Gastric cancer remained a high prevalent neoplasm in Asia-Pacific regions although the incidence and mortality rates of gastric cancer were declining in many countries, including China, Japan, Korea and Taiwan in recent two decades.1

The interactions of environmental or lifestyle factors, Helicobacter pylori (H. pylori) infection, and host genetic factors contribute to the carcinogenesis of gastric cancer.2 Environmental and lifestyle factors, such as preserved or salty foods and cigarette smoking are well known to be associated with increased risk of gastric cancer.3

Although the total alcohol drinking appeared not to be associated with risk of overall gastric cancer risk, drinking of liquor greater than 3 drinks per day was associated with 2.1-fold increased risk of gastric cancer at cardia.4 A recent meta-analysis of cohort study showed that overweight (BMI >25) was associated with increased risk of gastric cancer, particularly for cardia gastric cancer and in Non-Asian populations.5 Another recent population based cohort study in Japan further showed that hyperglycemia defined as HbA1C ≥ 6% was associated with increased risk of gastric cancer in uninfected persons.6

H. pylori infection, a necessary but not sufficient cause, is associated with a 5.9-fold increased risk of non-cardia gastric cancer in a combined analysis of nested case control studies.7 A prospective cohort study in Japan showed that gastric cancer developed in 2.9 % of 1,246 H. pylori infected persons over 7.8 years.8 In contrast, none of the 280 H. pylori uninfected persons developed gastric cancer.9 Animal models confirmed that inoculation of H. pylori induced gastric cancer in Mongolian gerbils. It is noteworthy that the

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**Message from Dr. Vincent K.S. Leung, President**

Welcome to our June 2012 newsletter!

A new council was formed. I would like to welcome our Vice President Dr. Wai-Cheung Lao, new council member Dr. Wai-Fan Luk and new co-opted member Dr. Jodis T.W. Lam.

On behalf of the Society, I would like to express my sincere thanks to Prof. Benjamin C.Y. Wong, our immediate past president, for leading the Society in the past two years and my gratitude to Dr. Wai-Mo Hui for his valuable contributions to the Society in the past 22 years while serving in the Council during which he was President from 1998 to 2000.

On 9 December 2011, the Society celebrated its 30th Anniversary in a dinner meeting during which 348 guests shared friendship while enjoying speeches, performances and games throughout the evening.

I would also like to thank all who have contributed efforts, Prof. Kentaro Sugano for his enlightening lecture, Dr. Stephen Tung, Dr. Ting-Lam Lee and Dr. Ho Ng for the case discussion during the successful Annual Scientific Meeting on 8 March 2012; Prof. Justin Wu for organizing the Annual Scientific Meeting and for editing this Newsletter; Prof. Jaw-Town Lin, Dr. Anthony Lembo, Prof. Geert D’Haens, Prof. Simon Ng, Dr. Vincent Wong, Dr. Siew Ng and Dr. Ting-Lam Lee for their scientific updates in this Newsletter as well as sponsors from the industry.

I look forward to seeing you all in the Joint Annual Scientific Meeting on 15 September 2012. The next newsletter will be published in December 2012. Thank you.

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**Scientific Updates**

**The causes and prevention of gastric cancer**

Although the total alcohol drinking appeared not to be associated with risk of overall gastric cancer risk, drinking of liquor greater than 3 drinks per day was associated with 2.1-fold increased risk of gastric cancer at cardia.4 A recent meta-analysis of cohort study showed that overweight (BMI >25) was associated with increased risk of gastric cancer, particularly for cardia gastric cancer and in Non-Asian populations.5 Another recent population based cohort study in Japan further showed that hyperglycemia defined as HbA1C ≥ 6% was associated with increased risk of gastric cancer in non-infected persons.6

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prevalence of *H. pylori* infection and incidence of gastric cancer vary among different countries in the Asia–Pacific regions.\(^3\) This highlights the importance of host genetic factors and other factors beyond *H. pylori* infection in the carcinogenesis of gastric cancer.\(^7\) Besides, some subtypes of gastric cancer, the lymphoepithelioma-like carcinoma (LELC), was associated with EB virus infection rather than *H. pylori* infection.\(^8\)

Germline mutations in E-cadherin genes have been shown to be associated “hereditary” diffuse gastric cancer, with penetration rate of about 70% by the age of 60 years. In contrast, genetic polymorphisms of proinflammatory cytokines, such as IL-1 and IL-10, have been reported to be associated with susceptibility of “sporadic” non-cardia gastric cancer.\(^9\) Hundreds of worldwide studies have been published with controversial results regarding their associations with gastric cancer risk. More recently, more than 20 meta-analyses have been conducted to assess the associations of genetic polymorphism and gastric cancer risk.\(^10\) However, ethnic differences on these issues have been observed in these meta-analyses. IL-1B-511C/T polymorphisms have been shown to be associated with increased risk of gastric cancer in Caucasians, but not in Asians. In contrast, IL-10-1082 A/G polymorphisms have been shown to be associated with increased risk of gastric cancer in Asians, but not in Caucasians. Ethnic differences of genetic polymorphisms at TNF-A, CDH1, TP53, and GSTT1 genes on gastric cancer risk have also been reported. The possible explanations for the ethnic differences in the meta-analyses of genetic association studies in gastric cancer included (1) heterogeneity of study design, methods, and patients (age, gender, location and histology type gastric cancer, *Helicobacter pylori* infection etc.); (2) inadequate power in some subgroup analysis; (3) ethnic differences in the genotype frequencies; and (4) publication bias. Further large genetic association studies using the same study design and methods are warranted to compare the differences between East and West populations directly on this issue.

A genome wide association study from Japan showed that polymorphisms at prostate stem cell antigen (PSCA) gene was associated with increased risk of gastric cancer, particularly for diffuse type cancer. The results had been validated in Korean and Chinese.\(^11\) More recently, Lochhead et al. confirmed that polymorphism (T allele at rs2294008) at PSCA gene was also associated with increased risk of non-cardia gastric cancer.\(^12\) They further showed that this polymorphism was associated with reduced risk of gastric cancer at cardia.\(^12\)

Gastric carcinogenesis is a multifactorial process. *H. pylori* infection has been known to induce chronic gastric inflammation that leads to gastric cancer. After eradicating *H. pylori*, precancerous lesions may regress. Fuccio Let al. conducted a meta-analysis of five randomized controlled trials and the result showed that *H. pylori* eradication had borderline significance in preventing gastric cancer.\(^13\) Fukase K, et al. conducted a randomized controlled study which showed *H. pylori* eradication significantly reduced the development of secondary gastric cancer after endoscopic resection of primary gastric cancer.\(^14\) A recent study using the Taiwan National Health Insurance Database showed that early *H. pylori* eradication was associated with decreased risk of gastric cancer in patients who had been hospitalized due to peptic ulcer disease.\(^15\) In the meanwhile, an interventional study with the strategy of test and treat *H. pylori* infection for a Taiwanese population quantified the interventional benefit in prevention of gastric atrophy, intestinal metaplasia, gastric cancer incidence, and gastric cancer mortality.\(^16\)

High intakes of fresh fruits and vegetables have been shown to be inversely associated with risks of gastric cancer. However, a meta-analysis consisting of 14 randomized control trials have failed to find a protective effect of Vitamin A, Vitamin C, Vitamin E, β-carotene, riboflavin, and zinc, either single use or combinations of them. Only selenium showed a reduction on the incidence of gastrointestinal cancers in the sub-analysis of four trials.

