Abstracts of Dissertations

December 2018 Exit Assessment Exercise

A MENDELIAN RANDOMIZATION STUDY ON VITAMIN D AND CLINICAL CARDIAC EVENTS: CONSTRUCT OF AN EXOME CHIP-DERIVED MULTI-LOCI GENETIC INSTRUMENT

Dr Chan Yap Hang, Department of Medicine, Queen Mary Hospital (December 2018 Cardiology Exit Assessment Exercise)

Backgound Vitamin D deficiency is pandemic worldwide and linked to cardiovascular (CV) diseases. Causality remained unclear especially in subjects with prevailing vitamin D deficiency.

Objective We investigated the use of a high-throughput exome chip-derived 16-alleles genetic score as the instrument for lifelong-deficient vitamin D exposure to dissect any causality for clinical cardiac events and death with mechanistic exploration under prospective individual-data Mendelian randomization setting.

Methods We studied clinical CV events in relation to serological and genetic vitamin D exposures among 5772 subjects in a prospective clinical cohort. High-throughput exome chip analysis interrogated 12 candidate single-nucleotide polymorphisms (SNP)s involved along the vitamin D biosynthetic, activation, binding or receptor pathways prior identified from GWAS. We constructed a multi-loci 16-alleles genetic risk score based on 8 SNPs confirmed associated with serum 25-hydroxyvitamin D level (*rs4646536*, *rs10877012*, *rs1993116*, *rs2060793*, *rs2282679*, *rs4588*, *rs7041*, *rs1155563*; all $P<0.05$) for CV risk prediction. Primary outcome was the pre-specified combined CV endpoint of myocardial infarction (MI), unstable angina, ischemic stroke, congestive heart failure (CHF), peripheral vascular disease (PVD) and CV death.

Results After a mean follow-up duration of 56.9 ± 28.8 months, incident events of MI, unstable angina, CHF, ischemic stroke, PVD and CV death were respectively 191 (3.3%), 99 (1.7%), 431 (7.5%), 98 (1.7%), 24 (0.4%) and 42 (0.7%). Total combined CV endpoints was 660 (11.4%). 16-alleles score was associated with reduced incident combined CV endpoints (HR 0.96 [95%CI 0.934 to 0.987], $P=0.005$). Kaplan-Meier analysis showed that genetically-deprived vitamin D exposure was associated with 26 reduced survival from combined CV endpoints (lowest versus highest tertile: 131.2±1.7 vs 136.3±1.5 months, log-rank=9.9, $P=0.007$). Adjusted for potential confounders, perallele increase in genetic score independently predicted reduced combined CV endpoints (HR 0.958 [95%CI 0.931 to 0.985], $P=0.002$). Mendelian randomization analysis supported that lifelong vitamin D exposure is causally protective against combined CV events (Wald's estimate: OR=0.868 [95%CI 0.769 to 0.965]) and MI (OR=0.734 [95%CI 0.593 to 0.879]). Mechanistic analyses revealed that vitamin D deficiencydriven deviation from guideline-directed systolic hypertension control (<150mmHg) (OR 0.889 [95%CI 0.811 to 0.963]) and raised fibroblast growth factor-19 (FGF-19) (beyond 75th percentile, OR 0.774 [95%CI 0.630 to 0.926]) were on the causal pathway.

Conclusions Lifelong vitamin D exposure has a causally protective effect against incident combined CV events, mediated at least partially through ameliorated systolic hypertension. The suggestive pathological role of FGF-19 warrants further studies.

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OBSERVATIONAL RESULTS FROM FOUR YEARS OF CONSECUTIVE PATIENTS WITH NON-ST ELEVATION ACUTE CORONARY SYNDROME (NSTE-ACS) AT AN ACUTE HOSPITAL AND THE IMPLEMENTATION OF A CLINICAL PATHWAY TO IMPROVE PATIENT OUTCOMES

Dr Fang Jonathan Xinguo, Department of Medicine, Queen Mary Hospital (December 2018 Cardiology Exit Assessment Exercise)

Background Suboptimal adherence to NSTE-ACS guidelines by treating physicians is common(1). This study aims to provide observational data regarding the causes, and to improve adherence and patient outcomes by implementation of a management pathway.

Methods 1510 consecutive patients with NSTE-ACS admitted from 2014-2018 with a mean-follow up of 419 days were analyzed retrospectively. Patient characteristics, management approach, and outcomes were analyzed. The primary outcome was all-cause mortality. The secondary outcome was major adverse cardiovascular event (MACE). The multivariate Cox proportional hazard model was used to identify the independent predictors of outcomes. A clinical pathway was implemented to improve treatment guideline adherence. Propensity score matching was used to compare the 180-day mortality and MACE in the patients treated with a pathway against those receiving standard treatment.

Results Medical therapy and in-patient revascularization were under-utilized, especially in patients aged 85 and older. Better medical therapy and revascularization were independent predictors of survival even in this age group with a hazard ratio of 0.50, p=0.007 for revascularization; hazard ratio 0.889, p=0.037 for each additional class of guideline-directed medical therapy (GDMT). Treatment with a pathway increased the in-patient revascularization rate from 22.6% to 51.0% and improved the prescription rate of all classes of GDMT. A 180-day mortality occurred in 33/236 patients (14.0%) in the pathway-managed groups compared to 50/236 patients (21.2%) receiving standard treatment, log-rank p=0.0378. The decrease in mortality was most significant in the elderly subgroup.

Conclusion The use of a clinical pathway improved adherence and decreased mortality.

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CLINICAL OUTCOMES BETWEEN EARLY INVASIVE VERSUS SELECTIVELY INVASIVE STRATEGY FOR NON-ST ELEVATION ACUTE CORONARY SYNDROMES

Dr Chan Lap Shing, Department of Medicine & Geriatrics, Tuen Mun Hospital (December 2018 Cardiology Exit Assessment Exercise)

Background Current guidelines recommend an early invasive strategy for high risk patients with non-ST elevation acute coronary syndromes (NSTEACS). However, there is still no clear-cut consensus whether it can lead to an overall reduction in major adverse cardiac events (MACE) from previous trials. There is also lack of evidence in Chinese population.

Methods In this observational study, we selected consecutive patients diagnosed with NSTEACS admitted to a tertiary referral center from February to July 2014 and February to July 2016 who were eligible for an invasive strategy. Patients from 2014 was labelled as the selectively invasive arm while the other one is labelled as early invasive arm. The overall MACEs rate of these patients was compared at 30 and 90 days.

Results Total 197 and 184 eligible patients were recruited from 2014 and 2016 respectively. 19.3% (from 2014) and 14.7% (from 2016) of the patients reached primary end-points in 30 days. It increased to 22.8% and 16.8% respectively at 90 days of follow up. MACEs were not significantly more frequent in the selectively invasive group at both 30 (p= 0.231) and 90 days (p= 0.143). But all-cause mortality was significant reduced in the early

invasive treatment group (p= 0.042).

