

## **Abstracts of Dissertations June 2009 Exit Assessment Exercise**

### **PREDICTIVE FACTORS IN PULMONARY EMBOLISM**

Dr Szeto Ching Ho, Department of Medicine, Yan Chai Hospital (June 2009 Advanced Internal Medicine Exit Assessment Exercise)

**Background** Clinical suspicion of pulmonary embolism (PE) is based on history, physical examination, blood gases, electrocardiogram (ECG), D-dimer and chest X-ray (CXR). Some may undergo ventilation-perfusion (V/Q) scanning and others may proceed to pulmonary angiography for confirmation of diagnosis.

**Objective and methodology** To elucidate the predictive factors for pulmonary embolism, 2 x 2 contingency table and various statistical tests based on the fundamentals of biostatistics had been used. Patients with suspected PE (those with dyspnoea and chest discomfort) and those with documented PE had been recruited from 1998 to 2008 in Yan Chai Hospital. They were then divided into confirmed PE group and non-PE group. Confirmation of pulmonary embolism was mainly by ventilation perfusion scan, contrast CT thorax and spiral CT thorax either alone or in combination. All the clinical variables in the database were evaluated using logistic regression analysis. The significance was assessed by using Chi-Square test for nominal categorical variables and the Wilcoxon test for continuous variables. Those predictor variables with 2-tailed P-value <0.05 were included for the multivariate regression analysis model. Regression coefficients for each statistically significant variable were calculated. Scores were assigned according the regression coefficient. Receiver-operating characteristic (ROC) curve analysis was performed and the cut-off scores for different probabilities of pulmonary embolism were found. Internal validation was performed by contingency cross validator. Patients without detectable PE at the time of study would be traced to see if there was any hospitalization for PE in the following three months. Usefulness and shortcomings of various diagnostic tests will be discussed.

**Results** Predictive factors for pulmonary embolism including a scoring system were identified. They were history of deep vein thrombosis or pulmonary embolism, steroid therapy, smoking and drinking habit, calf pain, collapse or arrest, mental dullness, tachypnoea, oxygen desaturation, diffuse rhonchi and calf swelling.

**Conclusion** Initial diagnostic test should be guided by clinical assessment on the probability of pulmonary embolism and by patients' clinical characteristics. Limitations of various diagnostic tests should be noted to avoid missing the diagnosis of pulmonary embolism. For practicability, further prospective external validation studies using patients from other centers should be done to confirm findings in this study.

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### **NOSOCOMIAL CANDIDAEMIA: 10 YEARS' EXPERIENCE IN THE INTENSIVE CARE UNIT OF A REGIONAL HOSPITAL OF HONG KONG**

Dr Chan Ka Hing Jacky, Department of Medicine, Tseung Kwan O Hospital (May 2009 Critical Care Medicine Exit Assessment Exercise)

**Objective** Candidaemia is a common bloodstream infection in hospitals. The incidence has been stable or increasing in the past decade according to worldwide literature. Intensive care unit patient has been recognized as a particular group at risk of Candida infection. Data on candidaemia in local ICU is however lacking. This study looked into the epidemiology and trend of ICU candidaemia from 1999 to 2008 in a regional hospital of Hong Kong. Bloodstream infection due to *Candida albicans* and non-*albicans* species and in different patient groups would be compared.

**Methods** Clinical records of all patients with positive blood cultures of *Candida* species in Queen Elizabeth Hospital intensive care unit from 1999 to 2008 were retrieved from Department of Microbiology. Patient demographics, distribution of *Candida* species, underlying medical conditions and surgery, management, clinical outcome and mortality were analysed.

**Results** 90 ICU patients had candidaemia in this decade. Annual incidence rates of nosocomial candidaemia ranged from 4.8 to 21.1 per 1000 admissions and 0.9 to 3.2 per 1000 patient days. It remained similar from 1999 to 2005 followed by surge since 2006. 86 patients entered the retrospective review as 4 clinical records were disposed. 61.6% of patients were male and 51.2% were older than 60 years of age. *Candida albicans* (67.4%) was the most common species, followed by *Candida tropicalis* (16.3%) and *Candida parapsilosis* (8.1%). Mean duration from ICU admission to candidaemia was 10.6 days and the mean length of stay in ICU was 23.5 days. Use of immunosuppressant (16.3%), diabetes (15.1%), malignancy (14.0%) and chronic kidney disease (14.0%) were common associated medical conditions. 54.7% of patients had operations done and abdominal surgery was the most common. 79.1% of patients were diagnosed to have sepsis on ICU admission. All had antibiotics given and 14% had prophylactic antifungal agents. All had inotropic or vasopressor support and central line use. 98.8% had mechanical ventilation, 87.2% had packed cells transfusion, 68.6% had renal replacement therapy and 32.6% had TPN use. Mean APACHE II score was 28.8. Mortality reached 79.1% and was even higher in those with central line not removed and antifungal treatment not given.

**Conclusion** Nosocomial candidaemia was associated with significant morbidity and high mortality. Its incidence remained similar till 2005 and had been rising in recent years. Early recognition of high risk patients, source removal and prompt antifungal use were of paramount importance.

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## **B-TYPE NATRIURETIC PEPTIDE AS A PROGNOSTIC MARKER OF ADVERSE EVENTS POST-OESOPHAGECTOMY**

Dr. Tang Kai Yan Gloria, Intensive Care Unit, Queen Mary Hospital (May 2009 Critical Care Medicine Exit Assessment Exercise)

**Background** B-type natriuretic peptide (BNP) has been investigated extensively as a marker of acute heart failure. It can also be raised in conditions with compromised myocardial reserve. Oesophagectomy is a complex operation with high morbidity with cardiopulmonary and surgical complications. This study aims to investigate the prognostic value of BNP in patients undergoing oesophagectomy for carcinoma of the oesophagus or cardia.

**Methods** In this prospective, single-blinded observational study conducted between February 2008 and February 2009, patients undergoing oesophagectomy for carcinoma of the oesophagus or cardia were recruited. The BNP was checked pre-operatively and subsequently on day 1 and day 3 post-operatively. The cardiac function was assessed by measurement of left ventricular systolic function by transthoracic echocardiogram on day 1 or day 2 post-operation. The fluid status was assessed by the haemodynamic parameters, the fluid balance and the serum creatinine. These values were measured over 3 days post-operation. The medical and surgical adverse events were recorded.

The B-type natriuretic peptide (BNP) profiles were compared with the presence of adverse events post-oesophagectomy using the Chi-square test or Fisher's exact test. The fluid status, echocardiogram finding, and serum creatinine were correlated with the BNP levels using non-parametric analysis of Spearman's correlation. The secondary endpoints included the length of stay in the Intensive Care Unit and the length of hospital stay.

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## **A COMPARATIVE STUDY ON STAPHYLOCOCCUS AUREUS COLONIZATION IN PATIENTS WITH ATOPIC DERMATITIS, CONTROLS AND THEIR CLOSE CONTACTS**

Dr Chiu Lai Shan, Department of Medicine & Therapeutics, Prince of Wales Hospital (June 2009 Dermatology & Venereology Exit Assessment Exercise)

**Background** Staphylococcus aureus (*S. aureus*) colonization is common in atopic dermatitis (AD) patients. The close contacts of AD patients may be an important reservoir of *S. aureus*.

**Objectives:** 1) To determine the prevalence of *S. aureus* colonization in AD patients and their close contacts as compared with non-AD controls and their close contacts. 2) To identify factors affecting severity of AD. 3) To study the antibiotic resistance profile of *S. aureus*.

