Abstracts of Invited Speakers

Micturition Disorders in elderly stroke patients in Hong Kong

Dr. Edward Man Fuk LEUNG on behalf of the SIG on Continence Care, HKGS

Background: Micturition disorders are common among patients after cerebrovascular events. Urinary incontinence is a predictor for poor stroke outcomes, higher mortality, poor functional recovery and institutionization after discharge. Yet local data on the areas is scant. Prompt recognition of micturition disorders in stroke patients and appropriate management will improve the care and quality of life of stroke survivors. **Objectives:** Primary objective of current study is to explore prevalence of micturition disorders in elderly patients with recent stroke. Secondary objectives were to study the correlation between types and sites of cerebral lesions with occurrence of micturition problems, and to study their rehabilitation and discharge outcome. **Methods:** This was a prospective observational study. All stroke patients aged 60 years and older admitted to 13 participating rehabilitation facilities in Hong Kong were recruited. Data were captured prospectively in standard form during the hospital stay in the rehabilitation setting. The nature and site of intracranial lesions were documented according to CT or MRI scans. **Results:** 514 male and 645 female subjects with mean age of 75.3 and 78.4 respectively were recruited. Upon admission, 44.9% were incontinent and 17.8% required indwelling catheter for urinary retention. Higher prevalence of micturition disorders were found in those with cortical strokes (71%), in elderly with more severe functional impairments and among older stroke survivors. Patients with micturition disorders had significantly longer hospital stay, poorer functional recovery, higher institutional care and mortality. **Conclusion:** Micturition disorders are prevalent amongst Chinese stroke survivors undergoing rehabilitation. Identification of risk factors for micturition disorders as well as proper treatment may significantly improve the outcome of stroke patients.

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Voiding dysfunction in elderly male – A management update

Dr. Francis Chan Wing LEE

Bladder outlet obstruction secondary to BPH is the commonest cause of voiding problem in elderly men. Recent studies have identified risk factors for disease progression and have identified patients who require more aggressive treatment. Medical therapy is still the mainstay of treatment. The treatment of BPH with Saw Palmetto has shown to offer no benefit in randomized controlled trials. The available alpha blockers have similar efficacy and differ only in their profiles of adverse events. Tamsulosin is being used increasingly as it has the least effect on blood pressure and has little additive effect with existing use of antihypertensive. However, the recent finding of a high incidence of intraoperative 'Floppy Iris' syndrome associated with the drug raises concern on its use in elderly men who maybe a candidate for cataract surgery. Addition of a 5 alpha reductase inhibitor to an alpha blocker has shown to reduce the risk for clinical progression and risk for surgery. Recent researches on botox injection have shown its potential to be an effective treatment in BPH with rare side effects. TURP is still the operation of choice in surgical treatment of BPH. However, the risk of bleeding and dilutional hyponatraemia has made conventional TURP a high risk operation in some elderly men with multiple co-morbid conditions. Bipolar TURP and the use of laser technologies have largely avoided these complications making transurethral prostatectomy a much safer procedure in the elderly men, even in those who are taking anticoagulants. Overactive bladder syndrome is another common voiding problem in the elderly men. It is very common in patients with BPH. The addition of an anticholinergic drug to an alpha blocker has shown to significantly improve voiding symptoms in a large proportion of patients with BPH without increased risk of urinary retention. Many of the side effects associated with anticholinergic drugs can be rather bothersome in the elderly. These adverse effects can be lessened with the use of topical drug formula or completely avoided by the use

of other non-pharmacological treatments. Stress urinary incontinence in elderly men is an emerging problem with the increasing incidence of prostate cancer and its treatment with radical prostatectomy. Duloxetine, as in female stress incontinence, has shown to have significant effect on post-prostatectomy stress incontinence. The artificial sphincter is still the gold standard of surgical treatment. Male slings with improving designs are fast catching up as viable alternatives.