Conclusions Our study could not demonstrate that an early invasive strategy was superior to a selectively invasive strategy in reducing composite MACES in patient with NSTEACS. It only showed a statistical trend towards decreased composite MACEs rate instead. However, an early invasive strategy is beneficial in reducing all-causes mortality.

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SAFETY AND EFFICACY OF CITRATE-CONTAINING DIALYSIS FLUID FOR BICARBONATE-BASED INTERMITTENT HEMODIALYSIS IN CRITICALLY ILL PATIENTS OF A LOCAL REGIONAL HOSPITAL IN HONG KONG

Dr Wong Hiu Ming, Department of ICU, United Christian Hospital (2018 Critical Care Medicine Exit Assessment Exercise)

Background Citrate-containing dialysis fluid is an effective and safe alternative to acetate-containing dialysis fluid in end stage renal failure patients on maintenance hemodialysis. Since currently there are limited studies on citrate-containing dialysis fluid use in intermittent hemodialysis of critically ill patients, we conducted this study to evaluate the efficacy and safety of citrate-containing dialysis fluid in intensive care setting.

Methods This is a retrospective case control study evaluating heparin-free intermittent hemodialysis sessions in patients with high bleeding risk from January 2014 to January 2017 in the Intensive Care Unit of United Christian Hospital. Citrate-containing dialysis fluid, which has been used since June 2015, was compared with the historical control—acetate-containing dialysis fluid, in terms of clotting of extracorporeal circuit, ultrafiltration, transmembrane pressure, hemodynamic stability, acid-base and clearance, using chi-square tests, Fisher's exact tests and independent t tests.

Results 217 heparin-free hemodialysis sessions using citrate-containing dialysis fluid and 175 sessions using acetate-containing dialysis fluid in 118 patients were analyzed. Citrate group had less extracorporeal circuit clotting events of 9.2%, versus 19.4% in acetate control group (p=0.004), higher percentage of ultrafiltration volume achieved of 93%, versus 83% in the acetate control group (p=0.001), and lower mean post-hemodialysis transmembrane pressure of 20mmHg versus 40mmHg in the acetate control group (p<0.001). The hemodynamics, clearance and acid-base status of citrate group were non-inferior to acetate control group.

Conclusion Citrate-containing dialysis fluid is a safe and effective alternative to acetate-containing dialysis fluid for heparin-free intermittent hemodialysis in critically ill patients with high bleeding risk.

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NASOGASTRIC FEEDING INTOLERANCE IN A LOCO-REGIONAL INTENSIVE CARE UNIT

Dr Wong Shi Kit Thomas, Department of ICU, Kwong Wah Hospital (2018 Critical Care Medicine Exit Assessment Exercise)

Background Feeding intolerance is common among critically ill patients and is associated with adverse outcomes including mortality. Definition of feeding intolerance varies between studies and the reported prevalence range from 30-50%, while local data is lacking. This study aims to determine the prevalence of feeding intolerance in patients with naso-gastric tube feeding over a 6-month period observation, the to evaluate the associated

factors and outcomes.

Methods This is a retrospective, observational study conducted during the period of October 2017 to March 2018. Each tube-feeding recipient would be evaluated whether they had any of the 4 cardinal manifestation of feeding intolerance (1.gastric residual volume greater than 500ml, 2.altered bowel sound, 3.diarrhea and 4.witnessed vomiting) during their first 14 days of ICU stay. Clinical data that correlated with feeding intolerance and associated factors were analyzed. The outcomes related to feeding intolerance were also evaluated.

Results The prevalence of feeding intolerance during the study period was found to be 29.59%. In groups' comparison, patients with feeding intolerance had older age (72.48 vs 67.77), APACHE-II (26.41 vs 21.96) and average SOFA score (8.57 vs 5.96). Dopamine was the associated medication with high usage in the intolerance patients. Feeding intolerance was also linked to higher 28-day and 90-day mortality, longer ICU length of stay, ventilator days and positive fluid balance.

Conclusion The study revealed that the prevalence of feeding intolerance is a common phenomenon among patients with nasogastric tube feeding. There is an observable mortality relationship. Further study is needed for determination of any causal relationship.

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PROGNOSTIC VALUE OF CONTINUOUS FRONTAL EEG MONITORING IN HEPATIC ENCEPHALOPATHY PATIENTS IN THE CRITICAL CARE SETTING

Dr Chan Yee Lok, Department of ICU, Queen Mary Hospital (2018 Critical Care Medicine Exit Assessment Exercise)

Background Hepatic encephalopathy (HE) associated with acute liver failure or decompensated chronic liver disease (CLD) can lead to increased intracranial pressure (ICP) and significant mortality within days. This study aimed to investigate the utility of continuous frontal electroencephalogram (cEEG) for non-invasive monitoring of patients with hepatic encephalopathy at risk of developing intracranial hypertension and cerebral oedema, and to study the prognostic value of cEEG monitoring and quantitative EEG (qEEG) indices for predicting the outcomes of patients with liver failure and HE.

Methods Patients admitted to the intensive care unit with HE-complicated acute liver failure or decompensated chronic liver failure were recruited. Continuous 2-channel frontal EEG monitoring was initiated after admission, and qEEG parameters were recorded on day 1 (baseline), day 3 and the final day in the intensive care unit. Standard 21-channel EEGs were performed for comparison. Patients were dichotomised into a good-outcome group and a poor-outcome group based on the 30-day mortality, and the qEEG parameters were compared between the groups.

Results A total of twenty-one patients were recruited over a 10-month period. Sixteen patients dieddue to liver failure while waiting for a liver graft. The qEEG relative delta power increased (left EEG: 23% in the poor outcome group vs -9% in the good outcome group, p=0.009; right EEG: 16% in the poor outcome group vs -7% in the good outcome group, p=0.01) and the relative mean dominant frequency (MDF) decreased (-43, -44 vs 71, 75%; all $p \leq 0.004$) with a worsening stage of HE. Both the delta power and MDF were associated with the 30-day mortality with good predictive ability (The area under the receiver operating characteristic curve (AUROC) of the delta power for the left and right EEG were 0.91 and 0.90 respectively (95% confidence interval= 0.77-1.00 and 0.75-1.00; p=0.009, 0.01) and the area under ROC of the MDF= 1.00, 0.95; 95% confidence interval = 1.00, 0.86-1.00; p=0.001, 0.004). There was also an observation that changes in the qEEG indices preceded clinical deterioration for hours.

Conclusion Continuous frontal EEG monitoring with the help of qEEG indices is useful as an adjunct for neuromonitoring of patients with HE in the intensive care setting. Certain EEG variables that are derived by a commercially available module are correlated with the clinical outcome of HE, and may facilitate early recognition and aggressive intervention for ICP control. Further studies are required to verify the significance of this monitoring technique and to define optimal cut-offs for the cEEG readings.