**Method** Patients who were 21 year-old or younger with AD seen at the Pediatric Dermatology Clinic in the Prince of Wales Hospital and their close contacts were studied. Age-, gender-matched subjects who did not have AD and their close contacts were recruited as controls. Nasal swabs and skin swabs from eczematous lesion (for AD patients only) were taken for culture of *S. aureus* and the antibiotic resistance profile was tested. AD severity was assessed using the well-validated clinical SCORAD index.

**Results** Two hundred and eleven subjects were recruited with 50 AD patients, 50 non-AD controls, 60 close contacts of AD patients and 51 close contacts of controls. Four close contacts of the controls (7.8%) and 14 close contacts of the AD patients (23.3%) had *S. aureus* nasal colonization. The difference was statistically significant ( $P = 0.027$ ). By multivariate analysis, skin colonization of *S. aureus* was the only independent predictor for severe AD (odds ratio 17.01, 95% confidence interval 1.60 to 181.1;  $P = 0.02$ ). No MRSA colonization was detected in all subjects. All *S. aureus* isolates were sensitive to cloxacillin.

**Conclusions** Anterior nares of close contacts of AD patients are possible reservoirs of *S. aureus*. Skin colonization of *S. aureus* predicts severe AD. No MRSA

strain was found in this study. We suggest cloxacillin as the choice of antibiotic for treatment of infective exacerbation of AD.

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## **QUALITY OF LIFE ASSESSMENT AMONG PATIENTS WITH ATOPIC ECZEMA ATTENDING DERMATOLOGY CLINICS IN HONG KONG**

Dr Lam Ka Man, Social Hygiene Service, Department of Health (June 2009 Dermatology & Venereology Exit Assessment Exercise)

**Background** Atopic eczema (AE) is a common chronic skin disease worldwide with increasing prevalence in recent years. At least one-third of patients have disease extended to adulthood. Literatures found its impact on health related quality of life (HRQoL) was significant for both children and adults. However, there was very limited data available on this aspect in the local Chinese population.

**Objectives** This study aimed to measure the HRQoL of local Chinese population with AE and make comparison with that of the Hong Kong general population and that of the other diseases. It analyzed the correlation between various HRQoL methods. The association between objective Severity Scoring of Atopic Dermatitis (SCORAD) and HRQoL was also studied.

**Methods** It was a multi-center cross-sectional descriptive study carried out from October 2008 to February 2009 at the government dermatology clinics by a single investigator. Patients of age 3 to 65 years old fulfilled the criteria of atopic dermatitis based on The UK Working Party's Diagnostic Criteria for Atopic Dermatitis were invited to join the study in a consecutive manner. Three self-answered instruments were distributed to the subjects: 36-item Short-Form Health Survey (SF-36), 10-item Dermatology Life Quality Index (DLQI) or Children Dermatology Life Quality Index (CDLQI), and a single global question. The SF-36 scale scores and summary scores were compared with that of the general population of Hong Kong (mean=50, SD=10) after age and sex-specific standardization. The clinical severity of AE was assessed by Objective SCORAD by the investigator.

**Results** One hundred and twenty patients were recruited in this study [70 children (age 3-16y.o.) and 50 adults (age  $\geq$  16y.o.)]. Patients with AE were found to have impairment of quality of life when compared with that of the general population. The greatest impairment of SF-36 was found in the Social Functioning [SF mean score (SD)=38.86 (14.00);  $p < 0.0001$ ] and Mental Health [MH mean score (SD)=46.05 (11.07);  $p < 0.01$ ] domains. Both mean scores of Physical component summary and Mental component summary of AE patients were lower than that of the 2410 HK healthy controls. The Mental component summary decreased significantly with mean score 45.15 ( $p < 0.01$ ). The DLQI and CDLI were scored the highest in the symptoms and feelings [median score (IQR) = 3 (2-4), median score (IQR) = 2 (1-3) respectively] and the lowest in the personal relationship [median score (IQR) = 1 (0-1), median score (IQR) = 0 (0-1) respectively]. The single global question showed most of the patients rated themselves 6 as mild (38.3%) and moderate (33.3%) grade of disease. The Mental component summary of SF-36 correlated with other HRQoL instruments including DLQI, CDLQI ( $r = -0.44$ ,  $r = -0.63$  respectively;  $p < 0.05$ ) and single global question ( $r = -0.50$ ;  $p < 0.001$ ) significantly. However, the Physical component summary of SF-36 did not correlate or correlated weakly with other HRQoL instruments except single global question ( $r = -0.40$ ;  $p < 0.01$ ). The strongest correlation between HRQoL

instruments and disease severity occurred in single global question ( $r=0.67$ ,  $p<0.0001$ ).

**Conclusion** The quality of life of AE patients was affected in local population. Its mental impact was comparable to other medical conditions that were well known to cause significant morbidity and mortality. Physicians should assess the psychological impact of AE patients during consultations and multidisciplinary approach may benefit these patients. Single global question showed the highest and significant correlation with most of the HRQoL instruments used. Therefore the clinical use of it for assessment of disease severity and HRQoL by patients was evident.

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## **THE PREVALENCE OF HUMAN PAPILLOMA VIRUS IN THE ANAL REGION AND ORAL CAVITY OF MALE CHINESE PATIENTS WITH GENITAL WARTS IN THREE LARGE SEXUALLY TRANSMITTED DISEASE CLINICS IN HONG KONG**

Dr Leung Wai Yiu, Social Hygiene Service, Department of Health (June 2009 Dermatology & Venereology Exit Assessment Exercise)

**Background and Objective** Human papillomavirus infection is believed to be one of the primary causes of the rising trend of anal cancer and also accountable for some of the head and neck cancer. The aims of our study are To examine the asymptomatic carriage rate of oral and anal HPV infection in patients with and without genital wart; To characterize viral prevalence, types and concordance between the anal region and oral cavity of patient with genital wart; To identify factors influencing the prevalence of genital wart, HPV infection in oral cavity and anal region.

**Methods** This study was a cross-sectional one conducted from September 2008. Chinese male patients (with or without genital wart) attending three sexually transmitted disease clinics were consecutively invited to participate in the study on randomly chosen days between the study period. At the first visit, diseased patients and the control cases were asked to complete the questionnaire regarding the demographic data and sexual behaviors and swab specimens were collected blindly from the surface of oral cavity and peri-anal areas for HPV DNA detection. The morphology, duration and location of the genital warts were recorded, the number of warts were counted and the surface area measured.

**Results** A total of 160 men completed the study. For genital wart, the risk factors independently associated with it were “**Number of life time sex partners**” and “**Circumcision**”. On the basis of DNA analysis, the overall prevalence of anal and oral HPV infection was found to be 16.9% and 3.1% respectively. Of the men with anal HPV infection and oral HPV infection, 14.8 % and 20% had an oncogenic HPV type respectively. No concordance was found between the anal region and oral cavity. Risk factors independently associated with anal HPV were “**Presence of genital wart**” and “**Circumcision**”. Results also indicated that the risk factors independently associated with oral HPV infection were the “**Number of life-time sexual partners**”.

**Conclusion** The prevalence rate of anal and oral HPV in this cross sectional study of STD attendees demonstrate that anal HPV infection is not uncommon and detection of oral HPV is rare in our locality. However, the prevalence rate of oncogenic HPV type

was relatively low compared with other studies. This study suggested that sexual behavior, presence of genital wart and circumcision status might play important roles in HPV transmission in peri-anal area and oral cavity.