Aspirin and non-steroidal anti-inflammatory drugs (NSAIDs) have been suggested to prevent gastric cancer by inhibiting production of COX-1 and COX-2 through both prostaglandin-dependent and independent pathways. In a meta-analysis pooling of the results of clinical studies, NSAIDs use was found to be associated with a reduced risk of gastric cancer, with similar magnitudes of risk reduction for aspirin and non-aspirin NSAIDs users. Regular users of NSAIDs were found to have a lower risk of gastric cancer compared to nonusers and irregular users. A recent study in Taiwan using the Taiwan National Health Insurance Database also reported potentially protective effect of NSAIDs in gastric cancer.\(^17\) However, the risk of cardiovascular events and gastrointestinal bleeding associated with NSAIDs and COX-2 inhibitors might outweigh their beneficial effects in the chemoprevention of cancer in average-risk individuals.

**References**

Based on the ROME III criteria, a clinical diagnosis of irritable bowel syndrome (IBS) can be made when the patient experiences recurrent abdominal pain or discomfort for at least 3 days per month, and with at least two of the following: symptom onset associated with change in frequency and/or form of stools, and/or symptom improvement with defecation. In addition, IBS patients frequently experience other gastrointestinal (GI) symptoms such as bloating, distension, dyspepsia, and heartburn, as well as non-GI symptoms including psychological symptoms such as depression and anxiety, headaches, migraines, neuralgias and/or chronic pain, which result in significant impact on their quality of life.

Although the prevalence of IBS decreases with increasing age, patients with prior GI infections have increased risks of developing IBS (odds ratio 7.3–11.4), with symptoms persistent for up to 8 years postinfection. Compared with controls, IBS patients have significant changes to their GI microflora demonstrated by both biopsy studies and breath tests. Emerging data from biopsy studies also suggest immunological reactivity in IBS patients, where increased number of mast cells, enteroendocrine cells and CD8 lymphocytes were observed along with decreased levels of mucosal cytokines and increased paracellular permeability.

Early studies investigating the efficacy of antibiotics for the treatment of IBS demonstrated clinical improvements over placebo, especially in patients treated with rifaximin—a minimally-absorbed oral antibiotic with a favourable safety profile and low risk of antibiotic resistance used extensively for treating and preventing travellers’ diarrhoea. In a preliminary randomized, double-blind, placebo-controlled trial of 87 patients diagnosed with IBS using ROME I criteria, patients treated with rifaximin at a dose of 400 mg three times daily (tid) for 10 days demonstrated significant improvements in IBS symptoms during the 10-week follow-up period over placebo-treated patients, despite having higher pain levels at baseline.

Subsequently, two identical large-scale, phase III, randomized, double-blind, placebo-controlled trials in non-constipated IBS patients were conducted. IBS patients in the rifaximin arm received 550 mg tid for 2 weeks and were evaluated during the 10-week follow-up period. Combined analysis of both trials showed that rifaximin-treated patients achieved significant improvements in Global IBS symptoms (40.7% vs 31.7%; p<0.001) and IBS-related bloating (40.2% vs 30.3%; p<0.001) during the first 4 weeks (Figure), which was sustained in the 10-week follow-up period (p=0.001) over placebo-treated patients.

Although rifaximin has shown efficacy in treating non-constipated IBS patients, symptom recurrence occurs. Hence, future trials should be conducted to ascertain the efficacy and safety of repeated treatments with rifaximin. In addition, the role and efficacy of systemic antibiotics in IBS should also be further investigated.

References
1. Longstreth GF et al. Gastroenterology 2006;130:1480.
Corticosteroids are the cornerstone of inflammatory bowel disease (IBD) treatment and have demonstrated efficacy. However, adverse events – such as infections, postoperative complications and dependency – limit their use in chronic illnesses which require long-term therapy. With the availability of biological agents, the use of long-term steroid therapy can be limited.

Despite its advantages over steroids, biological therapy should not be used first-line for all patients with Crohn’s disease (CD). Biological therapy should be considered for patients likely to benefit from early immunosuppression or anti-tumour necrosis factor (TNF) treatment, such as younger patients (<40 years), those with perianal disease and those who have failed prior conventional therapies, taking into account patients’ treatment preferences and financial status.

Biological therapy is contraindicated in patients with active infections/sepsis. Patients with latent infections (eg, tuberculosis, hepatitis B, HIV) should be either excluded or treated prior to initiation of biological therapy. Other conditions where biologicals are not recommended include a recent history of malignant carcinomas, lymphoproliferative disorder, severe congestive heart failure and demyelinating neurologic disease. As a precaution, patients should be vaccinated against common infections such as tetanus, invasive pneumococcal disease and influenza before initiation of biological therapy.

In contrast, patients refractory, or dependent on, steroid therapy, and/or with prior immunomodulatory therapy failure should be considered for early biological therapy. In addition, anti-TNF therapy was demonstrated to be more effective in patients with a shorter disease history. Specifically, postoperative biological therapy, in conjunction with surgical drainage, is the only effective treatment for complex fistulas in CD. Also, combination of biological and immunomodulatory therapies should be used in patients who have not been on prior immunomodulatory therapy due to improved rates of clinical remission and mucosal healing compared with monotherapy using either agent alone.

Infliximab has demonstrated efficacy in treating moderate-to-severe ulcerative colitis (UC) refractory to prior treatments, and can be used to achieve and maintain clinical remission, with mucosal healing. It also reduces colectomy rates for severe UC patients refractory to intravenous steroids upon admission by up to 50% (p=0.003). The role and efficacy of adalimumab in UC have yet to be established.

Maintenance therapy should be considered in patients who respond to biological agents although the optimal maintenance regimen has yet to be determined. Patients with diminished, or loss of, response may be treated with increased dosage or frequency. Patients with loss of response or intolerance to their current biological therapy may be switched to another biological agent. Although there is currently insufficient data, therapy cessation may be considered for patients with clinical remission and complete mucosal healing in the absence of inflammation.

References

Local experience with colorectal ESD

Colorectal ESD is effective and relatively safe, with en bloc resection and perforation rates of 80–90% and 5–10%, respectively. The ESD technique was introduced to Hong Kong in 2004 for the treatment of early neoplasms of the foregut. With the accumulation of clinical experience, ESD has been successfully used to treat early colorectal neoplasms at the Chinese University of Hong Kong since 2006. Among the 29 patients with early colorectal neoplasms who underwent ESD between January 2006 and June 2009, en bloc resections were achieved in 27 cases (93.1%). Perforation occurred in only 3 patients (10.3%). All these cases were successfully managed with endoscopic clipping. Compared with 28 matched historical control patients who underwent laparoscopic surgery, patients who underwent ESD showed significantly lower morbidity, earlier recovery and shorter hospital stay. Furthermore, another retrospective study showed...
Management of chronic hepatitis B: An update

Chronic hepatitis B is the leading cause of hepatocellular carcinoma (HCC). Antiviral treatment reduces the risk of HCC and infection-related cirrhotic complications.1,2 Yet, identification of patients at risk of developing HCC who may benefit from antiviral treatment remains a clinical challenge. The Chinese University of Hong Kong has recently developed and validated a clinical score to predict the risk of HCC in hepatitis B virus (HBV) carriers based on five risk factors: old age, hypoalbuminemia, bilirubinemia, high HBV viral load, and cirrhosis.3

Another clinical challenge is drug resistance, which frequently arises with the long-term use of oral antivirals. Use of potent drugs with a high genetic barrier to resistance can prevent the emergence of resistance.4 In case of resistance, salvage therapy should be administered as soon as possible, with caution against cross-resistance. Notably, an in vitro study has shown that adefovir-resistant A181T/V mutations can lead to resistance across drug classes (Table).5 For difficult cases, sequence analysis can be used to predict drug sensitivity and guide treatment selection.

