximab, a TNF-α blocking agent, is proven to be effective in the treatment of refractory CD patients who do not respond to conventional treatments including corticosteroids and immunosuppressants. Three randomized control trials have shown that infliximab can obtain clinical response, maintain disease remission, have corticosteroid-sparing effects, and help fistula healing in patients with successful induction therapy. The experience of using infliximab in our locality was still limited. For the 7 patients who received infliximab in the current study, 6 of them achieved initial response with improvement in clinical symptoms and decreased levels of inflammatory markers. Although the number was small, it seemed that infliximab was an effective induction agent to our patients. 3 patients discontinued infliximab (after 3-6 doses) due to financial reason, with 2 of them had sustained remission after switching back to conventional treatments. 3 patients in this study lose the initial response to infliximab. In a recent retrospective study, only 35% of patients were able to regain a sustained response at 12 months after a single
infliximab dose-adjustment. The response rate increased to 50% after second dose intensification. However, for the 3 patients in this study, despite doubling the dose from 5 to 10 mg/kg, and shortening of infusion interval from 8 to 6 weeks, no satisfactory treatment response could be obtained. The most likely reason was the development of antibodies against infliximab, leading to decreased serum infliximab concentration and thus reducing effects. Studies had shown that patients on concomitant immunosuppressive agents (azathioprine, 6-MP or methotrexate) had lower serum concentration of antibodies to infliximab when compared to those on infliximab monotherapy. However, whether the loss of response to infliximab can be prevented by concomitant immunomodulators remains unclear.

2 patients in this study developed severe infection after infliximab treatment. One had pulmonary tuberculosis, while one died of intra-abdominal abscess and disseminated fungal infection post-operatively. The safety profile of infliximab is always a concern as infectious complications increase with the use of anti-TNF therapies. Pre-treatment assessment such as chest X-Ray, tuberculin test, hepatitis serology etc., and on-treatment monitoring are indicated while patients are put on anti-TNFα therapy.

2 patients had closure of fistula after infliximab infusion (1 had perianal fistula and 1 had recto-vaginal fistula). The benefit of infliximab in closure of CD fistula refractory to prior therapy with antibiotics, corticosteroids, or immunosuppressants was demonstrated in a placebo-controlled trial. Around half of the patients achieved closure of at least one fistula for at least 4 weeks. In another placebo-controlled trial, complete cessation of fistula drainage persisted in over one-third of patients. Therefore, infliximab can be considered early in treating patients with fistulizing disease.

Adalimumab
2 patients who lose response to infliximab achieved disease remission while on maintenance subcutaneous adalimumab injection. Placebo-controlled trials had demonstrated the effectiveness of adalimumab in patients who are naive to biologics in obtaining clinical response, maintaining clinical remission, and having corticosteroid-sparing effects. Meta-analysis by Ma et al evaluating the benefit of adalimumab in patients who were primary or secondary infliximab non-responders showed a short-term clinical response at 4 weeks ranged from 41% to 83% and long-term clinical remission at 12 months ranged from 19% to 68%. The observed variability was likely due to differences in the study design and baseline characteristics of patients in the 15 trials included. A more recent large scale trial had shown a promising result of adalimumab in patients who lost response to infliximab. Complete fistula healing was achieved in 34 out of 88 (39%) patients with fistulas, and improvements in quality of life and work productivity were sustained from week 4 to week 24 for all patients, including a subgroup of primary infliximab non-responders. Adalimumab could be considered as an alternative treatment for patients who had no or less of initial response to infliximab in clinical practice.

Clinical Outcomes
More than half of the patients in this study cohort had at least one episode of CD relapse during follow-up period. Yet the cumulative relapse rates (25%, 49%, 69% at year 1, 5, 10 respectively) were still much lower than Western data (53%, 85%, 90% at year 1, 5, 10 respectively). 48.0% of patients had complications in the study cohort. The most common complications were enteric strictures, abscess formation and enteric fistula. Patients with L4 disease had a significantly higher rate of complications including abscesses development, enteric fistula formation and bowel perforation. The chance of bowel resection among patients with L4 phenotype (17 out of 35) was also higher. This result was in accordance with findings of the local prospective cohort by Chow et al, which showed that the presence of L4 phenotype at presentation was associated with early surgery and further hospitalization in Chinese CD patients. However, as not all patients had routine small bowel investigation or OGD done for detection of upper gastrointestinal involvement at disease presentation, the presence of L4 in this study cohort was marked once it was found during any imaging, endoscopic or surgical interventions. Though a causative relation cannot be concluded, this study demonstrated that the presence of L4 phenotype in Chinese CD patients was probably associated with a more difficult disease course, in terms of disease complication and surgery.