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## **NATURAL HISTORY AND NON-INVASIVE ASSESSMENT OF PRIMARY BILIARY CIRRHOSIS**

Dr But Yiu Kuen David, Department of Medicine, Queen Mary Hospital (June 2009 Gastroenterology & Hepatology Exit Assessment Exercise)

Primary biliary cirrhosis (PBC) is a chronic liver disease characterized by progressive ductopenia and liver fibrosis. Patients typically deteriorate slowly through asymptomatic, symptomatic and liver insufficiency phases. Progressive jaundice and cirrhotic complications mark the pre-terminal stage of disease. However, the pace of disease progression is not uniform. Prognostic scores consisting various clinical, laboratory parameters and even quantitative imaging assessments are used to predict disease progression. Histologic severity of liver fibrosis remains one of the most important prognostic factors for disease progression. Due to inherent risks and limitation of liver biopsy in PBC, non-invasive methods of assessing liver fibrosis are being explored. The recent understanding of mechanisms in hepatic fibrosis leads to the use of direct and indirect serum markers to qualify and quantify liver fibrosis. Liver stiffness assessment by transient elastography has shown promise in the detection, quantification and monitoring of liver fibrosis in various chronic liver diseases including PBC. A cohort of local Chinese PBC patients was recruited for liver stiffness measurement. Its correlation with common clinical and laboratory parameters was assessed. Factors predicting disease progression were also analyzed. A higher liver stiffness measurement by transient elastography, Fibroscan, was associated with clinical cirrhotic features, advance blood test results and worse survival prognostic scores. Liver stiffness measurement may also be useful in Chinese patients with PBC to predict, quantify and monitor liver fibrosis.

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## **COMBINATION THERAPY WITH PEGYLATED INTERFERON-A AND RIBAVIRIN FOR CHRONIC HEPATITIS C INFECTION: 6 YEARS' EXPERIENCE IN A LOCAL CENTRE**

Dr Cheung Wing Lin, Kent, Department of Medicine, Queen Elizabeth Hospital (June 2009 Gastroenterology & Hepatology Exit Assessment Exercise)

**Background** Combination therapy using pegylated interferon- $\alpha$  with ribavirin for chronic hepatitis C has been the recommended treatment since 2002. However, the response rate was only around 50% for genotypes common in Hong Kong. Besides, not all patients can benefit due to contraindications, intolerance of side effects or expensive cost of treatment.

**Objectives** The aim of this study was to investigate the applicability, efficacy and safety of this combination therapy in a local hospital clinic. Predictive factors for sustained virological response (SVR) would be identified.

**Methods** A total of 254 anti-HCV positive patients attended our clinic from January

2002 to December 2007. Characteristics of these patients were analyzed. 32 patients treated with pegylated interferon- $\alpha$  plus ribavirin were retrospectively studied. Adherence to combination therapy and response to treatment were assessed. Predictors for SVR were identified by multivariate analysis.

**Results** 206 anti-HCV positive patients (81.1%) were not treated due to various reasons such as normal ALT level (31.6%), contraindications for treatment (26.2%) and patient choice (18.4%). For patients received combination therapy with pegylated interferon- $\alpha$  and ribavirin, 75.0% were infected by HCV genotype 1 and 12.5% were infected by genotype 6. The overall sustained virological response (SVR) rate was 62.5%. For patients infected with HCV genotype 1, SVR rate was 58.3%. Multivariate logistic regression identified pegylated interferon  $\alpha$ -2b (OR 21.45, 95% CI 1.21–380.96,  $P=0.037$ ) and completion of at least 80% of the recommended course of treatment (OR 17.75, 95% CI 1.35–234.22,  $P=0.029$ ) as independent predictors of SVR. 43.7% of patients discontinued treatment prematurely due to adverse events or failure to achieve early virological response (EVR). 53.1% required dose reduction of either medication due to side effects of treatment.

**Conclusions** Although not widely applicable, the pegylated interferon- $\alpha$ -based combination therapy was shown to have comparable efficacy and well-tolerated in our hepatitis C patients. Pegylated interferon  $\alpha$ -2b and completion of at least 80% of the recommended course of treatment were identified as independent predictors of sustained virological response.

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## **PERFORMANCE OF DIFFERENT CLINICAL SCORING SYSTEMS IN PREDICTING LIVER FIBROSIS IN CHINESE PATIENTS WITH NON ALCOHOLIC FATTY LIVER DISEASE**

Dr Fan Tam Ting Tina, Department of Medicine, Tseung Kwan O Hospital (June 2009 Gastroenterology & Hepatology Exit Assessment Exercise)

**Background** Nonalcoholic fatty liver disease (NAFLD) is one of the most common causes of chronic liver disease worldwide. Patients with advanced fibrosis or cirrhosis have higher liver related mortality. BARD score predicts advanced fibrosis with good accuracy in Caucasian patients.

**Objectives** The primary aim of this study was to validate the BARD score in Chinese population and compared it with AST/ALT ratio, AST-to-platelet ratio index and NAFLD fibrosis score to predict advanced fibrosis (stage 3-4) and significant fibrosis (stage 2-4). The secondary aim was to determine independent predictors of significant fibrosis.

**Methods** Biopsy proven NAFLD patients were recruited prospectively during July 2001 to December 2008 from Tseung Kwan O Hospital and Prince of Wales Hospital. The clinical, biochemical and histological characteristics of NAFLD patients were evaluated and the performance of 4 scoring systems and predictors of significant fibrosis were determined.

**Results** A total of 199 patients was included in the study. Nineteen (9.5%) patients had advanced fibrosis and 50 (25%) patients had significant fibrosis. The AUC of BARD score in predicting advanced fibrosis and significant fibrosis were 0.57 and

0.64, respectively. The performance of the other three scoring systems in predicting advanced and significant fibrosis were similar to BARD score. AAR  $\geq$  0.8, DM and age  $\geq$  50 were independent predictors of significant fibrosis.

**Conclusion** The performance of BARD score and other three scoring systems was not satisfactory in Chinese NAFLD patients.

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## **NON-CARDIAC CHEST PAIN AND EPIGASTRIC PAIN: NATURAL HISTORY AND OUTCOME IN A PROSPECTIVE 4-YEAR COHORT STUDY**

Dr. Hsu Shing Jih Axel, Department of Medicine, Queen Mary Hospital (June 2009 Gastroenterology & Hepatology Exit Assessment Exercise)

**Background / Aims** To determine the morbidity and mortality of a prospective cohort of patients presenting with chest (and epigastric pain) at 6 months after last clinic consultation, at 2 years and at 4 years subsequent follow-up

**Methods** A total of about 3000 referral letters were screened during the recruitment period from 2004 to 2005. 918 patients who presented to Queen Mary Hospital's Triage Clinic within this period with a primary presenting symptom of retrosternal and/or epigastric pain were recruited. Clinic records were analyzed and patients with chest (and epigastric) pain were prospectively followed up. Patient demographics, co-morbidities and other relevant information were retrieved from hospital records and any missing information supplemented at the time of our telephone interview. Once discharged from Triage Clinic, we contacted these patients at 6 months intervals (up to 4 years) and asked patients about their chest pain symptoms. For simplicity of data presentation the first telephone interview at 6 months after last clinic visit, the 2 year results, and the 4 year results are presented in this dissertation project. Descriptive statistical methods were made to identify risk factors associated with non-cardiac chest pain and adverse long term outcome in terms of morbidity and mortality.