Reversing visual impairment: Current trends in cataract surgery

Dr. Philip Tsze Ho LAM

Cataract is the commonest cause of visual impairment in the elderly. Surgical removal of the cataractous lens with primary replacement with an intraocular lens is the standard treatment. Advances in microsurgical equipment and techniques offer additional benefits, such as rapid physical recovery, quick visual rehabilitation and correction of pre-existing refractive errors. Newer intraocular lenses incorporate advances in biomaterials and optical designs. Microincision, oscillations, blue-blocker, toric, multifocal and accommodating lenses are some of these hot gadgets. These are now being marketed directly to the public through various media. The speaker will discuss these advances and their limitations.

Common retinal diseases in the elderly and recent advances in management

Professor Vincent Yau Wing LEE

Purpose: The most common causes of vision loss due to vitreoretinal diseases in elderly people are age-related macular degeneration (AMD) and diabetic retinopathy. Other common visual threatening diseases in the elderly include retinal detachment and retinal vein occlusion. The field of vitreoretinal disease and surgery has tremendous growth and innovation in recent years. This presentation highlights some of the new advance and current trends in management of vitreoretinal diseases. **Findings:** The most important recent advance in the treatment of neovascular AMD is the development of antivascular endothelial growth factor (anti-VEGF) therapeutic agents that preserve and improve visual acuity by arresting choroidal neovascular growth and reducing vascular permeability. Anti-VEGF can also be used to treat macular edema related to diabetics and retinal vein occlusion, or assisting vitreoretinal surgery and laser therapy. Advancement in surgical instrument such as the suturless vitrectomy system, wide field operating system and chandelier light sources can enable vitreoretinal surgery to be done in a more efficient and safe way. Promising advances in the coming decade include pharmacologic vitreolysis and new methods of drug delivery to the posterior segment are also encouraging in treating common retinal diseases. **Summary:** The advancement in retinal disease treatment is tremendous in the last decade. There are significant changes in the practice patterns of retina specialists.

Sex hormone and health in older men

Professor Timothy Chi Yui KWOK

Borderline low serum testosterone is not uncommon in older men because of age related decline in testosterone secretion. Obesity and diabetes are additional negative factors for testosterone. In adults, hypogonadism is associated with lethargy, reduced libido, depression, osteoporosis and metabolic syndrome. But it is unclear as to borderline testosterone deficiency has significant impact on health status of older men. 1489 Chinese men aged 65 years or more had baseline serum sex hormones measured in a cohort study. Serum bioavailable testosterone was negatively associated with body fat and more weakly with appendicular muscle mass, as measured by dual energy X ray absorptiometry. It was mildly associated with narrow walking speed, health related quality of life (HRQOL) and total hip bone mineral density (BMD). Bioavailable estradiol was positively associated with body fat and appendicular muscle mass, and was moderately associated with BMD. Prospectively over four years, bioavailable testosterone was not significantly associated with body fat or muscle mass, but was associated with walking speed and negatively with mental domain of HRQOL. Bioavailable estradiol was associated with femoral neck BMD and incidence of non-vertebral fractures. Sex hormones were not associated with mortality. It was concluded that adequacy of testosterone has a significant influence on bone health in older men, and much of the effect was mediated through estradiol. Testosterone may also have an effect on muscle function, but not in muscle bulk.

Reducing Disability in the Elderly: A Scottish and European Perspective

Dr. Alan K MCKENZIE

The presentation considers changing life expectancy in Scotland and reviews risk factors for this, highlighting a striking example of socioeconomic and life expectancy differences in two adjacent Glasgow communities. This is supported by increasing evidence of risk modification extending life expectancy from studies in type 2 diabetics and from studies looking at the primary prevention of

stroke by adoption of a healthy lifestyle. European data from Italy has indicated that women on average live longer – a mean life expectancy of 84 years- compared to 78 years for men. However, this is offset by reduced disability free survival in women. There are also regional differences with an increased disability free survival in Northern and Central Italy compared to the South. From English data there is again evidence of the effect of socioeconomic status not only on life expectancy but also disability. Those individuals with the highest levels of wealth, education and social class have the lowest levels of disability. European and US studies which reviewed changes in disability over the last 2 decades of the 20th century have confirmed ongoing reductions in severe disability. Many factors have contributed to this fall. Using the current evidence base, addressing chronic disease by targeting and treating risk factors such as hypertension and reducing falls risk and decreased activity through structured exercise programs seem to offer the best chance of further reductions in disability in the elderly. There is also some evidence, from Glasgow, to support the use of comprehensive assessment and home based rehabilitation in reducing disability following hospital discharge. In conclusion, there is evidence that disability in the elderly is reducing in Europe. Many factors are contributing not least the improving socioencomic status of many elderly people. For further reductions to occur we must target and treat risk factors for chronic disease and proactively encourage regular exercise in all elderly people.