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OSTEOPOROSIS IN THALASSEMIA MAJOR: A STUDY ON THE CHARACTERISTICS, EVALUATION AND RISK FACTORS FOR THALASSEMIA-ASSOCIATED OSTEOPOROSIS IN A LOCAL CENTRE

Dr Chan Ka Yee Annette, Department of Medicine, Queen Elizabeth Hospital (November 2018 Endocrinology, Diabetes and Metabolism Exit Assessment Exercise)

Background Osteoporosis is a frequent comorbidity in thalassemia patients, and is associated with a high lifetime fracture risk even in appropriately treated patients. The underlying pathophysiology is complex, with a variety of contributing factors. With the increasing life expectancy of thalassemia patients due to the advances in their treatment, the management of osteoporosis is challenging as this group of patients usually present at a young age and require lifelong treatment. Currently, guidelines for osteoporosis treatment in thalassemia major patients are limited. Individualized assessment and treatment may be important to provide better care to this group of patients.

Objectives The aims of this study were to characterize osteoporosis in transfusion-dependent thalassemia patients in our local centre and to identify the factors that are associated with bone fragility, in hope to gain a better insight into the pathophysiology of the disease and guide future treatment to prevent fracture in this patient group.

Study design 31 adult thalassemia patients who required regular blood transfusion at the Hematology day ward in the Queen Elizabeth Hospital (QEH) were recruited to participate in this cross-sectional observational study. Osteoporosis was evaluated by means of bone mineral density (BMD) measured by dual-energy X-ray absorptiometry (DXA) scan, bone turnover markers and review on the history of fractures. Trabecular bone score (TBS) was also measured in selected patients (n = 7). Medical records were reviewed and clinical assessment with history taking, physical exam, laboratory tests and imaging studies were arranged to look for risk factors associated with bone fragility.

Conclusion Osteoporosis is common in transfusion-dependent thalassemia patients in our local centre. Lower BMD values on DXA scan were linked to an increased fracture prevalence. TBS may play a complimentary role to DXA scan by providing further information on bone quality. Timely identification and treatment of risk factors for

osteoporosis is crucial, and pharmacological treatment should be considered in patients with established osteoporosis. Longitudinal follow-up would be needed to better assess long term treatment response and outcome.

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PREVALENCE OF METABOLIC SYNDROME IN CHINESE PSORIATIC PATIENTS ATTENDING SOCIAL HYGIENE CLINIC

Dr Chow Chi Wing, Department of Health (December 2018 Dermatology & Venereology Exit Assessment Exercise)

Background Various studies from literature demonstrated a higher prevalence of metabolic syndrome in psoriasis patients.

Objectives
1 To investigate the prevalence of metabolic syndrome among Chinese psoriasis patients attending specialist dermatology outpatient clinics of Social Hygiene Service (SHS)
2 To identify any association between demographic and clinical parameters and metabolic syndrome

Method Cross-sectional study of 419 psoriasis patients attending specialist dermatology outpatient clinics between November 2017 and May 2018

Main Outcomes and Measures Prevalence of metabolic syndrome, and any association between demographic and clinical parameters and metabolic syndrome

Results Of the 419 psoriasis patients, 288 (68.7%) were men, and 131 (31.3%) were women; median age 58 years (range, 47-66 years). 167 patients (120 men and 47 women) had metabolic syndrome as defined by the NCEP ATP III criteria. Our study demonstrated the prevalence of metabolic syndrome was 39.9%. Clinically important variables and those with $p<0.1$ on univariate analysis were included in the regression model. In the final multivariate regression model, the followings were found to have association with metabolic syndrome: 1) patients who were married (OR 2.604, 95% CI 1.274-5.320), 2) older at the age of onset of psoriasis (OR 1.049, 95% CI 1.029-1.07), 3) longer duration of psoriasis (OR 1.038, 95% CI 1.011-1.067) and 4) elevated C-reactive protein (OR 2.327, 95% CI 1.26-4.295).

Conclusion The prevalence of metabolic syndrome in our study of psoriasis patients was 39.9%. This study result raises the awareness of physician taking care of psoriasis patients regarding high prevalence of metabolic syndrome among them.

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TOPICAL CORTICOSTEROID PHOBIA IN CHINESE ADULT ECZEMA PATIENTS IN HONG KONG

Dr Ngan Pui Yan, Department of Health, (December 2018 Dermatology & Venereology Exit Assessment Exercise)

Background Eczema had been a chronic illness with topical corticosteroid as mainstay of treatment for decades. However, topical corticosteroid phobia was a rising concern among eczema patients as found in overseas studies. 1 The data on this condition in Chinese adult eczema patients in Hong Kong (HK) was limited. In order to assess the topical corticosteroid phobia, TOPICOP©, a recently developed validated scale was used clinically in providing a different perspective on topical corticosteroid phobia in eczema patients.

Objective The main objective of this study was to investigate the nature and extent of topical corticosteroid phobia in the adult eczema patients in HK. Furthermore, to explore the patients' knowledge about the different potencies of commonly prescribed topical corticosteroid preparations.

Method We assessed by using the self-administered questionnaire with validated TOPICOP© scale incorporated to adult eczema patients in 8 Social Hygiene Clinics providing dermatological services under Department of Health in HK.

Results A total of 252 eligible patients were recruited in our study. The mean TOPICOP© score was 43.8%. 68.3% of them believed topical corticosteroids would harm their skin. More than half Topical corticosteroid phobia in Chinese adult eczema patients in Hong Kong of patients reported their feelings on 'I'm afraid of putting TCS cream on certain zones like eyelids' and 'I'm afraid of applying too much TCS cream', which was 69.4% and 60.4% respectively. Of these, 52.8% and 61.2% patients agreed on 'I stop the TCS treatment as soon as I can' and 'I need reassurance about TCS ' respectively. Confusion on the potency of different topical corticosteroids was also demonstrated in this study.

Conclusions It is crucial for dermatologists to recognize the impact of topical corticosteroid phobia on our eczema patients. Targeted messages from evidence-based study on various side effects of topical corticosteroid as well as clear written guidelines on proper topical corticosteroid use would help in addressing the topical corticosteroid phobia in busy dermatology clinics.

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A RETROSPECTIVE REVIEW OF CLINICAL CHARACTERISTICS OF ADULT PATIENTS WITH ADRENOCORTICAL CARCINOMA IN PUBLIC HOSPITALS IN HONG KONG

Dr Fok Chun Kit Vincent, Department of Medicine and Geriatrics, Caritas Medical Centre (November 2018 Endocrinology, Diabetes and Metabolism Exit Assessment Exercise)

Background Adrenocortical carcinoma (ACC) is a rare endocrine cancer with a diversity of presentation and a poor prognosis. Data is scarce in the Chinese population and local clinical study is lacking.