**Results** 918 referral letters to Queen Mary Hospital's Triage Clinic in 2004-2005 were screened and reviewed. 877 (490 females, 387 males; average age 55) patients were recruited into the 4 year prospective cohort study. Majority of patients were both non-smoker and non-drinkers with few co-morbidities (hyperlipidaemia being the most common co-morbidity). 11 patients died on follow-up with a mortality rate of 1.3% in this cohort. The mean age of death was 69 years old. The most common cause of death was malignancy (8 of 11 deaths, 73%). None of the NCCP patients died on follow-up. The most common diagnoses were NCCP (367, 41.8%), functional dyspepsia (219, 24.9%) and cardiac chest pain (106, 12.1%). 20 patients were diagnosed with malignancies during this 4-year follow-up. In the NCCP cohort, 18.9% and 32.5% of patients continued to experience chest pain up at 2 and 4 years respectively. Majority of patients only had symptoms occurring once a month. A significant proportion required medical attention or follow-up (up to 73%). Few Casualty attendances and hospitalizations were required. Quality of life was affected in less than 10% of patients up to 4 years from recruitment.

**Conclusions** In this hospital-based clinic study, the prevalence of NCCP was 41.8%. This natural history study has also shown that at 4 years from recruitment, no patients with the diagnosis of NCCP died. Despite a significant proportion of patients



requiring medical attention and medication, the quality of life was significantly affected in less than 10% of those with ongoing chest pain. Majority of patients had 1 episode of chest pain per month and Casualty attendance and hospitalization rate was very low. Further follow-up with this cohort will continue to provide more information in the study of the epidemiology and natural history of NCCP.

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## **EVALUATION OF THE PATTERN OF COLONIC POLYPS AND THE RISK FACTORS FOR THE DETECTION OF ADVANCED COLONIC POLYPS IN A REGIONAL HOSPITAL OF HONG KONG**

Dr. Kan Yee Man, Department of Medicine and Geriatrics, Kwong Wah Hospital (June 2009 Gastroenterology & Hepatology Exit Assessment Exercise)

**Background** The incidence of colorectal cancer is rising in Hong Kong.

**Objectives** To determine the prevalence and the distribution of colonic polyps in patients with colonic polypoid lesions and to evaluate possible risk factors for the detection of advanced colonic polyps.

**Design** Retrospective study.

**Setting** A regional public hospital in Hong Kong.

**Patients** The clinical data of all patients who underwent colonoscopy and polypectomy during the period July 2005 to July 2008 were reviewed. Patients who had resected polyps with histology reports were included.

**Results** A total of 326 patients were recruited. Five hundred and ninety-two polyps were collected. Two hundred and twenty-eight out of these 592 polyps (38.5%) were advanced polyps. Two hundred and sixty-four out of these 592 polyps (44.6%) were located in the proximal colon. Distal colonic polyps were found in 234 patients (71.5%). Proximal colonic polyps were found in 174 patients (53.4%). Eighty-two out of 234 patients (35.0%) with distal colonic polyps had synchronous proximal polypoid lesions. Ninety-two out of 174 patients (52.9%) with proximal lesions had no colonic lesion in the distal colon and 33 out of 68 patients (48.5%) with advanced proximal neoplasm had no colonic lesion in the distal colon. On univariate analysis, factors associated with the presence of advanced proximal polyps were the presence of multiple distal polyps (3 or more) (OR 2.75, 95%CI 0.99-7.60,  $p=0.05$ ), large distal polyps (1cm or larger) (OR 2.75, 95%CI 0.99-7.60,  $p=0.05$ ), distal polyps with advanced histology, age 60 or over ( $p=0.04$ ), and medical history of diabetes mellitus ( $p=0.01$ ). On multivariate analysis, medical history of diabetes mellitus was the only factor associated with the presence of advanced proximal polyp.

**Conclusions** Age 60 or over, a history of diabetes mellitus, the presence of large distal polyps, advanced distal polyps or multiple distal polyps were associated with an increased risk of advanced proximal polyps. If only distal colon is examined, about half of the cases of advanced proximal polyps will be missed.

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## **HEPATOGENESIS OF REGENERATIVE AND DYSPLASTIC LIVER NODULES IN CHINESE PATIENT: A RETROSPECTIVE ANALYSIS**

Dr Ng Chi Ho, Department of Medicine & Geriatrics, Tuen Mun Hospital (June 2009 Gastroenterology & Hepatology Exit Assessment Exercise)

**Study Objectives** To determine the hepatocellular carcinoma (HCC) development rate and survival of patients diagnosed to have regenerative nodules (RNs), low grade dysplastic nodules (LGDNs) and high grade dysplastic nodules (HGDNs) of liver by percutaneous needle guided biopsy.

**Design** Retrospective single centre study

**Setting** Regional hospital in Hong Kong SAR, China

**Methods** One hundred and forty seven patients with non malignant liver nodules were followed up over a median duration of 28.6 months. The initial histological diagnosis included regenerative nodules (RNs) (n=74), low grade dysplastic nodules (LGDNs) (n=34) and high grade dysplastic nodules (HGDNs) (n=39). Clinical data (age, sex, Child's status, alcoholic drinking history, past history of HCC), laboratory data (albumin, prothrombin time, bilirubin, alpha fetal protein level, platelet count, hepatitis B surface antigen, hepatitis B e Antigen and anti hepatitis C antibody), and radiological data (ultrasound and contrast enhanced computer tomography) were collected.

**Main outcome measured** Hepatocellular carcinoma development time and patient survival time

**Results** A total of 48(32.7%) nodules developed into HCC. Cumulative HCC development rate at first year, second year, third year and fourth year were 2.7%, 5.4%, 9.5% and 12.2% for RNs, 29.4%, 35.3%, 38.2% and 44.1% for LGDNs; and 38.5%, 41.0%, 51.3% and 51.3% for HGDNs, respectively. The HCC development rate was highest in the HGDN group. Multivariate analysis showed that histological dysplastic changes, elevated alpha fetal protein level and advanced age were independent predictors of HCC development. The overall cumulative mortality rates are 5.4% at 1 year, 12.9% at 2 years, 16.3% at 3 years and 20.4% at 4 years. Histological dysplastic changes, male sex, advanced age, prolonged prothrombin time and hyperechoic appearances in ultrasound are independent predictor of mortality

**Conclusion** The presence of dysplastic change in liver nodules increased the risk of HCC development and the risk of death.

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## **THERAPEUTIC ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY (ERCP) IN ELDERLY PEOPLE 85 YEARS OLD OR OLDER: IS IT SAFE AND EFFECTIVE?**

Dr Sze Yuen Chun, Department of Medicine, North District Hospital (June 2009 Gastroenterology & Hepatology Exit Assessment Exercise)

**Background** With the aging of our population, increasing numbers of elderly patients were admitted for pancreatobiliary disease. Therapeutic Endoscopic Retrograde Cholangiopancreatography (ERCP) is one of the effective and life-saving

procedures for management of these conditions. However, clinicians are sometimes hesitant to perform ERCP for the elderly as it is an invasive procedure and for fear of the increased risk of complications and mortality.

**Objective** To evaluate the outcome, safety and efficacy of performing therapeutic ERCP in the extreme elderly 85 years old or older in a local district hospital.

**Design** Retrospective cohort study

**Method** ERCP performed from January 2005 to June 2008 in North District Hospital Combined Endoscopy Unit by 2 experienced gastroenterologists were analyzed. Patients were divided into 2 groups: age 85 years old or older (Group A) and age less than 85 years old (Group B). Baseline demographic data, indications for ERCP, endoscopic procedures and diagnosis, complications of the procedure, 7-day and 30-day mortality were recorded.

The primary endpoint was the procedure related complications. The secondary endpoints included the successful cannulation rate, 7-day and 30-day mortality.