Table. In vitro cross-resistance may suggest limited treatment efficacy within and across drug classes6

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<tr>
<th>In Vitro Resistance substitution</th>
<th>ADV-resistant (N236T)</th>
<th>ADV-resistant (A181T/V)</th>
<th>ETV-resistant (L180M+M204V/I ± I169 ± T184 ± S202 ± M250)</th>
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<tr>
<td>LVD/LdT-resistant (M204I/V)</td>
<td>Entecavir</td>
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<td>Drugs remaining fully active</td>
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Resistant Intermediate Sensitive

1Impact on sensitivity variable; results according to laboratory analyses, not patient studies. ADV, adefovir; ETV, entecavir; LdT, telbivudine; LVD, lamivudine

Hepatitis B surface antigen (HBsAg) quantification reflects the amount of transcriptionally active HBV DNA in the liver and is a promising prognostic and predictive marker. A low HBsAg level is associated with a high chance of spontaneous seroclearance.6 Additionally, it predicts the rates of clinical success with antiviral treatment and sustained off-treatment response.7,8

References
Fistulas occur in 20–50% of patients with Crohn’s disease. Mostly perianal, Crohn’s disease fistulas are a substantial physical and mental burden on patients, and can lead to impaired quality of life.

A comprehensive disease assessment for perianal fistulas involves examination under general anaesthesia (with surgical drainage and/or seton placement), magnetic resonance imaging (MRI)/anal endosonography (AES) and endoscopy. The presence of proctitis or active luminal disease is a predictor of poor treatment response and should be actively managed.

Both medical and surgical approaches are required to achieve the primary therapeutic goal of fistula closure. Traditionally, surgery has been the mainstay of treatment, yet fistula recurrence and impaired continence limit its clinical use. Antibiotics confer only short-term benefits to patients while most immunosuppressants show modest efficacy. Anti-tumor necrosis factor (anti-TNF) therapies are a new addition to current therapeutic options and have been shown to provide rapid and sustainable efficacy on fistula healing. In one study, selective seton placement, in conjunction with early use of infliximab infusion and maintenance immunosuppressants, resulted in complete fistula closure in 67% of patients at 9 months. A collaborative approach between gastroenterologists and surgeons is therefore likely to bring about optimal outcomes.

MRI monitoring of fistula healing can be useful in determining the duration of anti-TNF therapy. Our study showed that 46% of patients with perianal fistulas experienced cessation of drainage post anti-TNF treatment, yet only 28% showed complete fistula resolution on MRI. MRI healing at 6 months was sustained at 18 months in all patients whilst on treatment, whereas only one third maintained healing off treatment. This suggests that prolonged treatment could be beneficial in patients with persistent fistulous tracks.

Nutrition optimization is an essential part of care especially for enterocutaneous fistulas. In patients with a high fistula output, an optimal management strategy includes fluid restriction, administration of oral electrolyte solutions, anti-motility agents and anti-secretory drugs.

References

Pyogenic liver abscess:
A 5-year experience in a regional hospital in Hong Kong
(Summary of Dissertation 2011)

Methods
All hospitalized patients with a discharge diagnosis of PLA at Pamela Youde Nethersole Eastern Hospital from 1st July 2005 to 30th June 2010 were retrospectively reviewed. The diagnosis of PLA was based on compatible clinical features, radiological findings of USG abdomen and/or CT abdomen as well as microbiological results from pus and/or blood culture. Pathological (fine needle aspiration cytology or biopsy) specimens were obtained to exclude liver tumour in case of doubtful radiological appearance. Patients were identified by searching through the Clinical Data Analysis and Reporting System (CDARS) of Hong Kong Hospital Authority based on the 9th revision of the International Classification of Disease code (ICD-9). Patients with diagnostic coding of abscess of liver (code 572.0), portal pyaemia (code 572.1) and intra-abdominal sepsis (code 038.9) along with procedure coding of percutaneous and open drainage of liver abscess (code 50.0 (4), code 50.0 (5)) were retrieved for the study. Reports of specimen sample obtained through fine needle aspiration cytology or biopsy, for differentiating liver abscess from tumour, were retrieved from the Department of Pathology. Microbiologic reports were also retrieved from the Department of Microbiology for all patients who had pus sample of liver abscess obtained by percutaneous needle aspiration or percutaneous catheter drainage. Records of imaged-guided procedures in the Department of Radiology were screened. Medical records of all patients who had undergone percutaneous aspiration or drainage of liver abscess were reviewed. If a patient was admitted more than one time for PLA, only the first episode was analyzed.

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The estimated annual incidence of pyogenic liver abscess (PLA) varies from 2.3 cases per 100,000 population in the Western world (1) to 17.6 cases per 100,000 population in endemic area such as Taiwan (2). The mortality rate of PLA dropped from more than 50% in the early 20th century (3) to around 10% as reported in recent study (4) secondary to the advent in treatment modalities of PLA in a regional hospital in Hong Kong. The estimated annual incidence of pyogenic liver abscess (PLA) was 1.6% of all cases in one hospital (5) and 1.5% in another (6). In recent study (7), it was reported that the incidence of PLA was 2.05 per 100,000 population in Hong Kong. The National Cancer Institute and the World Health Organization estimated the incidence of PLA to be 1.6 per 100,000 population in North America and Europe, respectively (8). The estimated annual incidence of PLA was 1.6% of all cases in one hospital (5) and 1.5% in another (6). In recent study (7), it was reported that the incidence of PLA was 2.05 per 100,000 population in Hong Kong. The National Cancer Institute and the World Health Organization estimated the incidence of PLA to be 1.6 per 100,000 population in North America and Europe, respectively (8).
Exclusion criteria were: 1) patients younger than 18 years old, 2) patients with infected liver cysts or tumour abscess, 3) patients with liver abscess secondary to infection by amoeba, fungus and tuberculosis, 4) patients with liver abscess secondary to penetrating trauma to the liver, post surgical or endoscopic procedure and 5) patients who have incomplete medical records.

**Classification of Aetiologies of PLA**

The aetiology of PLA was classified into biliary, direct extension from adjacent organs, portal pyaemic, haematogenous spread with primary source of infection and cryptogenic. PLA was considered to be biliary in origin in those patients with an obstructed biliary system by bile duct stones, a biliary stricture or a malignant growth demonstrated by USG abdomen and/or CT abdomen, MRCP or ERCP as well as previous history of hepatico/choledocho-enterostomy with or without active biliary pathology. PLA was ascribed to portal pyaemic cause if there was radiological evidence of intra-abdominal infection or inflammation along the drainage of portal venous system, such as intra-abdominal abscess, appendicitis and diverticulitis. PLA induced by direct extension from infected adjacent organs was defined as contagious spread of infection from an actively inflamed or infected adjacent organ, such as acute cholecystitis. PLA secondary to haematogenous spread with primary source of infection was classified as active infection at distant site without evidence of biliary or portal pyaemic component. Cryptogenic PLA was regarded as non-biliary and non-portal pyaemic cause without evidence of distant infection.