Methods This was a retrospective observational study of ACC patients who had been managed in the public hospitals in Hong Kong from January 2007 to December 2017. The clinical features, treatment and outcome including recurrence and survival were studied. Factors associated with survival were examined.

Results A total of 43 patients with histological proven ACC were recruited. The median age was 62 years at diagnosis. The median tumour size was 11.1 cm and 44.2% (n=19) were stage IV disease on presentation. Hormonally functioning tumours accounted for 62.8% (n=27) of all patients, in which hypercortisolism was the most common. Urinary steroid profiling was abnormal in all patients who had it performed with tetrahydro-11-deoxycortisol (THS) (86.96%) the most frequently reported abnormal steroid metabolites. Surgical resection of primary tumour was performed in 72.1% (n=31). The median overall survival of all patients was 18.0 months. Factors associated with better overall survival were stage I-III disease, initial surgical resection, a clear resection margin and absence of microvascular invasion. Mitotane treatment was not associated with improved overall survival in all patients but was associated with improved overall survival of patients who had not received surgery. Recurrence after curative surgery occurred in 68.4% (n=13) of patients with a median time of 14.0 months.

Conclusion The overall prognosis of ACC remained poor with short overall survival and high recurrence rate after surgery. Despite this observation, complete surgical resection of tumour with a clear resection margin offered the best chance of cure in this aggressive cancer. Early diagnosis and monitoring for disease recurrence is possible with newer diagnostic tools such as urinary steroid profiling.

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ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY (ERCP) IN OLDER PATIENTS: IS AGE A RISK FACTOR FOR COMPLICATIONS?

Dr To Tsz Yan, Department of Medicine & Geriatrics, Tai Po Hospital (November 2018 Geriatric Medicine Exit Assessment Exercise)

Background Given the fact that elderly patients have more significant comorbidities, especially for the oldest old group (aged 80 and above), whether endoscopic retrograde cholangiopancreatography (ERCP) is safe or not remains unknown. Data concerning the safety and efficacy of ERCP in octogenarian is limited.

Objective The aim of this retrospective study is to compare the safety and efficacy of ERCP in younger, older and the oldest old patients.

Methods A retrospective study involving 321 patients who underwent ERCP at the Alice Ho Miu Ling Nethersole Hospital from 2012 to 2017 was performed. Patients were divided into three groups according to age (Group A <65 years, N=64; Group B 65-79 years, N=103; Group C >=80 years, N=154). Indications, procedure related outcomes, and complications of ERCP among the three groups were studied.

Results In our study, choledocholithiasis was the most frequent endoscopic diagnosis in the three groups. Both the ERCP-related and other complication rates within the admission were similar among the three age groups. Despite more patients in the oldest old group

received anti-platelet agents and more older adults (Group B) received anti-coagulants, post-ERCP bleeding did not differ significantly among the three groups (0% in Group A vs 2.9% in Group B vs 3.2% in Group C, p=0.463). Difficult ERCP were more frequently encountered in the oldest old group (34.4% in Group A vs 49.5% in Group B vs 55.8% in Group C, P= 0.015), whereas the length of hospitalization did not differ significantly among the three groups. No independent factor was significantly related to post-ERCP complications in the octogenerians.

Conclusions Although the oldest old groups had multiple medical conditions, ERCP is safe in this geriatrics population.

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PREVALENCE OF DEPRESSIVE SYMPTOMS IN OLDER ADULTS WITH HIP FRACTURE AND ITS ASSOCIATION WITH REHABILITATION OUTCOMES IN A LOCAL REHABILITATION DAY HOSPITAL: A RETROSPECTIVE COHORT STUDY

Dr Chan Po Yi Polly, Department of Medicine, Tung Wah Eastern Hospital (November 2018 Geriatric Medicine Exit Assessment Exercise)

Background and Objective Hip fracture in older adults represents a serious public health issue. A number of potential factors could affect the effectiveness of rehabilitation post hip fracture. We study the prevalence of depressive symptoms post hip fracture and evaluate if depressive symptoms affect rehabilitation outcomes in older adults with hip fracture.

Methods and Results In this retrospective study, we looked at a cohort of 158 hip fracture older adults who underwent rehabilitation at a day hospital. Depressive symptoms were assessed using Chinese version of 15-item Geriatric Depression Scale (GDS-15), with GDS-15 scores ≥5 indicating positive for depressive symptoms. The prevalence of depressive symptoms was found to be 32.3% including the 9 patients that were excluded in this study cohort for taking anti-depressant or having an active diagnosis of depression (total sample= 167). Functional rehabilitation outcomes were assessed using Relative Functional Gain (RFG) on Modified Barthel Index (MBI) and Elderly Mobility Scale (EMS). Other rehabilitation outcomes were defined as 6-month mortality, 6-month hospital re-admission rate and institutionalisation. Poorer Relative Functional Gain (RFG) in Modified Barthel Index (MBI) (31.58 Vs 38.72, p= 0.042) and Elderly Mobility Scale (EMS) (42.62 Vs 59.10, p=0.008) were found in the depressed group. 6-month hospital re-admission rate (40% Vs 17.6%, p= 0.002) and institutionalisation (22% Vs 10.19%, p< 0.001) were statistically higher in the depressed group.

Conclusion We found that prevalence of depressive symptoms in our local study is comparable with current literatures. Self-reported depressive symptoms predict worse rehabilitation outcomes in older adults with hip fracture. Early detection, prevention and intervention of depressive symptoms could potentially improve the effectiveness of rehabilitation. This study should have referential value to other rehabilitation centres in Hong Kong.

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OUTCOMES OF PATIENTS WITH LYMPHOMA UNDERGOING HIGH DOSE THERAPY WITH AUTOLOGOUS HAEMATOPOIETIC STEM CELL TRANSPLANTATION IN HONG KONG – A STUDY ON THE IMPACT OF CONDITIONING REGIMEN

Dr Chan Ling Kit Nicholas, Department of Medicine, Pamela Youde Nethersole Eastern Hospital (November 2018 Haematology & Haematological Oncology Exit Assessment

Exercise)

Background and objectives Autologous haematopoietic stem cell transplantation (AHSCT) has been considered a standard therapy for patients suffering from relapsed or refractory Hodgkin lymphoma (HL) and non-Hodgkin lymphoma (NHL). The ideal conditioning regimen for AHSCT is yet to be determined. This study aims to evaluate the outcomes of lymphoma patients undergoing AHSCT in Hong Kong using different conditioning regimens.

Methods Adult lymphoma patients undergoing AHSCT in six transplant centers in Hong Kong between 1 January 2007 and 31 March 2018 were retrospectively recruited. Primary outcomes were overall survival (OS) and progression-free survival (PFS). Secondary outcomes include transplantation-related mortality (TRM) and toxicities and complications of transplantation.