Outstanding Free Paper

Acute Care for the Elderly (ACE) unit: an effective model to improve the quality of geriatric care in acute hospital

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Introduction: ACE unit is a care model that combines the principles of holistic approach and patient-centered care with geriatric assessment and quality improvement by integrated collaborative care. This model is not well-established in Hong Kong, yet we believe it improves the care of elderly in acute hospitals. **Objective:** To investigate the effectiveness of ACE unit in PWH. **Methods:** This prospective cohort involved patients with age 70 or above who had emergency admission to the medical unit between Oct 2009 and April 2010. Patients in the study group were those who were admitted to ACE unit under the care of a collaborative team of geriatricians, nurse and allied health staff with geriatric focus (n=316). In the control group patients received usual care (n=337). **Results:** As influenced by the triage criteria, more patients in ACE unit were nursing home residents. They had poorer clinical and functional status on admission measured by Norton and Katz score. High Admission Risk Reduction Program for Elderly score, which reflected their medical status and frailty, was similar in both groups. There was a significant reduction in the length of acute hospital stay in ACE unit (mean: 4.4±3.0 days) than control group (mean: 5.6±3.6 days, p=0.000). More patients in ACE unit were discharged to home directly (67% vs 55%, odd ratio: 0.62, 95% confidence interval: 0.44-0.85, p=0.003) while in the control group more patients required further convalescent care (study group 29.3% vs control group 40.8%, p=0.013). The use of physical restraint (10.1% vs 20.8%, p=0.001) and Foley catheter (7.7 vs 16.1%, p=0.004) in ACE unit as measured on day 3 after admission were significantly lower than in the control group. **Conclusion:** ACE unit is believed to be an effective model to improve the quality of care of elderly patients with complex needs. Future study should focus on functional decline and other related clinical outcomes in patients who receive this model of care.

The clinical course of elderly with frailty or advanced dementia at their last six months of life: a retrospective review at a local hospital

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Introduction: End-of-life care is appropriate for patients with frailty or advanced dementia in their last few months of life. Studies have shown that they have not received optimal care. **Objective:** To investigate the clinical course of patients with advanced dementia or frailty in their last 6 months of life. **Methods:** This was a case review cohort study. We randomly selected 10% of the deceased patients in our department in 2008. Their medical records were reviewed. The prognostic indicators of UK Gold Standards Framework (GSF) were used to identify those required end-of-life care 6 months preceding their deaths. Data included socio-demographic characteristics, distressing symptoms and burdensome interventions were collected. **Results:** Two hundred and seventy eight cases of 2,792 deaths were reviewed. Among 79 non-cancer cases, 21 (26.6%) cases belonged to the frailty or advanced dementia group. The average age at death was 86; 14 patients (67%) were women; 20 patients (95%) lived in nursing homes; 20 patients (95%) died of sepsis, among which 14 died of pneumonia. Concerning burdensome interventions within 6 months preceding

their deaths, they had 4.5 hospital admissions on average and the mean total hospital stay was 49.5 days. Eighteen patients (86%) were on tube feeding and 9 (50%) had feeding tubes inserted in the last 6 months of their lives. In their last three months of life, all received antibiotics and 18 patients (86%) received intravenous hydration. All patients had pressure sore assessment and 11 (52.4%) had pressure sores. In their last hospital admission, 16 patients (76.2%) had dyspnoea but only 3 (14%) had pain assessment or treatment. **Conclusion:** Sepsis, especially pneumonia, was a frequent cause of death in elderly patients with advanced dementia or frailty. Even though they were suitable for end-of-life care, most of them received burdensome interventions including repeated and prolonged hospitalization, antibiotics treatment, artificial feeding and hydration. Dyspnoea and pressures sores were common and were well-assessed. However, pain was usually neglected.