**Results** The overall successful cannulation rates were similar in Group A and B patients (95.1% and 93.6% respectively,  $P = 0.681$ ). 116 therapeutic ERCP were performed in 93 patients in Group A and 417 therapeutic ERCP in 328 patients in Group B. Group A patients had significantly more number of co-morbidities and poor premorbid status than Group B patients. Cholangitis was the most frequent indication for ERCP in patients older than 85 years old, followed by suspected biliary obstruction. In both groups, biliary tree stone was the most common endoscopic finding (68% in Group A and 55.2% in Group B,  $P=0.017$ ). The overall procedure related complication rate was not significantly different between the 2 groups (7.8% in Group A and 8.2% in group B,  $P=0.89$ ). The 30-day mortality was also similar in both groups (7.5% and 5.8%,  $P=0.712$ ). However, the 7-day mortality rate was higher in Group A than in Group B (5.4% in Group A vs. 1.2% in Group B,  $P=0.028$ ). Pneumonia was the most common cause of death (4 patients in Group A and 1 patient in Group B).

**Conclusion** Therapeutic ERCP is safe and effective in patients 85 years old or older when performed by experienced endoscopists. Age itself should not be a limiting factor for the elderly to undergo life-saving endoscopic procedure. Pneumonia was a common cause of early mortality. Therefore close monitoring with optimisation of chest condition before and after ERCP is needed when performing the endoscopic procedures for these elderly patients.

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## **EPIDEMIOLOGY AND OUTCOME OF OLDER INDIVIDUALS WITH HIP FRACTURES IN HONG KONG**

Dr Chan Chin Pang, Ian, Department of Medicine and Geriatrics, United Christian Hospital (June 2009 Geriatric Medicine Exit Assessment Exercise)

**Introduction** Hip fractures are associated with reduced mobility and increased dependency. Understanding its epidemiology and outcome predictors is important.

**Method** This is a retrospective study. Data was collected by comprehensive case notes review. Operated acute hip fracture episodes, which were admitted to the

United Christian hospital between 1<sup>st</sup> January, 2007 and 31<sup>st</sup> December, 2007, under ortho-geriatric team care were included. Episodes involving high energy trauma, hip prosthesis or disseminated malignancies were excluded.

**Result** Total 516 hip fracture episodes were identified involving 514 patients. 470 episodes fulfilled inclusion criteria. The mean age was 81.7 (SD 8.0) years and 73.6% were female. 18.7% elderly were institution residents before hip fracture. Over 80% of the cohort suffered from comorbidity. About 75% cases operated within 4 days after admission. Age ( $p=0.001$  OR 1.092) and dementia ( $p=0.003$  OR 3.169) were two independent predictors of 6-month post-fracture institutionalization. Age and pre-admission psychiatric medications prescription were predictors of worsened mobility and basic activities of daily living (BADL) 6 months after fracture hip. Acute hospital length of stay was affected by the duration of operation delay ( $p<0.001$ , B=1.572, Beta=0.493, 95% CI, 1.305-1.839). In-hospital, 6-month and 1-year mortality rate was 3.4%, 12.3% and 17.7% respectively. Pre-fracture hip institutionalisation and presence of comorbidity were independent risk factors of 6-month and 1-year mortality. Sepsis was the commonest cause of death.

**Conclusion** A number of factors were found to be predictors of geriatric hip fracture outcome. Cautious psychiatric medications prescription and minimization of pre-operative length of stay should be advocated.

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## **A RETROSPECTIVE STUDY – PRE-ADMISSION ANTITHROMBOTIC TREATMENT AND ACUTE ISCHEMIC STROKE SEVERITY IN ELDERLY PATIENTS WITH ATRIAL FIBRILLATION**

Dr. Wong Kin Chung Martin, Department of Medicine and Geriatrics, Kwong Wah Hospital (June 2009 Geriatric Medicine Exit Assessment Exercise)

**Introduction** Warfarin and anti-platelet agents (e.g. aspirin) were proven to be effective in primary prevention of ischaemic stroke in patients with atrial fibrillation. However, there is scarcely local data which emphasis the clinical outcomes in those elderly patients already on antithrombotic therapy after the stroke event.

**Study design** Patients (age  $\geq 65$ ) admitted to Kwong Wah Hospital with acute ischemic stroke and atrial fibrillation during the period of January 2001 to December 2007. The primary outcomes were associations between pre-admission antithrombotic treatments with the post stroke severity, complications, length of hospital stay, mortality and morbidity during the hospitalization. Secondary outcomes were post stroke survival and post discharge placement. It will be compared between the three treatment groups: no antithrombotic group, antiplatelet group and warfarin group. Modified Rankin scale was used for categorizing the post-stroke functional disability. Stroke severity was measured by Canadian neurological scale.

**Result** Total 167 patients were recruited. 47 patients received no antithrombotic treatment on admission, 100 patients were on the antiplatelet treatment and 20 patients were on warfarin. Among the warfarin group, 12 patients were within the therapeutic level (INR  $\geq 2$ ). Although the warfarin groups suffered from more cerebrovascular risks factors, the clinical and functional scale ( $p<0.05$ ), mortality during hospitalization ( $p<0.01$ ), 6 months and 1 year survival ( $p<0.01$ ), and mean survival ( $p<0.01$ ) showed significant beneficial effect when compared with the other

two groups. Also there were fewer stroke patients in warfarin group discharged to nursing home after hospitalization ( $p < 0.01$ ) and 6 months afterward ( $p < 0.01$ ).

**Interpretation** Pre-admission warfarin was associated with better survival, with better clinical and functional outcomes. Significantly more patients on warfarin returned to home after stroke. Therapeutic warfarin ( $\text{INR} \geq 2$ ) is associated with longest mean survival compared with other antithrombotics.

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### **SURVIVAL AND MOLECULAR RESPONSES OF CHINESE ADULTS WITH CHRONIC PHASE CHRONIC MYELOID LEUKEMIA TREATED WITH IMATINIB MESYLATE IN HONG KONG**

Dr Chan Hay Nun, Department of Medicine, Tuen Mun Hospital (May 2009 Haematology and Haematological Oncology Exit Assessment Exercise)

After the initial discovery of chronic myeloid leukemia (CML) more than 150 years ago, little progress had been made in its treatment for more than a century. With the introduction of tyrosine kinase inhibitors in the late 1990s, the management of CML has been revolutionized.

This thesis consists of two parts. The first part is an overview of the current management of chronic phase chronic myeloid leukemia. The second part is an analysis of the experience from a regional hospital regarding the management of chronic phase chronic myeloid leukemia treated with imatinib mesylate.

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### **A RETROSPECTIVE STUDY ON THE CHARACTERISTICS OF PATIENTS HOSPITALIZED FOR HCAP IN A REGIONAL HOSPITAL IN HONG KONG**

Dr Shum Rocky, Department of Medicine, Pamela Youde Nethersole Eastern Hospital (June 2009 Infectious Disease Exit Assessment Exercise)

**Background** Traditionally , pneumonia developing outside hospital has been classified as Community Acquired Pneumonia (CAP) . Health care associated pneumonia is a subset of CAP with health care risk factors ( prior hospitalization, dialysis etc ) . As growing evidences show that HCAP is different from CAP in terms of microbiology and treatment outcome . Some authorities advocated that HCAP should be managed differently from CAP.

**Objective** Our objective is to describe the demographic, clinical , microbiological characteristics and the mortality of hospitalized HCAP patients in HK .

**Study Design** A retrospective study of HCAP patients admitted to PYNEH medical unit or intensive care unit between 1 April, 2008 to 31 May ,2008 .

