GERIATRICS UPDATE

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The objective of this new section is to highlight published studies in the past year, which may have relevance to local clinical geriatric practice. After screening major journals in Medicine and Geriatrics/Gerontology and published local studies, three major topics - Dementia, Hospital readmission and Falls were selected for further review supplemented by relevant recent publications retrieved by Medline search.

Dementia

There has been a community survey on the prevalence of dementia in Hong Kong. A random sample of people over 70 years old stratified by age and sex was screened for dementia. An initial response rate of 69% was achieved. Of the 1034 subjects interviewed (17% in institutional care), 30% were identified to be probably demented or depressed on the basis of Chinese Mini-mental state examination (CMMSE) and Chinese Geriatric depression scale. 95% of these were clinically assessed by psychogeriatrician. The overall prevalence of clinical dementia was 6.1 ± 0.7%. The prevalence rose from 1.7 ± 0.8% in the group aged 70-74 years to 25.8 ± 3.8% in the 90+ year olds. Female had a higher prevalence (7.1%) when compared with that of male (4.7%). But the difference became insignificant when educational level was controlled for. 45% of demented subjects were in institutional care. Clinically diagnosed Alzheimer’s disease and vascular dementia based on criteria of Camdex accounted for 65% and 29% of dementia respectively. It was interesting that compared to Alzheimer’s disease, vascular dementia had much less age related increase in prevalence and it was not associated with sex and educational level.

There has been an interest in using apolipoprotein E genotype in the clinical diagnosis of dementia. Although the widely reported association between ε4 allele and Alzheimer’s disease was also observed in Hong Kong, only 17% of the Alzheimer’s disease patients had ε4 allele. This test is therefore unlikely to be useful in Hong Kong.

Newer Cholinesterase inhibitors, e.g. Donepezil, Rivastigmine, have been shown to have modest benefits in cognitive and functional symptoms in mild to moderate Alzheimer’s disease patients.

But subjective quality of life of patients either showed no change or was not measured. Behavioural symptoms and burden of care for caregivers were also not measured. Moreover none of the trials were longer than six months. The predominant side effect is gastrointestinal of mild to moderate severity.

While drug therapies are being and will be under intense investigation, there has been much literature and service development in dementia care in the past decade. Tom Kitwood in his thought provoking book “Dementia reconsidered: the person comes first” emphasized the personhood of demented people and suggested that the entrenched “malignant social psychology’ causes breakdown in communication between demented people and their families and society in general, leading to functional decline and behavioural problems.

Along this theme, care workers for the demented people have developed special communication skills with demented people and strategies in managing their challenging behaviour. Despite difficulties in evaluation, there is now some evidence that a programme of counselling and support for family caregivers can delay nursing home placement of patients with Alzheimer’s disease, and that staff training by an outreach team in behavioural management in residential and nursing homes improve quality of life of demented residents. In addition, manipulation of living environment like bright light therapy has also been shown to be useful in managing behavioural problems of demented people.

Hospital readmission

There have been two studies on the risk factors of hospital readmission in older medical patients in Hong Kong. A case control study in acute medical wards involving 760 age and sex matched subjects over the age of 65 years showed that readmitted subjects were more likely to have more disabilities, have no regular income, have more comorbid diseases, and have the following medical conditions: adverse drug reaction, dysphagia, advanced malignancy, congestive heart failure, chronic obstructive airway disease, end-stage renal failure. This study suggested that older people with chronic disabiling diseases are at risk of...
readmission. The problem in care arrangement for the terminally ill was highlighted.

The other study was a cohort study involving over 1,200 patients over seventy years old, discharged from acute medical wards to the community. The incidence of readmission (within 28 days of discharge) was found to be high at 18%. Hospital stay in the six months prior to index admission was the strongest predictor of readmission. In addition, medium length of stay (5-8 days), partial dependence (Barthel index 15-19/20), unresolved medical problem were independent predictors of readmission on multiple logistic regression. Most readmissions were caused by exacerbation of existing disorder. In only 8% of readmissions, avoidable factors were identified by admitting medical officers. This study suggested that premature discharge did take place and it was associated with readmission.