Results A total of 156 AHSCT cases were recruited. The 2-year OS was 77.6% and the 2-year PFS was 68.6%. On multivariate analysis, aaIPI high risk was predictive of inferior OS (HR 3.68, 95% CI 1.24-10.97, p=0.019). T-cell NHL (HR 2.48, 95% CI 1.32-4.67, p=0.005) and aaIPI high risk (HR 5.88, 95% CI 1.97-17.57, p=0.002) were predictive of a higher risk of disease progression. The choice of conditioning regimen did not significantly impact on OS or PFS. The overall TRM was 5.8% and was significantly higher in the CBV group (11.6% vs 1.2% for BEAM and BEAC combined). CBV conditioning was found to be associated with higher rates of septicaemia, grade 3-4 cardiotoxicity and requirement for parenteral nutrition and ICU admission.

Conclusions Survival of lymphoma patients after AHSCT in our locality was comparable to that reported in the literature. Among the commonly used conditioning regimens, CBV was associated with higher short-term toxicity and TRM, but long-term outcomes were influenced by disease-related factors instead of the conditioning regimen.

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CANCER HEALTH LITERACY AMONG CHINESE BREAST CANCER PATIENTS IN HONG KONG

Dr Ng Kim Pong Kenny, Department of Clinical Oncology, (December 2018 Medical Oncology Exit Assessment Exercise)

Introduction It is hypothesize that different patients have different cancer health literacy, which is directly related to patients' understanding of their illnesses and hence the impact on their health outcomes. However, cancer health literacy situation in Hong Kong is not known. This study focuses on Chinese breast cancer patients. It aims to determine the literacy status locally, as well as to identify the demographic factors that are associated with low cancer health literacy.

Methods The study population included 150 newly diagnosed breast cancer patients who were referred to the Department of Clinical Oncology at Prince of Wale Hospital. They could have undergone primary surgery but should not have been started on systemic therapy. Cancer Health literacy was assessed by a questionnaire which consist of 30 questions (CHLT-30), within this, 6 questions were included in the shorter format of CHLT-6. Patient background demographics and information of breast cancer characteristics were collected.

Results The mean CHLT-30 score is 23.8, which is comparable to the figure abroad. High CHLT-30 score is strongly related with education level. Those with tertiary and higher qualification had scored significantly higher than those with primary and secondary school level (mean score 26.03 vs 23.22, p value <0.001). Patients aged under 50 had scored significantly higher than those aged 50 or above (mean score 24.91 vs 23.29, p=0.016). Patients with CHLT-6 score 5 or more (out of 6) had higher CHLT-30 score when compared to those who score 4 or less in the CHLT-6 questionnaire (mean CHLT-30 score 24.83 vs 18.09 p<0.001).

Conclusion Cancer health literacy among Chinese breast cancer patients in Hong Kong is comparable to that of the United States. People with higher educational background and younger do better in terms of cancer health literacy. CHLT-6 can be used to identify patients of limited cancer health literacy in local female breast cancer patients.

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CLINICAL CHARACTERISTICS AND OUTCOMES OF PATIENTS WITH MEDICATION REFRACTORY EPILEPSY AFTER EPILEPSY SURGERY: A RETROSPECTIVE STUDY OF A TERTIARY EPILEPSY SURGERY CENTRE IN HONG KONG

Dr Ip Chun Tak, Department of Medicine, Tseung Kwan O Hospital (December 2018 Neurology Exit Assessment Exercise)

Background Epilepsy surgery is a well-established treatment for medically intractable epilepsy. Rates of achieving seizure freedom are promising in carefully selected patient group. Distinctive local data on surgical outcome and prognostic indicators were lacking. We aim to evaluate the clinical characteristics and factors associated with post-operative seizure outcome and cognitive consequences in patients undergoing epilepsy surgery.

Methods A retrospective analysis was conducted in adults aged 18 or above who had epilepsy surgery done in Queen Elizabeth Hospital from January 1998 to July 2017. Surgical outcomes were defined using Engel's classification at 1year after surgery and upon latest clinic visit. Independent predictors for unfavourable outcome (Engel's Class II, III and IV) were evaluated using the logistic regression model for individuals undergoing temporal lobe epilepsy (TLE) surgery.

Results A total of 70 surgical events were analyzed. The mean age at surgery was 39.4. The median duration from onset of epilepsy to surgery was 20 years. The most common structural abnormality identified was mesial temporal sclerosis (55.7%). Favourable surgical outcome (Engel Class I) was achieved in 41 (58.6%) patients at 1 year and 38 (54.3%) at latest follow-up. In the TLE surgical subgroup (n=57), favourable outcome was achieved in 66.7% and 59.6% of patients at 1 year and upon latest clinic visit respectively. Tapering of anti-epileptic drugs was allowed in 39 (68.4%) patients. 15.4% of patients who received left sided surgery had verbal memory decline. Subjects who had right sided surgery were shown to have significant visual memory improvement (p=.006). Multivariate logistic regression analysis showed that a higher seizure frequency at the time of pre-surgical evaluation (OR = 7.53, 95% CI 1.97-28.71, p=0.003), pathologies other than mesial temporal sclerosis, focal

cortical dysplasia, cavernoma or glioma/brain tumours defined on MRI brain (OR = 15.81, 95% CI 1.33-187.42, p=0.029) were statistically significant predictors for unfavourable surgical outcome at 1 year.

Conclusion The success rate of epilepsy surgery in local Hong Kong population was comparable to international cohorts. The identification of high pre-operative seizure frequency; pathologies other than mesial temporal sclerosis, focal cortical dysplasia, cavernoma or glioma/brain tumours defined on MRI brain as independent factors for unfavourable surgical outcome would help in prognostication and patient counselling during pre-surgical evaluation.

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PRURITUS IN END-STAGE RENAL FAILURE PATIENTS UNDER PALLIATIVE CARE: ITS ASSOCIATION WITH QUALITY OF LIFE AND RESPONSE TO GABAPENTIN

Dr Leung Ling Yan Clare, Department of Medicine, Queen Elizabeth Hosptial (December 2018 Palliative Medicine Exit Assessment Exercise)

Background Pruritus is a common symptom in patients with end-stage renal disease (ESRD). Most studies on chronic kidney disease (CKD)-associated pruritus involved only patients on dialysis. Therefore, its impact and its treatment in ESRD patients on conservative management remains unknown.

Objectives This study aimed to investigate the prevalence, severity and characteristics of pruritus symptom; and its correlation with quality of life and psychological symptoms in ESRD patients managed conservatively. The efficacy and the safety of gabapentin for the relief of the CKD-associated pruritus was also studied.