**Statistical Analysis**

Regarding descriptive statistics, continuous data was presented as median or mean with standard deviation. Categorical data was summarized as percentage. Chi-square test was applied for comparing categorical variables between groups. Student’s t-test was used to compare continuous variables between groups. A p value of less than 0.05 (p<0.05) represented statistical significance.

**Results**

Clinical records of 164 patients discharged with a diagnosis of PLA were systematically reviewed. Forty-one patients were excluded for analysis due to the following reasons: infected liver cysts (n=6), tumour abscess (n=4), fungal liver abscess (n=3), equivocal radiological features with no response following antimicrobial therapy (n=2), liver metastases (n=2), cholangiocarcinoma (n=2), mycobacterial liver abscess (n=2), amoebic liver abscess (n=2), extrahepatic abdominal abscess (n=1), abscess over the post-radiofrequency ablation site of a hepatocellular carcinoma (n=1) and incomplete medical records (n=16). The remaining 123 patients fulfilling the inclusion criteria were recruited into the study.

**Demographic data**

The annual incidence of PLA in this series was 4.2 cases per 100,000 populations. The number of PLA cases fluctuated over the study period with the highest incidence in October, April and July (Figure 1). Sixty-one patients were male and 62 were female (male to female ratio of 1:1.02). The mean age at the time of diagnosis was 67.2 +/- 13.2 years (range, 26 – 80 years) (Figure 2). There is no difference in mean age between female and male (69.4 versus 65 years, p=0.97). The largest group of patients fell in the range of 71 – 80 years. One hundred and twenty patients (97.6%) were Chinese, 2 (1.6%) were Filipino and 1 (0.8%) was Pakistani. The median time to diagnosis was 18 hours after admission (range, 1 – 384 hours).

![Figure 1 Distribution of number of patients with PLA (By Months)](image-url)
Clinical Presentation
The 3 commonest presenting symptoms were fever (68.3%), abdominal pain (47.2%), chills and rigor (41.5%). The median time of onset of symptom before admission was 3 days (range, 1 – 30 days). The 3 commonest physical signs on presentation were temperature >38°C (47.2%), abdominal tenderness (43.9%) and shock (systolic blood pressure < 90 mmHg and with pulse rate ≥ 100/minute) (15.4%).

Laboratory Findings
Leukocytosis (total white cell count (WCC) >10 x 10^9/L) was found in 95 patients (77.3%). The median total WCC level was 14 x 10^9/L. A total of 115 patients (93.5%) had neutrophilia (neutrophils >70% of total WCC). Eighty-two patients (66.7%) had elevated ALT level (range, 10 – 1340 IU/L; median 81 IU/L), 81 (65.9%) had elevated ALP level (range, 40 – 1493 IU/L; median 171 IU/L), 77 (62.6%) had hypoaalbuminaemia (range, 14 – 43 g/L; median 33 g/L) and 66 (53.7%) had elevated total bilirubin level (range, 4.7 – 263 umol/L; median 22 umol/L). However, normal LFT did not exclude the diagnosis of PLA as 9 of the confirmed cases (7.3%) had normal LFT.

Location, Number and Size of PLA
With respect to the location of PLA, 29 patients (23.6%) had isolated left lobe involvement, 81 patients (65.9%) had isolated right lobe involvement, 10 patients (8.1%) had bilobe involvement and 3 patients (2.4%) had caudate lobe involvement. Eighty-eight patients (71.5%) had a solitary abscess, 12 patients (9.8%) had two abscesses and 23 patients (18.7%) had multiple (≥3) abscesses. The median size of PLA was 5.7 cm (range, 0.9 – 18.8 cm).

Microbiological Results
Pus samples were obtained in 89 patients (72.4%) and were sent for culture and sensitivity assays. Eleven patients (8.9%) had fine needle aspiration of the abscess content for cytologic studies because the radiological features were suspicious of malignant lesions. Abscess culture was positive for pyogenic organisms in 81 patients (91%) while 8 patients (9%) had negative culture results. Among those with positive abscess culture, a single microorganism was identified as the causative agent of PLA in 69 patients (85.2%). Two microorganisms were isolated in 8 patients (9.9%) while a mixture of three or more microorganisms were found in 4 patients (4.9%). Abscess culture results were shown in Figure 3a. Blood cultures were obtained in 114 patients, of which 63 (55.3%) were positive. K. pneumoniae remained the commonest organism being identified in blood culture. (Figure 3b). Among those with positive blood culture, a single microorganism was isolated in 57 patients (90.5%). A mixture of two or three microorganisms was obtained in 4 (6.3%) and 2 (3.2%) patients respectively.

Abdominal Ultrasonography (USG Abdomen) and Contrast-enhanced Computed Tomography of Abdomen (CT Abdomen)
USG abdomen was performed in 84 patients (68.3%) and was the only imaging modality in 26 patients (21.1%). In comparison, CT abdomen was performed in 97 patients (78.9%) and was the only image modality in 39 patients (31.7%). Both USG and CT abdomen were performed in 58 patients (47.2%).

For patients who had undergone ultrasonographic examination, USG abdomen accurately identified 72 cases of PLA with a sensitivity of 85.7%. Of the 12 patients having a negative initial USG abdomen, all of them had the diagnosis of PLA confirmed by CT abdomen. CT abdomen was performed in 97 patients (78.9%) and all of them could identify the presence of PLA, with a sensitivity of 100%.

Radiological Imaging

Chest Radiograph (CXR)
Chest radiograph was performed in 107 patients and 47 patients (43.9%) had one or more abnormal findings. Right pleural effusion, elevated right hemidiaphragm, gas forming lesion in right upper quadrant of abdomen, right lower lobe atelectasis and right lower lobe consolidation were detected in 13.8% (n=17), 10.6% (n=13), 1.6% (n=2), 12.2% (n=15) and 1.6% (n=2) of patients respectively.

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Aetiologies of PLA

The most frequently identified aetiology for PLA in our cohort was cryptogenic, accounting for 76 patients (61.8%). Biliary cause was the second commonest aetiology of PLA, which was identified in 35 patients (28.5%) (Figure 4). The mean age of patients with biliary cause of PLA was insignificantly older than that of patients with non-biliary cause (70.9 versus 65.8 years, p=0.32). PLA due to biliary causes was associated with multiple liver abscesses (p=0.005).

Direct extension secondary to acute cholecystitis accounted for PLA in 6 patients (4.9%). Haematogenous spread from an identifiable focus of infection was found in 3 patients (2.4%) and the underlying causes were septic thrombophlebitis (n=1), necrotizing fasciitis (n=1) and infective endocarditis (n=1) respectively. Portal pyaemia-related PLA was identified in 3 patients (2.4%). Acute appendicitis was diagnosed in 2 patients and the remaining one had an underlying infected mass adjacent to the upper part of rectum with non-specific nature.
Management

Treatment Modality
The commonest treatment modality, used in 85 patients (69.1%), was antibiotics plus percutaneous needle aspiration with or without percutaneous catheter drainage, followed by antibiotic therapy alone in 35 patients (28.5%). Only 3 patients (2.4%) received antibiotics along with surgical exploration and drainage. One of them required surgical drainage in view of persistent fulminant sepsis without any radiological improvement of PLA even after percutaneous drainage was performed.

