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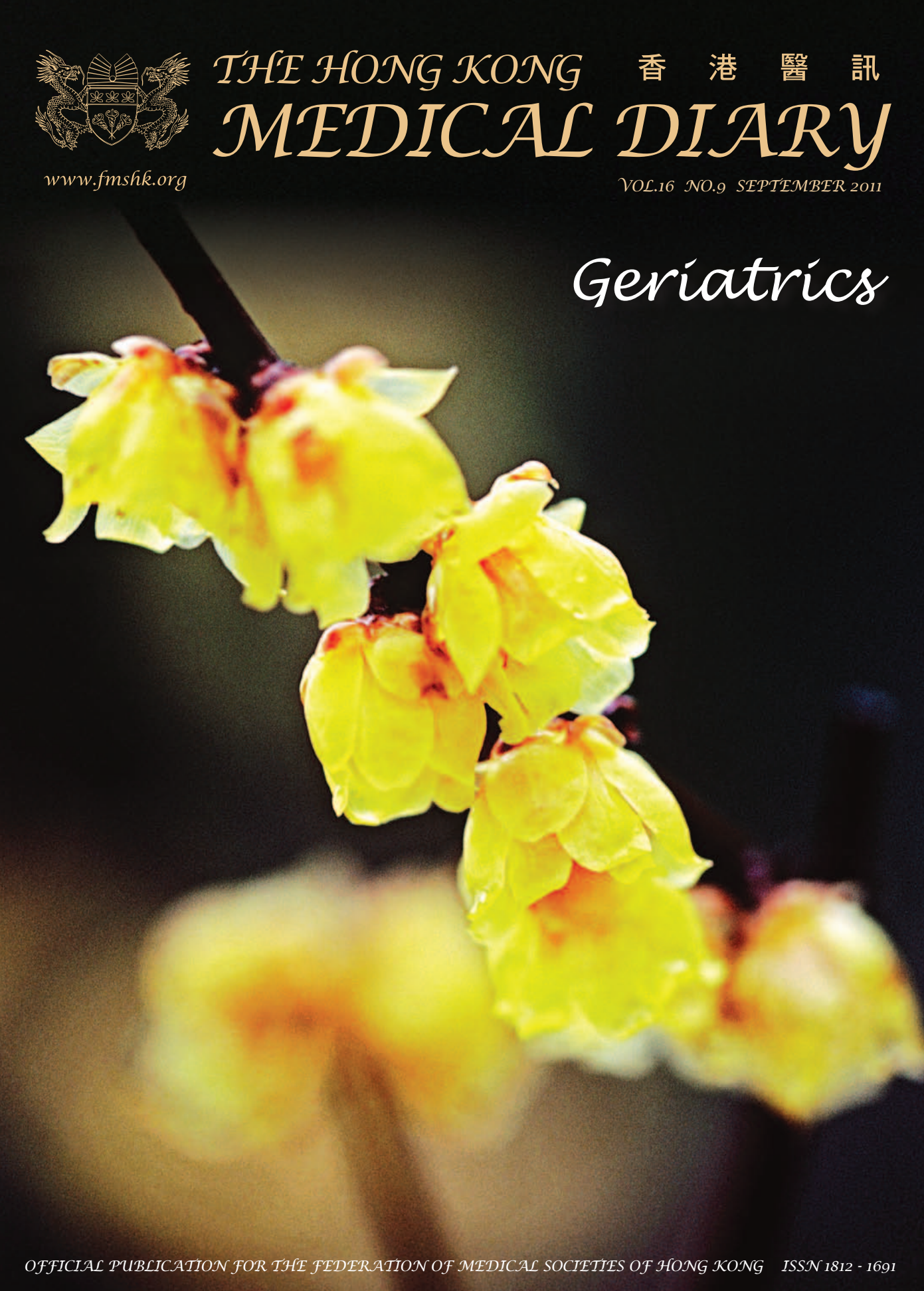
Geriatrics