Methods ESRD patients who were receiving renal palliative care (RPC) services in Caritas Medical Centre were screened and recruited. The study was divided into two parts. Part I was a cross-sectional study on the prevalence, severity and characteristics of the pruritus symptom. Pruritus symptom was assessed by numerical rating scale (NRS) and 5-D Itch Scale. McGill Quality of Life Questionnaire (Hong Kong Chinese Version) (MQOL-HK), Patient Health Questionnaire-9 (PHQ-9) and Generalised Anxiety Disorder-7 (GAD-7) were also used to assess the patient's quality of life and their psychological symptoms. Patients who reported an average pruritus score by NRS of 4 or above will be invited to join the Part II pilot study on the use of gabapentin for relief of pruritus. Oral gabapentin 100mg daily was prescribed. Follow-up assessment on the efficacy and the adverse effects was arranged at week 2 and week 4.

Results A total of 70 ESRD patients under RPC services were recruited into Part I of the study. The prevalence of pruritus was 87.1% and 92.9% using 5D Itch scale and maximum NRS score respectively. Twenty six (37.2%) of patients had moderate, severe to unbearable pruritus intensity. Sleep was affected by pruritus in 27 patients (38.6%). The 5 commonest affected areas were back (55.7%), forearm (37.1%), upper arm (27.1%), thigh (27.1%) and leg (27.1%). The average NRS score of pruritus was negatively correlated with the total score of MQOL-HK (r=0.25, p=0.034). A positive correlation was also observed between the average NRS scores for pruritus and the PHQ-9 scores (r=0.42, p=<0.001), as well as the GAD-7 scores (r=0.30, p=0.011).
12 patients were recruited into the Part II of the study, with 10 participants and 7 participants completed the 2-week and 4-week follow-up assessment. A 2-point improvement was noted in the mean score of the average NRS pruritus score (6.8 at baseline, 4.4 at week-2, 4.3 at week-4). However, adverse effects were reported in 7 patients (58.3%). One patient developed very severe vomiting which required early withdrawal from the study.

Conclusion The prevalence of pruritus in ESRD under palliative care service was very

high of around 90%. Around 40% of patients have moderate, severe or unbearable pruritus symptom with impairment of sleep. Severe pruritus symptoms were associated with increased risk of psychological symptoms and worse quality of life. Gabapentin of dosage 100mg was noted to have 2 point reduction in average NRS pruritus score in week-2 and week-4 but more than half of patients reported adverse effect. With the small sample size and high drop-out rate in part II of the study, further research on the efficacy, safety and optimal dose of gabapentin in ESRD patients not on dialysis is warranted.

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THE VALIDATION AND FEASIBILITY OF THE CHINESE VERSION OF THE PATIENT DIGNITY INVENTORY IN A HONG KONG PALLIATIVE CARE SETTING

Dr Natarajan Deepa, Department of Medicine & Geriatrics, Shatin Hospital (December 2018 Palliative Medicine Exit Assessment Exercise)

Background Dignity is an important area of study in palliative care. To assess and address a patient's dignity and dignity related distress would greatly benefit patients who have advanced stage disease. The Patient Dignity Inventory (PDI) has been created on the Model of Dignity, and allows clinicians to identify what may cause dignity related distress to patients.

Objective To translate the PDI into Chinese (Cantonese), then validate it in a palliative inpatient setting in Hong Kong, and to assess the feasibility of using the questionnaire.

Method The English version of the PDI was translated and back translated, then reviewed by a panel including clinician, clinical psychologist and nurse clinician. Patients admitted to a palliative care unit were approached for consent to the study. Patients completed the Patient Dignity Inventory, in addition to the Chinese version of Hospital Anxiety and Depression Scale (HADS), the McGill Quality of Life Questionnaire (Hong Kong). Physical symptoms were assessed using the Edmonton Symptom Assessment Scale, and other clinical and sociodemographic data were retrieved from medical records.

The data was then analysed using SPSS, for validation and reliability.

Results A total of 90 patients were recruited into the study. The mean PDI score was 50.82 (range 25-102).Internal consistency was good, with Cronbach's alpha at 0.947 ($p<0.001$). Concurrent validity with the HADS and McGill QOL questionnaire was established. Factor analysis showed 4 factors, which was similar to previous PDI translations and validation studies.
The PDI was well accepted by the Chinese inpatient palliative population, with willingness to complete the questionnaire and willingness to discuss any issues that arose with it.

Conclusion The PDI was translated into Chinese and validated in an inpatient palliative care unit in Hong Kong, with adequate validity. The PDI-Chinese version can be further used in a larger population to assess and address dignity related issues.

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TO STUDY THE ROLES OF CLINICAL ASSESSMENT AND TRANSCRANIAL MAGNETIC STIMULATION IN DETERMINATION OF THE PROGNOSIS OF UPPER LIMB RECOVERY IN STROKE REHABILITATION

Dr Tse Pui Man, Department of Medicine & Geriatrics, Tuen Mun Hospital (December 2018 Rehabilitaion Exit Assessment Exercise)

Background Previous overseas studies suggested that clinical assessment and neurophysiological assessment might help predict the upper limb functional outcome after stroke.

Aim of study The study aimed to determine the association between SAFE score, the presence of motor evoked potential by transcranial magnetic stimulation and upper limb functional recovery at 12 weeks after stroke. The study also tried to propose a simple and clinically relevant algorithm utilizing initial SAFE score and MEP response to predict upper limb functional recovery after stroke.

Methods Stroke patients transferred to the rehabilitation stroke unit (RSU) were screened within 1 week of arrival. Those fulfilled criteria were recruited into the study. Clinical assessment included the determination of shoulder abduction and finger extension strength (SAFE score) 8. The integrity of the cortical spinal tract was evaluated by the presence of motor evoked potential (MEP) by transcranial magnetic stimulation. Action research arm test (ARAT) was measured at 12 weeks after stroke. The associations between SAFE score, the presence of MEP and ARAT score were studied. With these results, a proposal of an algorithm on the prediction of upper limb functional recovery was formulated.

Results A total of 40 patients were recruited. Patients with an upper limb motor deficit who had higher initial SAFE score had better functional recovery of upper limb at 12 weeks after stroke ($P < 0.001$). Patients with a positive motor evoked potential (MEP) response detected by transcranial magnetic stimulation had better functional recovery of upper limb at 12 weeks after stroke ($P < 0.001$). An algorithm for prediction of upper limb functional recovery was derived and was shown to have sensitivity of 96.7%, positive predictive value of 96.7%, specificity of 87.5% and negative predictive value of 87.5%.

Conclusions Our study demonstrated that higher SAFE score and the presence of MEP were positively associated with upper limb functional recovery at 12 weeks after stroke. The study also supported the feasibility of the use of an algorithm utilizing SAFE score and TMS to predict upper limb functional recovery.