Percutaneous Drainage
Percutaneous aspiration and/or drainage were performed in 85 patients (69.1%) after obtaining a radiological diagnosis of PLA. Among them, 12 (14.1%) had percutaneous needle aspiration of abscess alone, while 73 patients (85.9%) had percutaneous needle aspiration as well as catheter drainage of the abscess. The mean size of PLA in needle aspiration group was smaller than that in needle aspiration with catheter drainage group (4.7 versus 7.2 cm, p=0.51). Percutaneous drainage under ultrasonographic guidance was achieved in 78 patients (91.8%) while the remaining 7 patients (8.2%) had computed tomographic-guided drainage. The median time from admission to percutaneous catheter drainage was 32 hours (range, 2 – 384 hours). The median duration of percutaneous catheter drainage was 14 days (range, 3 – 116 days). Three patients succumbed even after receiving antibiotics plus percutaneous drainage of PLA. The success rate of treating PLA with antibiotics plus percutaneous drainage was 96.5%.

Surgical Drainage
A total of 3 patients underwent surgical exploration and drainage because of rupture of PLA causing peritonitis (n=1), fulminant sepsis with multiple complications (acute renal failure, acute respiratory distress syndrome, metabolic acidosis and haemolysis) (n=1) and the absence of clinical and radiological improvement after percutaneous catheter drainage (n=1). The mean time from admission to open surgical drainage was 24 +/- 9.2 hours (range, 14 – 32 hours).

Co-morbidities
Seventy-nine patients (64.2%) had underlying co-morbidities. Most of the patients (n=35, 44.3%) had 1 concomitant medical disease (Table 1). Thirty-five patients (89.7%) had pre-existing DM and suboptimal DM control (defined FBS > 7 mmol/L and/or HbA1c >7%) was commonly noted in 24 out of 35 patients (68.6%). Four patients (10.3%) had newly diagnosed DM at the presentation of PLA. In addition, impaired glucose tolerance was identified by OGTT in 2 patients after discharge from hospital. The proportion of DM patients in cryptogenic group was higher than that in non-cryptogenic group (73.2% versus 56.1%), but the result was not statistically significant (p=0.07). Suboptimal DM control was neither associated with development of complications (p=0.80) nor requirement of ICU admission (p=0.66).

Table 1 Underlying medical diseases of patients with PLA

<table>
<thead>
<tr>
<th>Underlying Medical Disease</th>
<th>Number of Patients (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>44 (35.8)</td>
</tr>
<tr>
<td>Hypertension</td>
<td>44 (35.8)</td>
</tr>
<tr>
<td>Diabetic Mellitus</td>
<td>39 (31.7)</td>
</tr>
<tr>
<td>– Known history</td>
<td>35</td>
</tr>
<tr>
<td>– Newly diagnosed</td>
<td>4</td>
</tr>
<tr>
<td>Hyperlipidaemia</td>
<td>16 (13)</td>
</tr>
<tr>
<td>Malignancy</td>
<td>11 (8.9)</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>7 (5.7)</td>
</tr>
<tr>
<td>Ischaemic heart disease</td>
<td>7 (5.7)</td>
</tr>
<tr>
<td>Fatty liver</td>
<td>6 (4.9)</td>
</tr>
<tr>
<td>Ischaemic stroke</td>
<td>4 (3.3)</td>
</tr>
<tr>
<td>Liver cirrhosis</td>
<td>3 (2.4)</td>
</tr>
<tr>
<td>Chronic renal impairment</td>
<td>3 (2.4)</td>
</tr>
<tr>
<td>Impaired glucose tolerance</td>
<td>2 (1.6)</td>
</tr>
<tr>
<td>Pulmonary tuberculosis</td>
<td>2 (1.6)</td>
</tr>
<tr>
<td>Number of underlying medical disease(s) per patient</td>
<td></td>
</tr>
<tr>
<td>– 1</td>
<td>35 (44.3)</td>
</tr>
<tr>
<td>– 2</td>
<td>25 (31.6)</td>
</tr>
<tr>
<td>– 3 or more</td>
<td>19 (24.1)</td>
</tr>
</tbody>
</table>

Complications and Treatment Outcome

Table 2 Development of complications during hospitalization

<table>
<thead>
<tr>
<th>Complication</th>
<th>Number of Patients (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>76 (61.8)</td>
</tr>
<tr>
<td>Septic shock</td>
<td>23 (18.7)</td>
</tr>
<tr>
<td>Right pleural effusion</td>
<td>17 (13.8)</td>
</tr>
<tr>
<td>Metastatic infection</td>
<td>12 (9.8)</td>
</tr>
<tr>
<td>– Endophthalmitis</td>
<td>6</td>
</tr>
<tr>
<td>– Lung abscess</td>
<td>2</td>
</tr>
<tr>
<td>– Left subretinal abscess</td>
<td>1</td>
</tr>
<tr>
<td>– Right lung empyema</td>
<td>1</td>
</tr>
<tr>
<td>– Skin abscess</td>
<td>1</td>
</tr>
<tr>
<td>– Septic arthritis</td>
<td>1</td>
</tr>
<tr>
<td>Acute renal failure</td>
<td>10 (8.1)</td>
</tr>
<tr>
<td>DIC</td>
<td>9 (7.3)</td>
</tr>
<tr>
<td>ARDS</td>
<td>7 (5.7)</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>5 (4.1)</td>
</tr>
<tr>
<td>Acute coronary syndrome</td>
<td>3 (2.4)</td>
</tr>
<tr>
<td>Right subphrenic collection</td>
<td>2 (1.6)</td>
</tr>
<tr>
<td>Diabetic ketoacidosis</td>
<td>2 (1.6)</td>
</tr>
<tr>
<td>HONK</td>
<td>1 (0.8)</td>
</tr>
<tr>
<td>Haemolysis</td>
<td>1 (0.8)</td>
</tr>
<tr>
<td>Abscess rupture</td>
<td>1 (0.8)</td>
</tr>
<tr>
<td>Congestive heart failure</td>
<td>1 (0.8)</td>
</tr>
<tr>
<td>Fast atrial fibrillation</td>
<td>1 (0.8)</td>
</tr>
<tr>
<td>Pericholecystic abscess</td>
<td>1 (0.8)</td>
</tr>
</tbody>
</table>

DIC = Disseminated Intravascular Coagulopathy
ARDS = Acute Respiratory Distress Syndrome
HONK = Hyperosmolar Nonketotic Coma
Complications developed in 47 patients (38.2%) (Table 2). Patients, who developed complication, had longer mean duration of hospitalization than those who did not (37.1 versus 21.7 days, p=0.01). Females had longer mean duration of hospitalization than males (31.7 versus 23.4 days, p=0.012) as females were significantly associated with development of complications (p=0.028). The mean age of patients with development of complications was 67.5 years when compared to 66.3 years in those patients without complications (p=0.83). Admission to ICU was required in 36 patients (29.3%). The median duration of ICU stay was 4 days (range, 1 – 42 days).

Successful treatment was recorded in 117 patients as evidence by radiological resolution of PLA. The median duration of hospitalization was 22 days (range, 3 – 182 days). Mortality was reported in 6 patients with an in-patient mortality rate of 4.9%. The median time from admission to death was 11 days (range, 3 – 41 days).