In this study, 32.8% of patients had at least one bowel resection. The cumulative probability of bowel resection was around 40% at 10 year of diagnosis. This was comparable to the reported rate in Korea (32%) and China (45%), while much lower than that from Western countries such as Sweden (71%). The presence of penetrating disease behavior and non-L2 phenotype was found to correlate with a higher risk and earlier bowel resection after multivariate analysis. It is known that patients with penetrating disease suffer from more bowel perforations, enteric fistulas and related complications such as abscess formation, and therefore explainable for the higher risk of bowel resection. Furthermore, the demonstrated protective effect of isolated colonic disease involvement was also shown in other studies. None of the study cohort developed colorectal carcinoma or gastrointestinal tract lymphoma. This was consistent with the much lower incidence rate reported in Asian countries, comparing with the West. The cumulative probability of survival was 95% at 10 years in this study, which was lower than that of Japan but higher than the Western countries. Among the 6 CD-related death, majority of them (n=5) were died of complications of surgeries which was known to be the major cause of mortality.

Proposed treatment strategy
Conventionally, CD patients were treated in a “step care” manner with trials of 5-ASA, steroid, thiopurines and other immunomodulating agents. Biologics were often left to those refractory to treatment. Increasing evidence supported that early aggressive treatment with biologics for CD patients can induce and maintain mucosal healing, as well as reduce surgery and hospitalization. This study cohort demonstrated that patients with L4 phenotype were associated with more complications. In addition, patients with non-L2 phenotype and penetrating disease behavior were associated with a higher risk of bowel resection. To these patients, a “top-down” treatment algorithm with early introduction of anti-TNFα therapy could be considered, so as to improve the clinical outcome. To manage patients with expected indolent disease course, such as non-stricturing non-penetrating behavior or colonic distribution, a “step-up” approach might be appropriate.

Conclusion
The incidence rate of CD in Hong Kong Chinese population shown in current study was much lower than the reported rates in Western countries. It was static in the last decade. Most of the patients were diagnosed between 17 and 40 years of age, had ileocolonic involvement and non-stricturing non-penetrating disease behavior. Upper gastrointestinal involvement was more prevalent in our patients while extraintestinal manifestations were less reported than the western countries or other local studies in Hong Kong.

In this study, around a quarter of patients was steroid dependent. Patients with strictureing or penetrating disease behavior were associated with steroid dependency. Patients with non-colonic CD or penetrating disease behavior had higher risk of bowel resection. Moreover, the presence of upper gastrointestinal involvement was associated with higher complication rates. In the era of biologics, hopefully early introduction of such therapies in these disease subgroups could help to improve their clinical course. In future, long-term studies aimed at comparing traditional sequential approach and top-down strategies should be conducted to guide clinicians in the management of local CD patients.
References


Welcome! New Fellows & Members

Fellows

Dr. Grace Lai-Hung WONG
Institute of Digestive Disease
The Chinese University of Hong Kong
Hong Kong

Dr. Chi-Leung SETO
Specialist in General Surgery
Hong Kong

Members

Dr. Kenneth Hon-Da AU
Department of Medicine & Geriatrics
Pok Oi Hospital
New Territories, Hong Kong

Dr. Marc Tin-Long WONG
Department of Medicine & Geriatrics
Princess Margaret Hospital
Kowloon, Hong Kong

Highlights

Scientific Symposium: “Is There An Effective Treatment for Functional Dyspepsia?”

Date: 6 September 2013
Venue: The Mira Hotel, Kowloon

Chairperson: Dr. Dorothy Kai-Lai Chow
Honorary Clinical Assistant Professor
Department of Medicine & Therapeutics
The Chinese University of Hong Kong

Sponsored by: Abbott Laboratories Ltd.