**Results** 125 patients fulfilled the criteria of HCAP. 91.2% of the patients had one or more co-morbidity . The most common pathogens identified were Klebsiella and Pseudomonas . The overall day-28 mortality was 21% . After excluding patients who received DNR status , patients with low CURB65 scores ( 0-2 ) were associated with lower mortality ( 0-3.5% ) . In the high CURB65 scores group ( 3-4 ) , the mortality

were 33% and 14.2% in those who need and did not need antibiotic adjustment respectively .

**Conclusion** We showed that adjustment of antibiotics was associated with higher mortality rate. We suggested that broad spectrum antibiotics that could cover pseudomonas should be considered for patients with HCAP and CURB65 scores 3-4. This approach might lower the mortality of HCAP .

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## **TEN-YEAR CARDIOVASCULAR RISK IN HIV-INFECTED CHINESE PATIENTS AND ITS ASSOCIATION WITH ANTIRETROVIRAL THERAPY**

Dr. Wong Chun Kwan Bonnie, Department of Medicine and Therapeutics, Prince of Wales Hospital (June 2009 Infectious Disease Exit Assessment Exercise)

**Objectives** To describe the profile of metabolic complications in a cohort of HIV-infected patients attending a tertiary referral center in Hong Kong, to estimate their 10-year risk of coronary heart disease, to identify factors associated with an elevated risk profile and to explore its association with antiretroviral therapy.

**Methods** This is a descriptive observational study enrolling HIV-infected adults referred from Integrated Treatment Center for management of metabolic complications. The Framingham equation and UKPDS risk engine were used to estimate the 10-year risk of coronary heart disease.

**Results** 65 patients were enrolled during the 47-month period. Mean age was  $47.9 \pm 9.6$  years, 86.2% were male, and 90.8% were Chinese. 86.2% had history of AIDS, 93.8% had exposures to ART. Smoking and obesity were present in one fourth of the cohort; hypertension, diabetes and lipodystrophy were present in half; and a great majority had dyslipidaemia. Percentage of patients having low, moderate, high cardiovascular risks as estimated by the Framingham risk equation was 53.2%, 14.1% and 32.8% respectively. The use of UKPDS risk engine for estimation of 10-year cardiovascular risk in the subgroup with diabetes largely correlated with that calculated by the Framingham equation. Presence of obesity and the diagnosis of metabolic syndrome by the IDF criteria at entry of cohort were associated with moderate to high 10-year cardiovascular risk. Initiation of ART was associated with significant rise in total cholesterol level ( $2.13 \pm 2.24$ mmol/L,  $p < 0.001$ ), triglyceride level ( $4.19 \pm 6.25$ mmol/L,  $p < 0.001$ ) and HDL-cholesterol level ( $0.16 \pm 0.31$  mmol/L,  $p = 0.02$ ) measured at one year. At one year follow-up, there was significant improvement of lipid profile and glycaemic control in the cohort. Mortality rate was 4.6% over the study period.

**Conclusion** We observed high percentage of HIV-infected Chinese patients having multiple cardiovascular risk factors and were at high risk of developing morbidity and mortality in 10 years. Stratifying an individual's risk during clinical assessment may help physicians gauge the intensity of lifestyle or therapeutic interventions for risk reduction.

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## **A PRE-CLINICAL STUDY ON MET SIGNALING AND TARGETING IN NASOPHARYNGEAL CARCINOMA**

Dr Lau Chi Pan, Department of Clinical Oncology, Prince of Wales Hospital (June 2009 Medical Oncology Exit Assessment Exercise)

Head and neck cancer remains one of the most devastating malignancies because of its infiltrative pathology, damages to vital organs and structures at the head and neck region with radiation and surgical treatment and the high rate of local recurrence and distant metastasis leading to significant mortality from the disease. Special features of head and neck cancer at the molecular level that accounts for such specific clinical phenotype needs to be elucidated and therapeutically targeted. An oncogene named MET was cloned in 1984 from osteosarcoma cell line transformed by chemical carcinogen. MET was found to encode a transmembrane growth factor receptor with tyrosine kinase activity and mediate cancer growth, invasion, branching morphogenesis and angiogenesis in a variety of malignancies, including nearly all types of head and neck cancers. Nasopharyngeal carcinoma (NPC) represents an important endemic subtype of head and neck cancer in Hong Kong and the southern part of China. Since it shares similar invasive features with other types of head and neck squamous cell carcinomas, it is hypothesized that the MET signaling pathway also plays a role in mediating NPC's pathogenesis. The current project is a translational research which demonstrated that the MET signaling pathway is important in mediating NPC cell growth, migration and invasion via activation of its downstream signaling cascades. This molecular pathway is an attractive potential therapeutic target for NPC treatment.

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## **CLINICAL PREDICTORS OF RESPONSE TO CETUXIMAB IN METASTATIC COLORECTAL CANCER**

Dr. Ma Tin Wei Ada, Department of Clinical Oncology Prince of Wales Hospital (June 2009 Medical Oncology Exit Assessment Exercise)

**Background** The anti-epidermal growth factor receptor cetuximab has been proven to be active in metastatic colorectal cancer. This study aimed to identify clinical markers to predict which patients with advanced colorectal cancers are likely to benefit from cetuximab therapy.

**Methods** A retrospective review of 102 patients with metastatic colorectal cancer treated with cetuximab in combination with chemotherapy at a single institution between July 2004 and June 2008 was conducted. Multiple potential clinical predictive factors were tested for correlation with tumor response to cetuximab therapy using logistic regression analysis.

**Results** The objective response rates to cetuximab plus chemotherapy were 53% in patients receiving 1st line treatment and 17% in previously treated patients. The univariate analysis indicated that fewer prior chemotherapy regimens (odds ratio [OR], 0.36; 95% confidence interval [CI], 0.21-0.63;  $P < 0.01$ ), more cycles of cetuximab given (OR, 1.26; 95% CI, 1.12-1.42;  $P < 0.01$ ) and presence of grade 3 rash (OR, 5.52; 95% CI, 1.62-18.76;  $P < 0.01$ ) were associated significantly with a higher response rate to cetuximab therapy. Multivariate analysis confirmed independent predictive value of the number of prior chemotherapy regimens (OR, 0.37; 95% CI, 0.20-0.69;  $P < 0.01$ ), number of cycles of 4 cetuximab (OR, 1.23; 95% CI, 1.08-1.39;  $P < 0.01$ ) and grade 3

rash (OR, 4.65; 95% CI, 1.21-19.29; P=0.03).

**Conclusion** In this cohort of Chinese patients with advanced colorectal cancer, the presence of grade 3 rash, the number of prior chemotherapy regimens and number of cycles of cetuximab received by a patient were independent predictors of response to cetuximab-containing therapy. The utility of these clinical markers in clinical practice should be further evaluated together with established biomarkers.

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## **OUTCOME OF THE HAEMODIALYSIS CATHETER RELATED BACTERAEMIA TREATED WITH SYSTEMIC ANTIBIOTICS AND ANTIBIOTIC LOCK THERAPY – A SINGLE CENTRE EXPERIENCE**

Dr Chan Siu Kim, Department of Medicine, Pamela Youde Nethersole Eastern Hospital (June 2009 Nephrology Exit Assessment Exercise)

**Background** Tunneled cuffed dialysis catheters (CTC) are increasingly used as the mean of vascular access for haemodialysis worldwide. One of the major complications related to the use of CTC is catheter related bacteraemia (CRB) which leads to significant morbidity and financial burden. Biofilm formation is believed to be the reason behind difficult eradication of CRB with antibiotics alone and therefore, the treatment of CRB should include both antibiotics and biofilm eradication. Antibiotic lock therapy (ALT) was thus devised to serve this purpose.