**Clinical Profile of Patients with Klebsiella pneumoniae-associated Liver Abscess**

A total of 73 patients (59.3%) had positive blood and/or abscess culture for *K. pneumoniae*. The patient’s mean age at diagnosis of *K. pneumoniae*-associated liver abscess was older than that of non-*K. pneumoniae* (69.7 versus 65.5 years, p=0.29). Among these 73 patients with *K. pneumoniae*-associated liver abscess, 39 patients were males and 34 were females (male to female ratio of 1.15:1). No association between *K. pneumoniae* infection and gender was observed (p=0.23). There were 2 peaks in the incidence of *K. pneumoniae*-associated liver abscess during the study period, notably from July 2005 – June 2006 and July 2008 – June 2009 (Table 3). There was a seasonal variation with higher incidence in April and July of each year (Figure 5).

<table>
<thead>
<tr>
<th>Years</th>
<th>Patients with Klebsiella pneumoniae-associated Liver Abscess (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 2005 – June 2006</td>
<td>78.3</td>
</tr>
<tr>
<td>July 2006 – June 2007</td>
<td>51.6</td>
</tr>
<tr>
<td>July 2007 – June 2008</td>
<td>52.6</td>
</tr>
<tr>
<td>July 2008 – June 2009</td>
<td>70.0</td>
</tr>
<tr>
<td>July 2009 – June 2010</td>
<td>50.0</td>
</tr>
</tbody>
</table>

All *K. pneumoniae* isolated from abscess and/or blood were sensitive to gentamicin. Sensitivity to levofloxacin, cefuroxime (intravenous), cefazolin, cefuroxime (oral) and amoxicillin-clavulanate were demonstrated in 98.6% (n=72), 97.3% (n=71), 94.5% (n=69), 75.3% (n=55) and 67.1% (n=49) of patients respectively (Figure 6). About 44% of patients with *K. pneumoniae*-associated liver abscess had DM in contrast to only 18% of patients with DM in the non-*K. pneumoniae* group (p=0.03). Besides, majority (82.2%) of *K. pneumoniae*-associated liver abscess were cryptogenic in origin, whereas only 32% of patients were classified as cryptogenic in non-*K. pneumoniae* group (p<0.01). Moreover, about 36% of patients with *K. pneumoniae*-associated liver abscess required ICU admission compared with only 18% in those without *K. pneumoniae* infection (p=0.03). Furthermore, 9 out of 12 patients (75%) with metastatic infection had underlying *K. pneumoniae*-associated liver abscess, whereas only 3 patients (25%) in the non-*K. pneumoniae* group had metastatic infection (p=0.25).
compared with that in previous case series in early 20th century (8). In our cohort, the mean age of patients was 67.2 years who tends to develop more co-morbidities as one is getting older could be related to the longer average life expectancy of female, males as evidenced by a longer mean duration of hospitalization as a whole, were older than the male patients (mean age 69.4 years). This may be attributed to the greater number of females in our male-predominance studies in the United Kingdom and Taiwan (1). The male-to-female ratio was nearly 1:1 in our case series in contrast to those comparable to that in the western world. (1). The mortality rate of K. pneumoniae-associated liver abscess was seen in April and July, which corresponded to the most humid and the hottest month in Hong Kong respectively. This finding was compatible with the preferences of K. pneumoniae as mentioned above. However, the other peak incidence of K. pneumoniae-associated liver abscess in October remains unexplained. The distribution in the incidence of all cases of PLA in this study was similar to that of K. pneumoniae-associated liver abscess simply because most of the cases of PLA were attributed to K. pneumoniae infection.

A high index of suspicion is required for the diagnosis of PLA as the presenting clinical features could be rather non-specific. Fever, which was the commonest symptom, was only present in 68.3% of our patients. The elevation of serum total bilirubin, alkaline phosphatase and alanine aminotransferase as well as hypoalbuminaemia were only detected in 53.7% – 66.7% of the patients. Chest radiograph was helpful to provide diagnostic clue of PLA as 43.9% of patients in our cohort showed abnormality in chest radiograph. The sensitivity of USG to detect PLA was 85.7% in contrast to 100% with CT in this study. This difference could be explained by a small or early PLA might be missed with USG examination. Moreover, the echogenicity of the PLA might appear as isodense that could lead to difficulty in visualizing it with USG. In case PLA is highly suspected with negative findings on USG, early CT abdomen is warranted. Timely diagnosis could definitely shorten the time of hospitalization and earlier specific treatment could be initiated.

Figure 6  Sensitivity of Klebsiella pneumoniae to various antibiotics

### Choice of Antibiotic

<table>
<thead>
<tr>
<th>Antibiotic</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gentamicin</td>
<td>100</td>
</tr>
<tr>
<td>Levofloxacin</td>
<td>100</td>
</tr>
<tr>
<td>Ceftazidime (intravenous)</td>
<td>90</td>
</tr>
<tr>
<td>Cefazolin</td>
<td>100</td>
</tr>
<tr>
<td>Ceftriaxone (oral)</td>
<td>90</td>
</tr>
<tr>
<td>Amoxicillin</td>
<td>80</td>
</tr>
</tbody>
</table>

Discussion

The annual incidence of PLA in our hospital (4.2/100,000) was comparable to that in the western world. (1). The male-to-female ratio was nearly 1:1 in our case series in contrast to those male-predominance studies in the United Kingdom and Taiwan (1). This may be attributed to the greater number of females in our population aged 65 or more in Hong Kong (8). The female patients, as a whole, were older than the male patients (mean age 69.4 versus 65 years). Moreover, female patients with PLA in our study appeared to have a worse clinical outcome compared with the males as evidenced by a longer mean duration of hospitalization and an association with the development of complications. This could be related to the longer average life expectancy of female, who tends to develop more co-morbidities as one is getting older (8). In our cohort, the mean age of patients was 67.2 years compared with that in previous case series in early 20th century (third decade) (5), in mid 20th century (50-60 years) and in late 20th and early 21st century (56.4-64 years) (1,6,7).

A high index of suspicion is required for the diagnosis of PLA as the presenting clinical features could be rather non-specific. Fever, which was the commonest symptom, was only present in 68.3% of our patients. The elevation of serum total bilirubin, alkaline phosphatase and alanine aminotransferase as well as hypoalbuminaemia were only detected in 53.7% – 66.7% of the patients. Chest radiograph was helpful to provide diagnostic clue of PLA as 43.9% of patients in our cohort showed abnormality in chest radiograph. The sensitivity of USG to detect PLA was 85.7% in contrast to 100% with CT in this study. This difference could be explained by a small or early PLA might be missed with USG examination. Moreover, the echogenicity of the PLA might appear as isodense that could lead to difficulty in visualizing it with USG. In case PLA is highly suspected with negative findings on USG, early CT abdomen is warranted. Timely diagnosis could definitely shorten the time of hospitalization and earlier specific treatment could be initiated.

K. pneumoniae was the commonest organism identified in our case series. This finding was in accord with those studies in Hong Kong, Taiwan and Southeast Asia (2,7). However, a difference in causative agent of PLA was noted in other parts of the world. Streptococcus species, E. coli and Staphylococcus aureus were the commonest organisms seen in the United Kingdom, the United States and the Eastern European studies (1,4). These studies revealed that there was a regional difference in causative agents of PLA. However, one study from the United States (9) demonstrated that K. pneumoniae was the commonest pathogen of PLA. More than half of the studied patients with K. pneumoniae-associated liver abscess were Asians.