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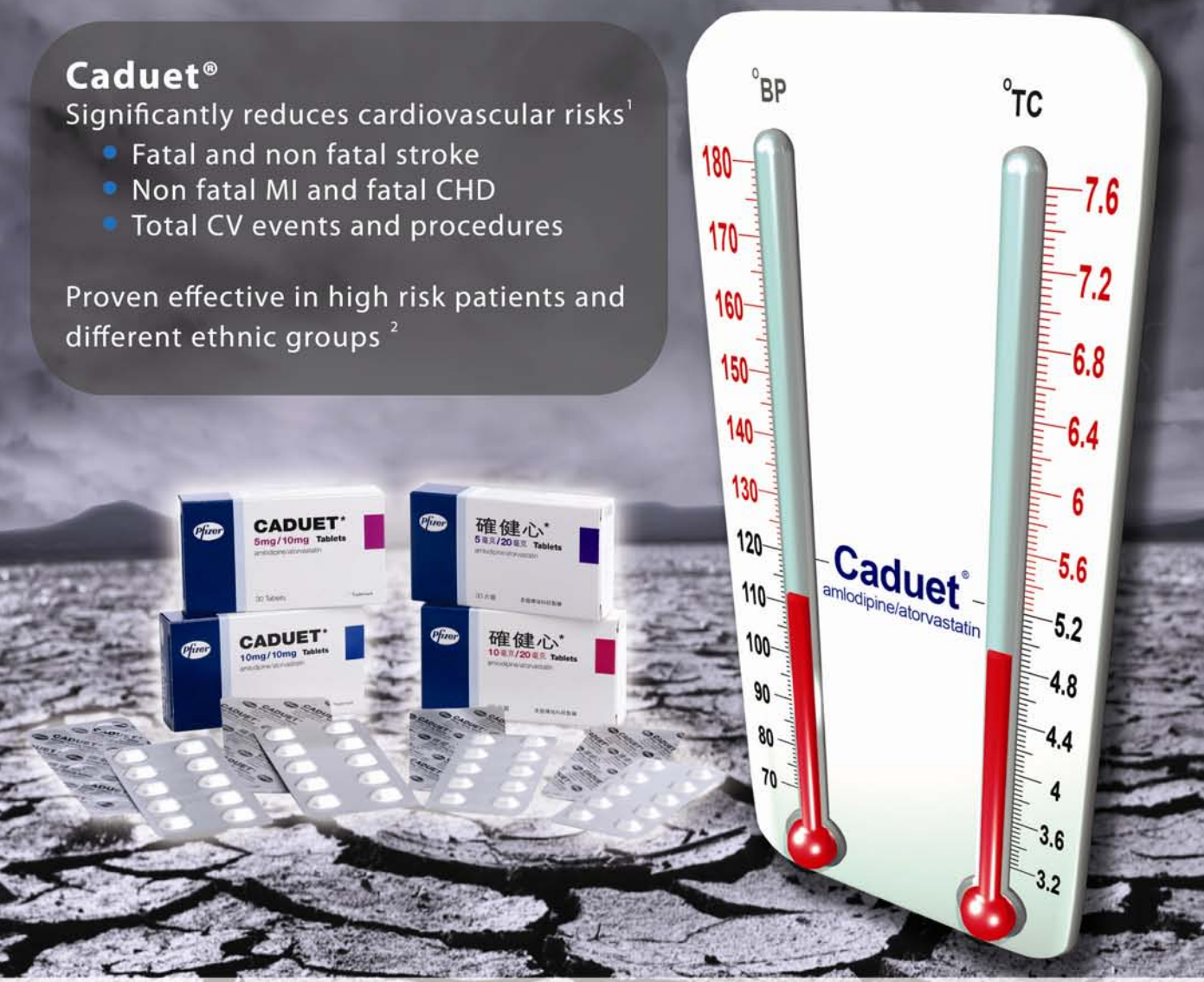

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Contents

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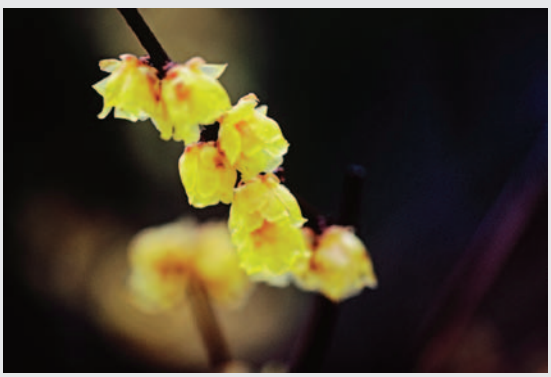

Early winter when the first snow fell after X'mas in Nanjing, the image captured the serenity and tranquility of nature and its purity.

This photo impressionism is shared with Dr. Leo KK Wong who is my mentor and teacher.

Prof. Richard YH YU
MD(HK), PhD(Lond), FRCP, Hon FRACP, Hon FHKCP, Hon FPSHK

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The Era of Living Agelessly

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Editor

Dr. Raymond SK LO

Much has been said about the ageing population both locally and worldwide. In Hong Kong, one in four citizens will be older than 65 by 2033. In addition to the demand on health services, the fiscal pressure is also considerable. For mainland China, the challenge is mounting with the faster-than-expected rise in the number of older people, and continuing decline of the working population. The 14 years old and under currently make up 16.6 percent of China's population, a decline of 6.3 percentage points from the 2000 census. Economists warn and highlight the need to rebalance the economy over the next decade to face this demographic trend.