**Methods** The outcome of ALT in addition to the standard systemic antibiotics in treating CRB was retrospectively reviewed in a cohort of haemodialysis patients using CTC in a single centre. Both efficacy and safety of ALT were studied and comparison was made with historical control. Treatment success was defined as fever subsided within three days of starting appropriate systemic antibiotics and ALT together with no relapse of CRB caused by same organism within 30 days of completion of treatment. Those presented with severe sepsis, cases of relapse, concurrent tunnel infection and no appropriate antibiotic for locking were excluded from analysis.

**Results** ALT was successful in 30 out of 32 episodes in the study group and 4 out of 8 episodes in the control group (93.8% vs 50%, p<0.01). Length of hospitalization was also significantly reduced (9.4 vs 15.4 days, p<0.01). There was no major complication with ALT and the prevalence of CRB per 1000 catheter days was not increased after implementation of ALT. Subgroup analysis on CRB caused by *Staphylococcus aureus* also showed significantly better outcome in study group (90.9% vs 42.9%, p<0.05).

**Conclusions** Co-therapy of ALT and systemic antibiotics may have advantage over systemic antibiotics alone, although randomized controlled trial is required to make a definite proof. Selection of appropriate patients is the key to high success rate and ensuring patient safety. Whether ALT is more cost effective than other methods like catheter exchange requires studies with head to head comparison.

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## **A CROSS SECTIONAL STUDY ON FACTORS ASSOCIATED WITH POST-TRANSPLANTATION ANEMIA IN CHINESE RENAL TRANSPLANT RECIPIENTS**

Dr Hau Kai Ching, Department of Medicine and Geriatrics, Tuen Mun Hospital (June 2009 Nephrology Exit Assessment Exercise)

**Background** Post-transplantation anemia (PTA) is an under-appreciated problem in Chinese Transplant recipients. The study aims at investigating the incidence and risk factors associated with PTA in the Chinese transplant recipient in a regional hospital in Hong Kong.

**Method** This is a retrospective analysis of 304 Chinese transplant recipients in a regional hospital between 1st January 1998 and 31st December 2007. Baseline characteristics were recorded. Immunosuppressant regimen and drug level, as well as other laboratory parameters, post-transplant complications and information on co-morbidities were collected at 1 year after transplant. Anemia was defined as less than 12 g/dL in female and 13 g/dL in male, according to the WHO criteria.

**Results** The incidence of PTA at 12 month post-transplant was 29.5%. Logistic regression analysis showed that estimated glomerular filtration rate, body weight, albumin and bicarbonate level are independent risk factors for the development of PTA in the whole group. In patients receiving cyclosporin, estimated glomerular filtration rate, albumin level, presence of renal artery stenosis and daily dose of cyclosporin (mg/kg/day) were the independent risk factors on the incidence PTA at 12 month.

**Conclusion** Anemia is a common problem in renal transplant recipients. It is multi-factorial in origin and involves interplay between a number of risk factors. The best predictor is the glomerular filtration rate. Other independent risk factors include albumin level, bicarbonate level and body weight.

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## **A RETROSPECTIVE ANALYSIS ON THE USE OF ICODEXTRIN IN PERITONEAL DIALYSIS PATIENT IN A LOCAL HOSPITAL**

Dr Ho Tsz Ling, Department of Medicine & Geriatrics, United Christian Hospital (June 2009 Nephrology Exit Assessment Exercise)

The incidence and prevalence of end stage renal disease (ESRD) is increasing worldwide. Peritoneal dialysis (PD) is one of renal replacement therapy (RRT) modalities that is advocated because of its simplicity, convenience, relatively low cost and most importantly the better preservation of residual renal function in dialysis patient, which has been shown to be predictive of patient outcome. However, dextrose-based PD solution, especially the hyperosmolar solution used to increase ultrafiltration (UF), may have inherent disadvantages.

Adverse systemic effects due to dialysis solution glucose absorption include hyperglycaemia, alteration in serum lipids, hyperinsulinaemia and obesity. Local toxic effects of glucose solutions include peritoneal membrane damage by the increased rate of production of advanced glycosylation end-products. This damage may reduce the UF capacity of the peritoneum leading to technique failure. Patients with high transporter peritoneal characteristic are associated with decreased fluid removal, higher technique failure and higher mortality 1,2. Icodextrin is a starch-derived, high

molecular weight glucose polymer that was first used as an osmotic agent alternative to glucose in peritoneal dialysis in the 1980s. Icodextrin differs from dextrose in that it provides colloidal, rather than crystalloidal, osmotic pressure for sustained peritoneal UF<sup>7</sup>, and this may prolong PD technique survival. Some studies have found that this effect is more pronounced in patients with high-average or high peritoneal membrane transporter status<sup>3-5</sup>. Using icodextrin reduces systemic carbohydrate absorption may be useful strategy for improving glycaemic control in PD patients with diabetic mellitus (DM), particularly those requiring hypertonic glucose exchanges to maintain UF. There are potential clinical benefits in improving blood pressure control and lipid profile.

The International Society of Peritoneal Dialysis (ISPD) Ad Hoc committee on Ultrafiltration Management in Peritoneal Dialysis recommended that icodextrin be used for the long dwell in high transporter patients with a net peritoneal UF of less than 400ml/4hr<sup>6</sup>. Icodextrin is also recommended to be used during episodes of peritonitis to achieve satisfactory UF. In this study, a retrospective analysis on the use of icodextrin in PD patient in a local hospital was performed

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## **QUALITY OF LIFE IN CHINESE PATIENTS WITH ADVANCED GYNECOLOGICAL CANCERS AND ITS CLINICAL CORRELATES**

Dr Chan Kwok Ying, Palliative Medical Unit, Grantham hospital (June 2009 Palliative Medicine Exit Assessment Exercise)

**Study Design** The study adopted a cross-sectional design and the data was collected from 3 July 2008 to 9 February 2009. A consecutive series of Chinese advanced gynecology cancer patients who had been admitted to the palliative medical unit of the Grantham Hospital during the above said period were recruited. The patients with advanced gynecology cancer were in palliative phase. The types of advanced gynecology cancer included cancers of ovary, uterus or cervix with stage 3 or 4 disease as shown by radiological investigations. The McGill Quality of Life Questionnaire-Hong Kong version (MQOL-HK) has been adopted to measure the quality of life (QOL) among the subjects. The Hospital Anxiety and Depression Scale (HADS) and the Lubben Social Network Scale (LSNS) were used to measure the anxiety and depressive symptoms and the extent of social support of the patients respectively. The Psychosocial Adjustment to Illness Scale (PAIS) sexual subscale was used to assess the sexual relationship and dysfunction.

**Results** A total of 30 patients with advanced gynecology cancer were interviewed. Three patients were excluded because of significant cognitive impairment, poor physical condition and language barrier respectively. Twenty seven eligible patients were recruited and all of them had completed the questionnaires. The mean score of MQOL-HK was 4.69 +1.93. Among the subscales, the physical domain has the lowest mean score of 4.10 (SD=2.12 range: 0-7) while the support domain yielded the highest of 5.35 (SD=2.21). Sexual domain of MQOL-HK was significantly compromised compared with previous studies using the same scale for patients in palliative stage other than advanced gynecological cancers. Using the HADS-Depression (Dep) scale > 10 as a screening cut-off point, significant depressive symptoms were common (59 %) in this group of patients. There was a statistically significant positive correlation found between age and LSNS with the mean total score of MQOL-HK ( $r=0.71, p<0.05$  and  $r=0.50, p<0.05$  respectively). HADS-dep

scores was negatively correlated with the mean total score of MQOL-HK ( $r = -0.57$ ,  $p < 0.05$ ). After multiple regression on the mean total score of MQOL-HK, age and HADS-Dep remained statistically significant and these two factors together account for 94.5 % of the total variance of MQOL-HK.