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CHRONIC RESPIRATORY FAILURE AND THE ROLE OF HOME MECHANICAL VENTILATION IN PATIENTS WITH MOTOR NEURON DISEASE

Dr Fok Yuen Tung, Department of Medicine, Queen Elizabeth Hospital (December 2018 Respiratory Medicine Exit Assessment Exercise)

Abstract Motor neuron disease is a progressive neurological disease which would lead to death due to respiratory failure with the involvement of respiratory muscles, usually in the later course of the disease. A number of poor prognostic factors had been identified in the medical literature including older age at disease onset, bulbar onset, rapid symptom progression and poor lung function (Forced Vital Capacity or FVC % predicted) upon disease presentation. Treatment options have been limited and therapeutic benefit of Riluzole, a glutamate release inhibitor, on survival is only modest. Home mechanical ventilation, particularly via non-invasive ventilation, has shown to improve survival in patients with chronic respiratory failure. Moreover, use of non-invasive ventilation in such patients would also enhance quality of life measures despite the progression of the disease and physical disability. Improvement in cognitive function and delaying the lung function decline had also been reported with the use of home non-invasive ventilation. Management of respiratory secretions, feeding and advanced care planning are also
important adjunctive management measures that are necessary in these patients. A small local retrospective study has been performed in a single centre over a 10-year period. Advanced age and male gender were found to be poor prognostic factor, which the use of Riluzole was shown to be protective. Use of home mechanical ventilation was shown to have better

survival when compared to those who did not use home ventilation after development of respiratory failure. It also delayed the first unscheduled hospital admissions, which were most commonly due to pneumonia. The compliance of home mechanical ventilation was on the whole satisfactory.

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RETROSPECTIVE STUDY ON FACTORS AFFECTING SUCCESS OF CHEMICAL PLEURODESIS IN MALIGNANT PLEURAL EFFUSION IN A REGIONAL ACUTE HOSPITAL AND A REVIEW OF THE LITERATURE

Dr Wong Charles, Department of Medicine, Pamela Youde Nethersole Eastern Hospital (December 2018 Respiratory Medicine Exit Assessment Exercise)

Background Chemical pleurodesis is a common treatment modality for palliation in patients with malignant pleural effusion (MPE), but factors associated with its success have not been determined.

Objectives To assess the success rate of chemical pleurodesis in MPE treatment in a regional acute hospital in Hong Kong, and to determine the factors associated with successful chemical pleurodesis.

Method A retrospective study was conducted on MPE patients treated with chemical pleurodesis in Pamela Youde Nethersole Eastern Hospital (PYNEH) from 1st January 2007 to 31st December 2016 (10 years). Pleurodesis success was defined as absence of symptomatic recurrent MPE requiring further ipsilateral pleural intervention. Success rates of chemical pleurodesis at 30 days and 90 days were assessed. Comparison was made between patients with and without pleurodesis success using univariate analysis, following which factors with p value < 0.2 were evaluated using multiple logistic regression to determine the independent factors associated with successful chemical pleurodesis.

Results Among 126 patients requiring pleurodesis evaluated in 10 years, the overall success rates were 80.2% at 30 days and 69.4% at 90 days, respectively. Primary malignancies were predominated by lung cancer (67.5%) and breast cancers (11.9%). Talc (50%) and minocycline (49.2%) were most commonly used. In 104 patients undergoing slurry pleurodesis, the success rates were 78.8% (82/104) at 30 days and 66.3% (58/89) at 90 days, respectively. Using multivariate logistic regression analysis, the use of large bore chest tubes was independently associated with pleurodesis success at 30 days (OR 4.500, CI 1.401-14.451, p = 0.012) and 90 days (OR = 3.490, 95% CI 1.338-9.103, p = 0.011), respectively. The success rates of poudrage pleurodesis in 22 patients were higher, being 86.4% (19/22) at 30 days and 81.8% (18/22) at 90 days. No statistically significant factor affecting the pleurodesis efficacy in the poudrage group was found.

Conclusion Though retrospective in nature, the results of this study suggested that the use of large bore chest tubes is associated with slurry pleurodesis success at 30 and 90 days. Chest tube size should be taken into account when considering pleurodesis in MPE patients, together with patient's preference, co-morbidities and functional status.

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CLINICAL CHARACTERISTICS, TREATMENT AND OUTCOMES OF PATIENTS WITH PNEUMOCYSTIS PNEUMONIA IN TWO ACUTE GENERAL HOSPITALS

Dr Lo Ying Fung, Integrated Medical Service, Ruttonjee Hospital (December 2018 Respiratory Medicine Exit Assessment Exercise)

Background There has been a notably increase of Pneumocystis jirovecii pneumonia (PCP)incidence in non-HIV immunocompromised patients due to an increase use of potent immunosuppressive agents and organ transplants, despite a substantial decrease in PCP

incidence in HIV population with widespread use of highly active antiretroviral therapy (HAART) and PCP prophylaxis.

Objectives To describe the clinical characteristics, treatment and outcomes of patients with PCP in HIV and non-HIV patients, and to identify factors associated with poor outcomes and mortality.

Methodology This retrospective study recruited patients with PCP who were admitted in two acute general hospitals in Hong Kong East Cluster, from 1stJanuary 2012 to 30th April 2018.

Results A total of 57patients were recruited in the study for analysis. The mean age was 52.1± 15.9years with35 (61.4%) being male. 34(59.6%) patients were HIV positive (HIV) and 23(40.4%) were non-HIV immunocompromised (non-HIV). Mean age of HIV and non-HIV patients were 44.3+9.0and 63.6+17.1respectively (p<0.001). On presentation, HIV patients had more symptoms compared with non-HIV patients; more HIV patients having cough (97% vs 74%, p=0.014), fever≥38ºC (71% vs 39%, p=0.018), oral thrush (59% vs 8.7%, p=0.001), weight loss (53% vs 0%, p<0.001) and longer duration of symptoms (25.5 days vs 5.5 days, p=0.001) as compared with non-HIV patients.
Overall mortality rate in the study was 12.3% (7/57), which was statistically significantly lower in HIV as compared with non-HIV group(0%vs30%, p=0.001).In univariate analysis, factors significantly associated with hospital mortality were old age (p=0.001), use of immunosuppressive agents (p=0.001), active malignancy (p=0.003), absence of fever (p=0.034), shock (p=0.005), acute kidney injury (p=0.035) and longer time from hospitalization to PCP treatment initiation (p=0.001).

Conclusions Pneumocystis pneumonia is an important opportunistic infection and carries significant mortality in the non-HIV immunocompromised subjects.