The study by Pastagia et al (9) showed that most of the Asians had not resided in their country of origin for quite a long time. These studies showed that the causative agent of PLA was associated with ethnicity of patients rather than the location where the patients resided. Asians might have a genetic predisposition to K. pneumoniae infection as compared with Caucasians.

Seasonal variation was noted for K. pneumoniae bloodstream infection (10). The incidence of K. pneumoniae infection increases in warm and humid months as it is the most heat tolerant microorganism and it can survive better at higher humidity than all other enteric pathogens. As a result, there is a higher level of K. pneumoniae colonization in the environment and the bacteria are as virulent as the clinical isolates from hospitals and similarly can produce virulence factors. In our cohort, the peak incidence of K. pneumoniae-associated liver abscess was seen in April and July, which corresponded to the most humid and the hottest month in Hong Kong respectively. This finding was compatible with the preferences of K. pneumoniae as mentioned above. However, the other peak incidence of K. pneumoniae-associated liver abscess in October remains unexplained. The distribution in the incidence of all cases of PLA in this study was similar to that of K. pneumoniae-associated liver abscess simply because most of the cases of PLA were attributed to K. pneumoniae infection.

A shift in the aetiology of PLA was identified over the last century. With the advances and availability of radiological imaging, there was early detection of acute appendicitis resulting in a significant decline in the incidence of portal pyaemia-related PLA. The decrease in the number of biliary-related PLA might be linked to improvement in environmental hygiene in Hong Kong, thereby lowering the number of patients with RPC. In this study, the mean age of patients with biliary-related PLA was older than that in the non-biliary group (70.9 versus 65.8 years, \( p=0.32 \)). It is likely due to the increase in incidence of gallbladder stone as people grow older. This can be reflected from the increasing cholesterol level in the bile content with aging. Our study also revealed that biliary-related PLA was associated with multiple abscesses and this was comparable with previous study. This is also suggested by the fact that RPC was one of the biliary causes of PLA and RPC-associated liver abscess could be multiple.

There is an uprising trend of cryptogenic PLA in Hong Kong, which is likely related to the prevalence of diabetes mellitus as a result of obesity pandemic and sedentary lifestyle. Diabetes mellitus is well known to be associated with K. pneumoniae-associated liver abscess. Such an association was also identified in our case series. The chemotaxis and phagocytosis of neutrophils are defective in...
diabetic patients predisposing them to *K. pneumoniae* infection. As it was more likely to affect older patients and was also associated with the necessity of ICU admission, more intensive monitoring for elderly patients with *K. pneumoniae* infection is required. *K. pneumoniae* bacteraemia may manifest as a distinctive syndrome with liver abscess, meningitis or endophthalmitis. The risk factors for metastatic *K. pneumoniae* infection include more virulent K1 serotype and diabetes mellitus. As more people are prone to develop diabetes mellitus secondary to westernized lifestyle, further increase in the incidence of *K. pneumoniae*-associated liver abscess will be expected in our population in future.

Since percutaneous drainage of PLA had been widely used in 1970s – 1980s, the mortality rate started to decline to 5.6 – 12.3% as shown in published case reports in Taiwan, the United Kingdom, the United States and Hong Kong (1,2,6,7). The mortality rate of 4.9% in our cohort was in concord with those of previous studies.

**Conclusion**

The incidence of PLA is static over the years and the mortality is decreasing owing to evolution of treatment modality. There is a trend of increasing age of patients with PLA. *Klebsiella pneumoniae*-associated liver abscess of cryptogenic origin was the predominant cause of PLA. Non-specific symptoms and signs on presentation may delay the diagnosis of PLA. Most patients responded to antibiotic treatment plus percutaneous aspiration or drainage of PLA. The clinical features and treatment outcome of patients with PLA in this study were comparable to previous studies conducted in Hong Kong and other parts of Asia.

**References**

8. Demographic Statistics Section, Census and Statistics Department. *Index_tc.jsp*
On 9 December 2011, the Society celebrated its 30th Anniversary in a dinner meeting. The meeting started with lectures delivered by prominent scholars, Prof. Joseph Sung on “Changing Landscape in gastroenterology” and Prof. Ching-Lung Lai on “The Future of Hepatology”. The opening ceremony was officiated by honourable guests Dr. York Chow, GBS, JP, Secretary for Food and Health of the Hong Kong Special Administrative Region, and Mr. Anthony Wu, GBS, JP, Chairman of the Hospital Authority, Hong Kong. 348 guests in the meeting shared friendship while enjoying speeches, performances and games throughout the evening. We are indebted to all who contributed towards the dinner meeting and the commemorative 30th Anniversary Booklet.

Dr. Annie Chan welcomed the delegates and thanked all co-organizing societies and sponsors for their support.

The thirteenth Joint Annual Scientific Meeting was very successful attended by 276 local medical professionals. It was again a substantial program including 9 lectures that encompassed gastroenterology, hepatology, endoscopy and motility delivered by distinguished speakers: “Antibiotics in IBS” and “Novel Treatments for Chronic Constipation” by Dr. Anthony J. Lembo from Beth Israel Beaconess Medical Center, Boston, U.S.A.; “Biological therapy for IBD: When to Start, When to Stop, Which Drug to Choose, and How to Predict Response?” and “Prevention of post-operative recurrence in Crohn’s disease” by Prof. Geert R. D’Haens from University of Amsterdam, Netherlands; “Management of chronic hepatitis B: an Update” by Dr. Vincent Wong from The Chinese University of Hong Kong; “Autoantibody tests for gastrointestinal and hepatobiliary diseases” by Dr. Eric Y.T. Chan from Queen Mary Hospital, Hong Kong; “What are new in gastroesophageal reflux disease?” by Prof. Justin C.Y. Wu from The Chinese University of Hong Kong; “Image-Enhanced Endoscopy in the Colon: Is the Future Bright?” by Dr. Sok-Fei Hon from Prince of Wales Hospital, Hong Kong; “Local Experience on Colorectal ESD” by Prof. Simon S.M. Ng from The Chinese University of Hong Kong and “Modern Management of Fistulising Crohn’s disease” by Dr. Siew C. Ng of The Chinese University of Hong Kong.

Panel discussions after each session led by chairpersons, Dr. Wan-Chee Sze, Dr. Yee-Tak Hui, Prof. Benjamin C.Y. Wong, Dr. K.K. Li, Dr. Nelson N.S. Kung and Dr. Hester Cheung were actively participated. Crystal trophies were presented to the speakers and sponsors in appreciation of their contributions.

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The annual scientific meeting was very successful attended by 155 medical professionals during which our distinguished guest, Prof. Kentaro Sugano from the Jichi Medical University, Tochigi, Japan was awarded Honorary Fellowship of the Society. Prof. Sugano is currently the President of Japanese Society of Gastroenterology and Vice President of The Asian Pacific Association of Gastroenterology. He was among the 14 honorary fellows of our Society who are renowned scholars in the specialty.

Prof. Sugano then delivered a lecture on “Early detection and treatment of gastric cancer”. It was informative and well received.

A digestive disease case on “Interventional Endoscopic Ultrasonography” was presented by Dr. Stephen Y.M. Tung from Kwong Wah Hospital. The following panel discussion led by Dr. Ting-Lam Lee and Dr. Ho Ng, both from the Pamela Youde Nethersole Eastern Hospital, was actively participated.