Speakers:

Prof. Justin C.Y. Wu (Debate 1: NO)
Associate Dean (Clinical), Faculty of Medicine
Professor, Institute of Digestive Disease
The Chinese University of Hong Kong

Prof. Kok Ann Gwee (Debate 2: YES)
Consultant Gastroenterologist, Gleneagles Hospital Singapore
Adjunct Associate Professor of Medicine, National University of Singapore

The symposium was attended by 27 healthcare professionals with fruitful discussions on the value of prokinetic agent in the treatment of functional dyspepsia.
15th JOINT ANNUAL SCIENTIFIC MEETING

Date: 31 August 2013

Venue: Langham Place Hotel, Mongkok, Kowloon, Hong Kong

Organizing Chairman: Dr. Wai-Cheung Lao

Co-organized by:
- The Hong Kong Society of Gastroenterology
- Hong Kong Society of Digestive Endoscopy
- Hong Kong Society for Coloproctology
- The Hong Kong Association for the Study of Liver Diseases
- The Hong Kong Society of Gastrointestinal Motility
- Hong Kong IBD Society

Sponsored by: AstraZeneca, Bristol-Myers Squibb, Ferring, LF Asia, Menarini, Merck Sharp & Dohme, Novartis, Pfizer, Takeda

On behalf of Dr. Wai-Cheung Lao, Dr. Ching-Kong Loo welcomed the delegates and thanked the co-organizing societies and sponsors for their support and contributions to the fifteenth Joint Annual Scientific Meeting.

There were 8 lectures covering hot topics in gastroenterology, hepatology and endoscopy delivered by renowned speakers.

<table>
<thead>
<tr>
<th>Topics</th>
<th>Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Symposium I</strong></td>
<td></td>
</tr>
<tr>
<td>Chairs: Dr. William C.S. Meng (OLMH) / Dr. Ching-Kong Loo (KWH &amp; WTSH)</td>
<td></td>
</tr>
<tr>
<td>Surgical treatment of the lower third rectal cancer</td>
<td>Prof. Feza H. Remzi (USA)</td>
</tr>
<tr>
<td>NSAID Injury beyond the duodenum: Where do we stand?</td>
<td>Prof. Francis K.L. Chan (CUHK)</td>
</tr>
<tr>
<td>Tips and tricks in avoiding and managing anastomotic</td>
<td>Prof. Feza H. Remzi (USA)</td>
</tr>
<tr>
<td>complications in colorectal surgery</td>
<td></td>
</tr>
<tr>
<td><strong>Symposium II</strong></td>
<td></td>
</tr>
<tr>
<td>Chairs: Prof. Man-Fung Yuen (HKU) / Dr. Francis T.W. Li (PYNEH)</td>
<td></td>
</tr>
<tr>
<td>Hepatitis C Treatment</td>
<td>Dr. Leon A. Adams (Australia)</td>
</tr>
<tr>
<td>Intestinal Microbiota in Health &amp; Disease</td>
<td>Dr. Ivan F.N. Hung (HKU)</td>
</tr>
<tr>
<td>Non-alcoholic fatty liver disease</td>
<td>Dr. Leon A. Adams (Australia)</td>
</tr>
<tr>
<td><strong>Symposium III</strong></td>
<td></td>
</tr>
<tr>
<td>Chairs: Dr. Raymond S.Y. Tang (CUHK) / Dr. Wayne H.C. Hu (Private)</td>
<td></td>
</tr>
<tr>
<td>Image Enhanced Colonoscopy</td>
<td>Dr. Siu C. Ng (CUHK)</td>
</tr>
<tr>
<td>Therapy for Severe Ulcerative Colitis</td>
<td>Dr. Dorothy Kai-Lai Chow (CUHK)</td>
</tr>
</tbody>
</table>

The Meeting was attended by 275 healthcare professionals. Panel discussions were actively participated. Souvenirs were presented to the speakers and sponsors in appreciation of their contributions.
33rd Annual General Meeting cum Scientific Meeting of The Hong Kong Society of Gastroenterology
Thursday, 27 March 2014  6:00 pm

Venue: Level 7, Langham Place Hotel
555 Shanghai Street, Mongkok, Kowloon

Organizing Chairperson: Dr. Annie On-On Chan

Presentation of Honorary Fellowship by President, Dr. Vincent K.S. Leung

"Achieving the Balance between Drug Therapy and Surgery in Inflammatory Bowel Disease"
Professor Michael A. Kamm
Professor of Gastroenterology
St Vincent’s Hospital, Melbourne
University of Melbourne, Australia
Imperial College, London, United Kingdom

Case Discussion on “IBD”
Presenter: Dr. Yee-Tak Hui
Department of Medicine
Queen Elizabeth Hospital
Kowloon, Hong Kong

Annual General Meeting

(More information will be available soon from www.hksge.org)

**Major Meetings**

**30**th December 2013
20th International Workshop on Therapeutic Endoscopy
Organized by: CUHK Institute of Digestive Disease, CUHK The Nethersole School of Nursing & Hong Kong Society of Digestive Endoscopy
Location: Prince of Wales Hospital, Kowloon, Hong Kong
Website: www.hksge.org