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EFFECTS OF WHOLE BODY VIBRATION (WBV) TRAINING ON OUTCOME OF PULMONARY REHABILITATION IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD). A RANDOMIZED CONTROLLED TRIAL

Dr Wong Tin Chiu, Department of Medicine, Haven of Hope Hospital (December 2018 Respiratory Medicine Exit Assessment Exercise)

Background and objective Whole body vibration (WBV) training is a novel strength training modality in pulmonary rehabilitation. However, there is only little evidence existed on the efficacy of WBV training on top of conventional pulmonary rehabilitation in patients with stable chronic obstructive pulmonary disease (COPD). We aim to investigate the efficacy of WBV training on top of conventional pulmonary rehabilitation program, in the exercise capacity and health related quality of life in a group of patients with stable COPD in out-patient setting.

Methods Eighty two stable patients with COPD were randomized in 1:1 ratio into the WBV group and the control group. They underwent a six weeks pulmonary rehabilitation training with either conventional pulmonary rehabilitation program alone or WBV training on top of conventional pulmonary rehabilitation program. The primary outcome of the study was 6-minute walk test (6MWT). Secondary outcomes included five times sit-to-stand time (FTSTS) as an indicator of muscle strength, disease specific quality of life in terms of chronic respiratory questionnaire (CRQ) and COPD assessment test (CAT), exercise capacity in terms of incremental exercise stress test and symptom-limited endurance time.

Results Both the WBV group and control group demonstrated a statistically significant increase in 6MWT after the pulmonary rehabilitation (50.2 meters ±12.3 meters in the WBV group, 51.4 meters ±44.9 meters in the control group). However, between-group difference was insignificant (1.2 meters, p=0.654). There was a statistically significant between-group difference in CAT score (-2.5 points, p=0.048) favouring WBV training.

Conclusion This study showed that there was no additional benefit in exercise capacity (6MWT) and muscle strength (FTSTS time) when WBV training was added on top of conventional pulmonary rehabilitation. There was a statistical significant improvement in the CAT score in the WBV group compared to control group. Future study focusing on selecting the subgroup of patients which could benefit more from WBV training is suggested.

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PULMONARY SARCOIDOSIS: A LITERATURE REVIEW WITH STUDY OF CASES IN A LOCAL HOSPITAL

Dr Sze Yee Yan, Department of Medicine & Geriatrics, Kwong Wah Hospital (December 2018 Respiratory Medicine Exit Assessment Exercise)

Abstract Sarcoidosis is a multisystem disease of uncertain etiology, characterized by the presence of non-caseating granuloma mainly affecting the pulmonary and lymphatic system. Currently, it is postulated that the disease manifests in genetically susceptible individuals with possible environmental exposure. However, despite vast interest across the globe, concrete evidence is still lacking.

In Hong Kong, diagnosing sarcoidosis is difficult in view of high burden of tuberculosis. To further complicate matters, some studies postulate that tuberculosis infection could be a trigger for the onset of sarcoidosis disease. Nevertheless, it is very important to avoid misdiagnosis since treatment differs.

Definitive diagnosis of this disease poses challenge to clinicians since this is a diagnosis by exclusion. Mainstay of investigations includes chest X-ray (CXR), computed tomography (CT), spirometry and bronchoscopy. Newer diagnostic test including positron emission tomography (PET) scan and endobronchial ultrasound transbronchial nodal aspiration (EBUS-TBNA) improve the yield of diagnosis.

The mainstay of treatment is steroid, though the decision to start treatment still leads to much discussion. Since a large number of patients will undergo spontaneous remission, it is of utmost importance to identify patients at risk of developing chronic disease and complications to initiate treatment.

Apart from steroid, studies of other drugs particularly methotrexate or azathioprine has shown that they can be used as second line treatment. Newer agent such as anti-tumour necrosis factor (anti-TNF) also shows promising result. This review summarizes the information on a series of cases in a local hospital, followed by literature review on the epidemiology, pathogenesis, diagnostic methods, treatment, mortality and morbidity of Sarcoidosis.

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THE ASSOCIATION AND IMPACT OF DEPRESSION AND ANXIETY ON AXIAL SPONDYLOARTHRITIS PATIENTS IN HONG KONG

Dr Ng Hoi Yan Alexandra, Department of Medicine & Geriatrics, Caritas Medical Centre
(December 2018 Rheumatology Exit Assessment Exercise)

Background and objectives Depression and anxiety symptoms are common in patients with axial spondyloarthritis (SpA). Our aim was to evaluate the psychological status of patients with axial SpA. We had two main objectives. The first objective was to determine the proportion of SpA patients screened positive for depression and anxiety by the use of Hospital Anxiety and Depression Scale (HADS). The second objective was to look at the association and impact of psychological symptoms with disease activity scores, inflammatory lesions on Magnetic Resonance Imaging (MRI), quality of life (QoL) and work productivity.

Methods A total of 128 patients with diagnosis of axial SpA according to the Assessment of SpondyloArthritis International Society criteria were recruited. Baseline demographics data was collected. Blood tests including human leukocyte antigen-B27 (HLA-B27) and C-reactive protein (CRP) were performed. Disease activity in terms of Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) and Ankylosing Spondylitis Disease Activity Score-C-reactive protein (ASDAS-CRP), Bath Ankylosing Spondylitis Functional Index (BASFI) were used to assess the clinical status. Radiographs of the cervical, lumbar-sacral spine and the sacroiliac joints (SIJ) as well as Magnetic Resonance Imaging (MRI) of the spine and SIJs were performed. The QoL was evaluated by the Short form-36 version 2 (SF-36v2) and EuroQuality of life -5 Dimensions (EuroQoL-5D). Work and daily activity impairment were assessed by the Work productivity and activity impairment questionnaire (WPAI: SpA). Depression was screened by the

Results In our cohort, 41.1% and 50% of patients were screened positive to have depression and anxiety symptoms, respectively. Higher HADS and HADS-A were positively associated with higher self-reported outcomes: BASDAI (HADS: ß=0.12, p=<0.001; HADS-A: ß=0.22, p=<0.001), ASDAS-CRP (HADS: ß=0.05, p=<0.001; HADS-A: ß=0.08, p=<0.001) and BASFI (HADS: ß=0.06; p=<0.007) but neither with the CRP level nor the amount of inflammatory lesions on MRI. Higher HADS and HADS-A were also inversely correlated with lower scores in EuroQoL-5D (HADS: ß=-0.01, p=0.003; HADS-A: ß=0.2, p=<0.006) and most domains of SF-36v2 (all with p=<0.001). Furthermore, HADS and HADS-A were both positively associated with work impairment (HADS: ß=1.23, p=0.050; HADS-A: ß=2.28, p=0.046) and daily activity impairment (HADS: ß=1.16, p=0.012; HADS-A: ß=1.90, p=0.019).

Conclusion It was common for axial SpA patients to have depressive and anxiety

symptoms upon screening. Depression and anxiety symptoms were associated with higher disease activity scores and functional index. Symptoms of depression and anxiety were negatively associated with QoL and work productivity. Therefore, psychological factors should be taken into account during assessment and earlier screening for the presence of depressive and anxiety symptoms is important.

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