There have been many debates about the reliability of readmission rate as a performance indicator in hospital service. While there is much evidence to suggest that case-mix is a very important determinant, hospital services can play an active role in prevention by ensuring adequate length of stay and improving on patient education and counselling before discharge.

There have been a number of randomised controlled trials on the effectiveness of post-discharge visit in preventing high risk patients from readmission. An Australian research group showed that a home visit by a cardiac nurse 1-2 weeks after discharge of chronic cardiac failure patients prevented unplanned readmissions and death both in the first six months and in the longer time frame of eighteen months. Moreover they demonstrated that the intervention was very cost-effective, reducing total health care cost significantly in the first six months. The benefit of post-discharge home visits is not confined to cardiac failure patients. Two randomised controlled trials in Australia and USA showed similarly positive results for high risk older hospital patients.

The common characteristics of the home visits which have been shown to be effective were as follows: targeted at high risk patients, initiated within 2 weeks of discharge, performed by qualified specialist nurse, and close liaison with the physician in charge. The fact that such infrequent visits (most subjects receiving just one visit) could be effective even in long term, suggests that the main role of post-discharge visit is in patient education and drug counselling. One wonders why these interventions could not be effectively performed before discharge. In Hong Kong where primary health care is under-developed, more frequent home visits to reinforce patient education and to monitor clinical condition may be needed.

The effectiveness of post-discharge home visits for at risk patients looks promising but the cost effectiveness of such intervention in Hong Kong is currently under investigation.

Falls

Multidisciplinary assessment for older fallers was subjected to a randomised controlled trial. Older people who were recently discharged from Accident & Emergency Department (A&E) after presenting with a fall were recruited by written and telephone invitations. Demented people with no regular caregivers and old age home residents were excluded. Three hundred and ninety seven subjects with average age of 78 years were randomised into intervention and control groups.

The intervention group received comprehensive multidisciplinary assessment in day hospital, and a home visit by an occupational therapist. Appropriate remedial actions were taken. Both intervention and control groups kept a fall diary and completed a postal questionnaire every four months for one year after the fall. In the intervention group, 67 out of 213 subjects (31%) required further follow-up in hospital outpatient clinics, 38 (18%) required day hospital rehabilitation, 33 (15%) were referred to general practitioners, visit to optician was suggested in 27 (12%). Only 24 (16%) required no further action.

At 12 month follow-up, the intervention group had significantly fewer falls and were more likely to be able to go out alone than the control group. There was a trend towards lower fracture rate in intervention group (4% versus 8% in control group, p=0.26). The chance of institutional care showed no group difference. Health resource utilisation was similar between the two groups. This study provides evidence for the benefit of structured multidisciplinary assessment for community elderly fallers presenting to A&E.

In another British study, 1,815 people over 75 years old had yearly health checks by general practitioner for four years. At each visit, the subjects were asked for the number of falls they sustained in the previous three months. At first year, the prevalence of single fallers and multiple (more than one fall) fallers was 7.8% and 4.2% respectively. Risks of death at one and three years were increased for recurrent fallers but not single fallers. But both types of fallers were at equally high risks of institutional care at one year (OR 3.8, single fallers, 4.5 multiple fallers). Functional decline was not
related to faller status which varied from year to year. This study suggested that the perceived health risk of single fallers is often exaggerated and leads to probably unnecessary institutional care.

Risk factors for falls in older patients in medical wards were investigated in a case control study in Hong Kong. 51 cases and age sex matched controls (average age 78 years) received detailed clinical and functional assessment. On multiple logistic regression, the independent predictors were lower limb weakness (less than grade 4 by Medical Research Council grade) and Tandem walk (2-meter, noting number of errors). These two parameters could be used as a screening tool in any fall prevention programme in hospital setting.

References