A cohort study on the clinical outcomes of elderly patients admitted for community-acquired pneumonia

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Introduction: Community-acquired pneumonia (CAP) is a common cause of medical admission, associated with significant morbidity and mortality. Poor prognostic factors include advancing age, multiple co-morbidities, severity of pneumonia and poor functional status. **Objective:** To identify risk factors that were associated with in-patient mortality in elderly patients admitted for community-acquired pneumonia (CAP). **Methods:** A prospective observational study was conducted on elderly patients who were admitted to the medical unit of PWH from October 2009 to March 2010 with clinico-radiological diagnosis of CAP. Demographic characteristics, medical illnesses (Charlson's comorbidity index, CCI), premorbid functional status (Katz index) and investigation results were recorded. The primary outcome was in-patient mortality. **Results:** During the study period, 236 patients were recruited. The mean age was 80.8 years (±7.8 years) and 134 patients (56.8%) were male. Sixty-six patients (28%) were nursing home residents. The median CCI was 2.0 (interquartile range: 1-3). The in-patient mortality rate was 10.6% (25 patients died out of 236). The median length of stay in hospital was 9 days. In the univariate analysis, age (relative risk [RR]=1.07, p=0.011), nursing home residence (RR=7.0, p<0.001), CCI (RR=1.52, p<0.001), Katz index (RR=0.63, p<0.001), acute confusion (RR=16.9, p<0.001), mid-arm circumference (MAC) (RR=0.73, p<0.001), blood urea level 7mmol/L (RR=3.52, p=0.007), serum albumin level (RR=0.90, p<0.001), multilobar involvement on chest radiograph (RR=3.8, p=0.001), pleural effusion (RR=1.8, p=0.008), CURB score (confusion, blood urea level, respiratory rate and low blood pressure) (RR=2.2, p<0.001) were associated with in-patient mortality. Confusion, tachypnoea and blood urea level were not included in the multivariate analysis. Cox regression analysis showed that nursing home residence (RR=2.92, p=0.017), CCI (RR=1.56, p<0.001), MAC (RR=0.77, p<0.001) and CURB score (RR=2.04, p=0.001) were independent predictors of in-patient mortality. **Conclusion:** In keeping with previous studies, comorbidities and severity of pneumonia (CURB score) were independent predictors of in-patient mortality of patients with CAP. Our study also suggested that nutritional status was an independent predictor of in-patient mortality, and MAC was a better surrogate marker of nutritional status than serum albumin level. However, this study failed to demonstrate functional status as an independent predictor due to the limitation of Katz index.

Prognostic value of depressive symptoms on mortality, morbidity and nursing home admission in older people

Miu D

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Introduction: Depression is frequently encountered in hospitalized elderly persons. Studies have found an independent association between depressive symptoms, mortality, functional decline and nursing home admission. However there are few studies that look specifically at other potential effects of depressive symptoms, such as subsequent hospital readmission or nursing home admission. No study was done in outpatient setting. **Objective:** To investigate the relationship between the presence of depressive symptoms and nursing home placement, hospital admission and mortality among a group of geriatric outpatients receiving rehabilitation in geriatric day hospital. **Methods:** All community dwelling elderly patients, who had no history of depression or cognitive impairment and were attending the geriatric day hospital of a regional hospital in Hong Kong, were recruited. Baseline demographic data, medical comorbidities, functional status and presence of depressive symptoms (defined as a Geriatric Depression Scale (GDS) >8) were recorded. All patients were followed up for 1 year. Outcome variables were mortality, nursing home admission and unplanned hospital admission rate. **Results:** One hundred and ninety subjects were included with a mean age of 77.5 (standard deviation=7.6). One

hundred and ten patients (57.9%) were female. Majority (87.5%) were living with relatives and 9.5% were living alone. There were no statistically significant differences between the depressed and non-depressed group with respect to functional status, medical comorbidities and living condition. There were also no statistically significant differences in mortality in 1 year and nursing home admission. However depressed subjects were found to have more episodes of unplanned hospital admission (odd ratio: 1.84, 95% confidence interval: 1.23, 2.77). **Conclusion:** Elderly with depressive symptoms were more likely to have more hospital admission episodes and higher inpatient services utilization, independent of functional status. These results emphasized the need to improve the management of depressive symptoms and promoted the recognition and treatment of depression in elderly population.