73 fellows and members attended the Annual General Meeting during which the Society’s annual report and financial statements for the year of 2011 were presented by the Chairman and Hon. Treasurer respectively. Seven members were elected to the Council for the term 2012-14.

A Certificate of Appreciation was presented to each of the fourteen sponsors in appreciation of their support and contributions towards the meeting and they were Abbott, AstraZeneca, Bristol-Myers Squibb, Eisai, Ferring, GlaxoSmithKline, Jacobson, LF Asia, MSD, Novartis, Otsuka, Pfizer, Reckitt Benckiser and Takeda.

Most participants joined the dinner after the meeting.
9-10 June 2012
The International Digestive Disease (IDD) Forum 2012: “Pioneering Research and Practice”
Organized by: Institute of Digestive Disease, The Chinese University of Hong Kong
Location: HKCEC, Hong Kong
Website: www.iddforum.com

22-25 June 2012
14th International Symposium on Viral Hepatitis and Liver Disease
Location: Shanghai, China
Website: www.isvfd2012.org

24-27 June 2012
ISUCRS XXV Biennial Congress
Organizer: International Society of University Colon & Rectal Surgeons
Location: Bologna, Italy
Website: www.isucrs.org/

1-5 July 2012
10th World Congress of the International Hepato-Pancreato-Biliary Association
Location: Paris, France
Website: www.hpb2012.com

12-15 July 2012
GIHep Singapore 2012
Organizers: The Gastroenterological Society of Singapore in collaboration with the Chapter of Gastroenterologists, College of Physicians, Singapore
Location: Singapore
Website: www.gihep.org.sg

14 July 2012
Hong Kong Surgical Forum – Summer 2012
Organizer: Department of Surgery, Li Ka Shing Faculty of Medicine, The University of Hong Kong; Queen Mary Hospital & Hong Kong Chapter of the American College of Surgeons
Location: Queen Mary Hospital, Hong Kong
Website: www.3.hku.hk/surgery/forum.php

17-18 August 2012
World Congress on Gastrointestinal Cancer: Asian Perspectives
Location: Shanghai, China
Website: www.worldgicancaresia.com/2012

1-4 September 2012
11th World Congress of the OESO
Organizer: World Organization for Specialized Studies on Diseases of the Esophagus
Location: Como, Italy
Website: www.oeso.org

6-8 September 2012
Joint International Neurogastroenterology and Motility Meeting (NGM 2012)
Organized by: The European Society of Neurogastroenterology and Motility (ESNM) and the American Neurogastroenterology and Motility Society – Functional Brain-Gut Research Group (ANMS-FBG)
Location: Bologna, Italy
Website: www.ngm2012.org/

12-15 September 2012
Indonesian Digestive Disease Week (IDDW) 2012 & 8th International Endoscopy Workshop
Organizer: Indonesian Society of Gastroenterology and Indonesian Society for Digestive Endoscopy
Location: Jakarta, Indonesia
E-mail: gripda@citb.net.id
Website: www.worldgastroenterology.org/major-meetings.html

13-15 September 2012
XXVth International Workshop on Helicobacter and related bacteria in chronic digestive inflammation and gastric cancer
Organizer: European Helicobacter Study Group
Location: Ljubljana, Slovenia
Website: www.helicobacter.org

14-16 September 2012
International Liver Cancer Association Sixth Annual Conference (ILCA 2012)
Organizer: International Liver Cancer Association
Location: Berlin, Germany
Website: www.ilca2012.org/

15 September 2012 (Saturday)
14th Joint Annual Scientific Meeting
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
Location: Langham Place Hotel, Mongkok, Kowloon, Hong Kong
Program: “Coming Soon” on page 18 of this newsletter

20-22 September 2012
International Prague Hepatology Meeting
Organizer: Czech Society of Hepatology, Foundation of the Czech Society of Hepatology
Location: Prague, Czech Republic

22-25 September 2012
2012 International Meeting on Molecular Biology of Hepatitis B Viruses
Organizers: Professor Mala K. Mains, University College London Professor: John Casey, Georgetown University Medical Center
Location: Oxford, England
Website: www.hepb.org/2nmeeting/

26-28 September 2012
ESCP 7th Scientific & Annual Meeting
Organizer: European Society of Coloproctology (ESCP)
Location: Vienna, Austria
Website: www.escp.eu.com/vienna

3-5 October 2012
Boston International Live Endoscopy
Organizer: Beth Israel Deaconess Medical Center, Harvard Medical School
Location: Boston, MA, USA
Website: www.bliec.com

5-9 October 2012
19th International Symposium on Hepatitis C Virus and Related Viruses
Location: Venice, Italy
Website: www.hcv2012.org/

10-13 October 2012
Japanese Digestive Disease Week (JDDW)
Location: Kobe, Japan
Website: www.jddw.jp/jddw2012/en/index.html

15-17 October 2012
13th World Congress of the International Society for Diseases of the Esophagus
Organized by: The International Society for Diseases of the Esophagus and European Society of Esophagology
Location: Venice, Italy
Website: www.isde2012.org

16-19 October 2012
Australian Gastroenterology Week (AGW2012)
Organizer: Gastroenterological Society of Australia
Location: Adelaide, South Australia
Website: www.agw.org.au/

19-24 October 2012
ACG 2012 Annual Scientific Meeting & Postgraduate Course
Organizer: American College of Gastroenterology
Location: Las Vegas, Nevada, U.S.A.
Website: www.acg.gi.org/acgmeetings/

20-24 October 2012
20th UEGW Amsterdam 2012
Organizer: United European Gastroenterology Federation
Location: Amsterdam, The Netherlands
Website: www.uegw12.uegf.org/

3 November 2012
The 3rd Asian Pacific Topic Conference: Nutrition Related Disorders and Digestive System
Organizers: Japanese Society of Gastroenterology (JSGE), Asian Pacific Association of Gastroenterology (APAGE)
Location: Tokyo, Japan

9-13 November 2012
The Liver Meeting 2012 & 63rd Annual Meeting of the American Association for the Study of Liver Diseases
Organizer: The American Association for the Study of Liver Diseases
Location: Boston, Massachusetts, USA
Website: www.aasld.org/2012/Pages/default.aspx

14-16 November 2012
Annual Scientific Meeting 2012 of The New Zealand Society of Gastroenterology
Organized by: The New Zealand Society of Gastroenterology
Location: Hamilton, New Zealand
Website: www.nzsg.org.nz/cms2/news/1/15/NZSG-2012-ASM/

27-30 November 2012
Tenth Annual International Congress Frontiers in Intestinal and Colorectal Disease 2012
Organized by: St. Mark’s Hospital Academic Institute
Location: London, United Kingdom
Website: www.stmarkshospital.org.uk/frontiers

5-8 December 2012
Asian Pacific Digestive Week (APDW 2012)
Hosted by: The Gastroenterological Association of Thailand and the Liver Society (Thailand)
Location: Bangkok, Thailand
Website: www.apdw2012.org/

5-8 December 2012
22nd World Congress of the International Association of Surgeons, Gastroenterologists and Oncologists (IASGO 2012)
Organizer: International Association of Surgeons, Gastroenterologists and Oncologists
Location: Bangkok, Thailand
Website: www.iasgo2012.org

11-13 December 2012
27th International Workshop on Therapeutic Endoscopy
Location: Prince of Wales Hospital, Shatin, N.T., Hong Kong
Website: www.hkde.org

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