10-12 January 2014
4th Asian Pacific Single Topic Conference on Functional GI Disorders
Organized by: Asia Pacific Society of Digestive Endoscopy, Philippines
Location: Tagaytay, Philippines
Website: www.apsgfd2014.org

26-28 January 2014
15th International Colorectal Forum (ICF)
Organized by: ICRC, Switzerland
Location: Villars-sur-Ollon, Switzerland
Website: www.icrc-colorectal.com

6-8 February 2014
5th Dresden International Endoscopy Symposium
Organized by: University of Dresden, Germany
Location: Dresden, Germany
Website: www.endo-dresden.de

5-8 February 2014
Canadian Digestive Disease Week (CDDW 2014)
Organized by: Canadian Association of Gastroenterology
Location: Toronto, ON, Canada
Website: www.cag-cgc.org

11-15 February 2014
25th Joon Ma / 35th Turnbull International Colorectal Disease Symposium
Organized by: Cleveland Clinic Florida
Location: Fort Lauderdale, USA
Website: www.clevelandclinicflorida.com

13-16 February 2014
EASL HCC Summit
Organized by: European Association for the Study of the Liver (EASL)
Location: Geneva, Switzerland
Website: www.easleu.org

26-22 February 2014
6th Congress of ECCO on Inflammatory Bowel Diseases (IBD)
Organized by: European Crohn’s and Colitis Organisation
Location: Copenhagen, Denmark
Website: www.ecco-ibd.eu/ecco14

28 February – 2 March 2014
25th Live GI Endoscopy Workshop
Organized by: Asian Institute of Gastroenterology
Location: Hyderabad, India
Website: www.ajegi.com

6-7 March 2014
7th Sydney International Endoscopy Symposium (SIES)
Organized by: Sydney Endoscopy, Australia
Location: Sydney, NSW, Australia
Website: www.sies.org.au

12-15 March 2014
24th Conference of the APASL: Hepatology, The New Era Begins
Organized by: Asia Pacific Association for the Study of the Liver
Location: Brisbane, Queensland, Australia
Website: www.apasl2014.com

2-5 April 2014
SAGES 2014 Annual Meeting – Putting the Patient First
Organizer: The Society of American Gastrointestinal and Endoscopic Surgeons
Location: Salt Lake City, USA
Website: www.sages.org

9-13 April 2014
The International Liver Congress 2014 & 46th Annual meeting of the European Association for the Study of the Liver
Organized by: European Association for the Study of the Liver (EASL)
Location: London, United Kingdom
Website: www.easleu.org

30 April - 2 May 2014
International Surgical Congress
Organizer: Association of Surgeons of Great Britain and Ireland
Location: Harrogate, United Kingdom
Website: www.asgbri.org/harrogate2014

**Additional Meetings**

1-3 May 2014
The 3rd World Congress on Controversies in the Management of Hepatitis (C-C Hep 2014)
Organized by: European Crohn’s and Colitis Organisation
Location: Berlin, Germany
Website: www.c-c-heap.org

3-6 May 2014
Digestive Disease Week (DDW 2014)
Organizer: American Association for the Study of Liver Diseases (AASLD), American Gastroenterological Association (AGA), American Society for Gastrointestinal Endoscopy (ASGE) and The Society for Surgery of the Alimentary Tract (SSAT)
Location: Chicago, IL, USA
Website: www.ddw.org

17-21 May 2014
2014 ASCRS Annual Meeting
Organizer: American Society of Colon and Rectal Surgeons
Location: Hollywood, FL, USA
Website: www.ascrs.org/annual_meeting/

17-22 October 2014
ACG 2014 Annual Scientific Meeting and Postgraduate Course
Organizer: American College of Gastroenterology (ACG)
Location: Nashville, TN, USA
Website: http://acg.org/

18-22 October 2014
USS Week
Organizer: United European Gastroenterology (UEG)
Location: Vienna, Austria
Website: www.ueg.eu/wek/

22-25 November 2014
Asian Pacific Digestive Week (APDW 2014)
Hosted by: Indonesian Society of Gastroenterology, Indonesian Society for Digestive Endoscopy, Indonesian Society of Digestive Surgeons & Indonesian Association for the Study of the Liver
Location: Bali, Indonesia
Website: http://apdw2014.org/

(More information is available from www.hksge.org/events)