Outcomes of elderly patients with feeding problems managed with oral or tube feeding after implementation of a multidisciplinary care pathway

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Introduction: Feeding problems in elderly patients are commonly managed by tube feeding but outcomes following discharge from hospital have not been well studied in Hong Kong. **Objective:** To study the outcomes of hospitalized elderly patients with feeding problems managed by tube or oral feeding in a regional hospital after implementation of a multidisciplinary care pathway. **Methods:** This was a cohort study of elderly patients with feeding problems who were referred for initiation of tube feeding from September 2009 to December 2009. The decision for tube or oral feeding modality was reached by using a multidisciplinary team care pathway, together with informed consent by patient or carer. Inpatient data were collected with a feeding registry. Outcomes of death and residence of the discharged patients were obtained by telephone and electronic patient database. **Results:** One hundred and forty patients were studied. The mean age was 82.3 years (standard deviation: 9.7 years). Twenty five (17.9%) patients died in the index admission and 26 (18.6%) died post-discharge at a median follow-up of 145 days (interquartile (IQ): 112-179 days), with a cumulative mortality of 36.5%. The most common cause of death in these 26 patients was pneumonia (58%). Of the 115 discharged patients, 50 (43.5%) patients were on oral feeding and 65 (56.5%) on tube feeding. Mortality for tube-fed patients at a median follow up 141 days (IQ: 105-169 days) was 27.6% as compared to 16% of orally-fed patients at a median follow up of 148.5 days (IQ: 119-185.3days), but it did not reach statistical significance (p=0.1209), with a hazard ratio of 1.911 (95% confidence interval: 0.831, 4.397). Fifty one (78.5%) tube-fed patients were discharged to nursing homes compared to 18 (36.0%) orally-fed patients (p<0.001). **Conclusion:** Feeding problem in the elderly was associated with a high overall mortality. A care pathway identified patients who were discharged on oral feeding, without increased mortality at follow-up. This study showed that tube feeding did not confer patients with survival advantage but was strongly associated with being discharged to a nursing home.

Submitted Free Paper

Aggressive peripheral parenteral nutrition support for high-grade pressure sores

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Introduction: Pressure ulcer (PU) is a common, disruptive condition affecting frail elders. Frailty and malnutrition further influence the course of PU, leading to immunodeficiency and poor healing. Enteral nutrition support may enhance wound healing, yet nutrition requirement was difficult to achieve due to poor compliance and tolerance. Peripheral parenteral nutrition (PPN) offers another delivery route for nutritional augmentation which helps achieve the nutrition goal easier. Patients with high-grade refractory PU being treated with PPN resulted in improved wound healing, serum albumin (Alb), as well as C-reactive protein (CRP). **Objective:** To observe the relationship between pressure sore, nutritional status, inflammatory markers and peripheral parenteral nutrition. **Methods:** Ten patients with stage IV pressure sores were managed in the orthopaedic ward of a tertiary hospital in Hong Kong. Daily dressing, antibiotics use and surgical debridement were applied and nutritional status was assessed by geriatricians and dietitian clinically and biochemically. PPN support was commenced and the duration ranged from 10 - 40 days. Alb and CRP were measured at baseline and after PPN intervention for comparison. **Results:** Wilcoxon Signed Rank Test was used to compare the baseline and post-intervention Alb and CRP among this group of patients. Their average age was 79.9±7.8 yr. Their mean Alb significantly increased from 25 g/dL to 29.9 g/dL (p=0.022). The mean CRP was decreased significantly from 126.3 mg/L to 39.5mg/L