**Conclusion** Patients with advanced gynecology cancer had a relatively poor QOL compared with previous local studies using MQOL-HK in palliative care. Among different domains of MQOL-HK, all the domains were low especially the physical one. Depressive symptoms were common in this group of patients. Age and depressive symptoms were the most important independent factors for QOL in this group of patients.

**Implications** The results of this study draw the attention of palliative care workers to the depressed advanced gynecology cancer patients in the palliative care unit. The results help the physicians to identify the group of patients that is particularly vulnerable to depression by identifying its clinical correlates. It was found that depressive symptoms significantly affect a patient's QOL. A correct identification and subsequent treatment of depressive symptoms is the first step towards improving the quality of care in advanced gynecology cancer patients. By using HADS as a screening tool, it helps to identify more depressed cases who need specialist care. To this end, it is important for the palliative care workers to aware of the depressive symptoms in advanced gynecology cancer patients and to know the way to handle; therefore, more training in this aspect is warranted.

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## **POST STROKE MICTURITION DISORDERS: CLINICAL & URODYNAMIC FEATURES**

Dr Cheng Hon Kuen, Department of Rehabilitation, Kowloon Hospital (June 2009 Rehabilitation Exit Assessment Exercise)

**Background** Micturition disorder is common among stroke survivors and is associated with poor functional outcomes. The most frequently occurring voiding abnormalities associated with stroke have been identified as urgency, frequency, urge incontinence and urinary retention. These voiding abnormalities results from a complex spectrum of anatomical and physiological disorders. Urodynamic study is a useful clinical tool to provide accurate diagnosis for micturition disorder and direct appropriate treatments.

**Objectives** This study aims to study the clinical spectrum of micturition disorders in alert stroke Chinese patients and objectively examine these micturition disorders by conventional urodynamic study (UDS). The second part of the study would focus on the group of patients who have undergone UDS and follow up 12 weeks post discharge for their voiding abnormalities and rehabilitation outcomes.

**Design** Prospective study (from April, 2008 to December, 2008)

**Setting** Rehabilitation unit specializing in stroke rehabilitation

**Participants** 105 alert Chinese stroke patients (54 male, 51 female; mean age of 71.4 years) who had developed new voiding abnormalities.

**Main outcomes measures** Demographic data, lower urinary tract symptoms (LUTS), post voiding residual urine (PVR) volume, Functional Independent Measure (FIM) scores, UDS findings, and improvement in voiding abnormalities.

**Results** Almost half (105 patients) of the post stroke alert patients had new voiding abnormalities, 54.3% (57 patients) had new LUTS but did not require any urinary aids, 36.2% (38 patients) had urinary incontinence and needed diapers, 9.5% (10 patients) had retention of urine and required foley catheterization.

In 37 patients, who underwent UDS, 15 patients did not require urinary aids, 22 patients required urinary aids (using diaper: 14, using foley catheter: 8). The FIM-motor score (excluded bladder item) upon admission was significantly higher in the group not requiring urinary aids comparing with the group using urinary aids (mean 54.1 versus 36.9,  $p<0.05$ ). But no significant differences were observed in the FIM change and FIM efficiency across these two groups upon discharge and 12 weeks post discharge.

All of 37 patients had abnormal urodynamic findings. Detrusor overactivity was the most common findings – 81.1% patients had acquired the problem (30 out of 37 patients: 15 not requiring urinary aids, 15 using urinary aids). In the filling phase, all patients of the group not requiring urinary aids had detrusor overactivity, it was statistical significantly higher (100% versus 68.2%,  $p<0.05$ ) when comparing with the patients using urinary aids. In the voiding phase, there was no statistically significant difference in terms of detrusor underactivity (53.3% versus 59.1%,  $p=NS$ ) and acontractile detrusor (0% versus 9.1%,  $p=NS$ ) between the group not requiring urinary aids and the group using urinary aids.

Moreover, alert stroke patients showed improvement in voiding abnormalities with time. At 12 weeks post discharge, in the absence of bladder medications, 35.7 % patients not requiring aids had no further LUTS, 61.5% patients could wean off diaper, 85.7% patients could wean off foley catheter.

**Conclusion** Post stroke micturition disorder was common. Among the alert stroke patients whom suffered from new voiding abnormalities and had undergone UDS, all of their UDS results showed bladder dysfunction. Detrusor overactivity is the most common type of bladder dysfunction associated with stroke. At 12 weeks post discharge, the prevalence of voiding abnormality decrease with time.

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## **MOOD SYMPTOMS IN CARDIAC REHABILITATION – THE PREVALENCE AND SCREENING IN LOCAL REHABILITATION SETTINGS**

Dr Fong Ching Han, Rehabilitation Medicine, Department of Medicine & Geriatrics, Tuen Mun Hospital (June 2009 Rehabilitation Exit Assessment Exercise)

**Objectives** Mood problems adversely affect the outcomes of coronary heart disease (CHD). Angina, arrhythmias, re-hospitalization, prolonged disability and increased mortality were all associated with depression. Due to its impact to cardiac outcome, it is recommended that efforts should be paid to identify and treat any mood problems in these patients. This article described a retrospective descriptive study aiming at the evaluation of the prevalence of mood problems in patients with coronary artery

disease undergoing cardiac rehabilitation program (CRP), and the discussions of current issues, including the debate on the options and limitations of screening instruments for mood problems in cardiac rehabilitation patients.

**Study design** A retrospective descriptive study.

**Methods** One hundred and thirty-five patients enrolled in the phase II CRP and fulfilled the inclusion criteria. The scores of Hospital Anxiety and Depression Scale (HADS) were reviewed to assess the prevalence of mood problems. Score changes before and after the program were compared and the associated factors were identified.

**Results** Out of the 135 patients, 21 (15.6%) patients were screened to have anxiety and 18 (13.3%) were depressed at entry into the CRP. After completion of the program, the proportion of patient having anxiety and depression were reduced to 11.1% (15 patients) and 12.6% (17 patients) respectively though it did not reach statistical significance. However, there was a significant reduction in the mean HADS-Anxiety (A) sub-scale score from  $4.1 \pm 3.6$  to  $3.2 \pm 3.0$ , with a decrease of  $0.9 \pm 3.2$  ( $p=0.003$ ) and the mean HADS-Depression (D) sub-scale score from  $3.9 \pm 2.9$  to  $3.3 \pm 2.9$  with a change of  $-0.6 \pm 2.9$  ( $p 0.02$ ), as well as the mean total HADS score from  $8.0 \pm 6.1$  to  $6.6 \pm 5.5$ , with a decrease of  $1.4 \pm 5.5$  ( $p=0.003$ ). It was found that patients with poor quality of life as measured by SF-36, especially in the domains of general health ( $p=0.001$ ), vitality ( $p<0.0001$ ), mental health ( $p<0.0001$ ) and role-emotional ( $p<0.0001$ ) was associated with mood problems.

**Conclusions:** Mood problems were common in cardiac rehabilitation patients. Depression and anxiety were demonstrated to have an adverse impact on the outcomes in patient with coronary heart disease, so it is advisable to screen the mood problems. Comprehensive cardiac rehabilitation program incorporating measures addressing the mood problems may have a positive impact on patient's mood and thus cardiac outcomes. The use of appropriate screening instruments in local Cantonese-speaking Chinese remains a challenge to rehabilitation professionals.

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Note: For obtaining the full dissertation, please contact the author directly.