We must not however assume that our older people are all dependent, with no valuable contribution to the society. There are plenty examples of positive ageing, with active older persons working or living agelessly while embracing their golden era. Octogenarians still run marathon. A near-centenarian from Japan was recently awarded the black belt in Judo. There are many more ordinary older people engaged in day to day household functions, bringing up grandchildren and bridging the inter-generational gap. The silverhair market is growing strong. Various leaders in different fields around the world are still contributing beyond their retirement age. Indeed, how old is old? There is much wisdom in the well-known cliché: you are really only as old as you feel it. Ageing can be gracefully accepted rather than denied.

What health professionals and policy makers relentlessly strive for is an ageless society too where our older generations can continue to maximise their potential. In this issue, the Honourable Dr CH Leong kindly recapped for us several salient measures which our government and the Elderly Commission have promoted towards this goal. Prevention of geriatric syndromes is much better than treatment. Care should start in the community pre-empting the need for hospitalisation. Prof J Woo highlighted succinctly in her article what we could do to cater for our elders in the community.

For established diseases, dementia and osteoporosis are near the top in accounting for the health costs and economic burden. Estimated cost of dementia to the UK economy is 23 billion Pounds per year, more than the cost of cancer and heart disease combined. In US, it has been estimated that up to 85% of white women in nursing homes are osteoporotic, with risks of fragility fractures threatening much disability and handicap. Prof T Kwok and Dr E Chow outlined for us the recent therapeutic advances on the management of these two silent epidemics respectively.

Quality of life of our older citizens depends not just on physical functioning, but also on the psychospiritual well-being. Dr C Tam and Prof H Chiu updated for us the approach in managing elderly depression and suicide. For the more advanced conditions commonly seen in the dependent and institutionalised elderly patients such as refractory pressure sores, Drs KW Liu and D Dai revisited the role of

nutrition and suggested an aggressive approach when indicated. The perpetual search for the fountain of youth will no doubt go on, and Dr LW Chu reviewed critically the evidence for any benefits with growth hormone in the ageing process, which has been a topic of interest lately. Finally, cure and care is a continuum, especially for palliative and end-of-life scenarios in older patients. This important aspect of patient care deserves a future issue for our Medical Diary.

To close in this issue, a special interview with Ms Li Wei from the Ministry of Health of the People's Republic of China helpfully informs our readers the latest situation regarding doctors wishing to practise in the Mainland. I sincerely hope you find this issue on geriatrics an interesting read, and would like to thank all the authors for their kind contribution. Finally, a special thanks must be extended to Prof R Yu for the lovely and meaningful cover photo. A quote from Abraham Lincoln would help remind us the ethos of ageing well: "In the end, it's not the years in your life that count. It's the life in your years."

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16/9/2011 - 25/11/2011	C176	Certificate Course on Management of Common Diseases in Older Persons	General Practitioners, Other Health Care Professionals Involed in Elderly Care	9 CNE Points; CME/CPD Accreditation in application
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Needs of Older People in the Community

Prof. Jean WOO

MD

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Prof. Jean WOO

The Hong Kong population is ageing rapidly. According to the HK Census data, there are about 900,000 people aged 65 and over (or 13% of the population) in 2007, which is double that for the past two decades. The number is projected to rise to 2.1 million (or 25% of the population) by 2030. Yet our society is ill-prepared for how the elderly should be cared for in the community, in terms of knowledge of diagnoses and management of geriatric syndromes and availability of complementary multidisciplinary team support in primary care. In general, patients are managed as adults or children, ignoring the growing number of elderly people within the adult group who require different management approaches that deal with multi-morbidity, physical and cognitive functional decline, poor mental health, and increasing frailty. These are intertwined with social needs as dependency increases. A 'typical' patient would be an 80 year old woman with hypertension, diabetes, renal impairment, osteoporosis, declining visual acuity from age-related macular degeneration, anaemia, sarcopenia, incontinence, frequent falls, depression, taking 15 prescribed drugs, and partly dependent on a carer.

In primary care, management is often focused on individual diseases, according to evidence-based guidelines. Yet this approach ignores the fact that evidence is derived from a different population with single disease only, and not to the 'typical' elderly patient described above. A comprehensive assessment of the patient covering functional, psychological, nutritional, and social domains is seldom carried out as a result of lack of time or expertise, and it is not surprising that patients' needs are not met. It has been pointed out that there are potential pitfalls of disease-specific guidelines for patients with multiple conditions[1], and that following guidelines for an elderly patient with chronic obstructive pulmonary disease, hypertension, diabetes, osteoporosis and osteoarthritis can result in a regime that is so complicated that it becomes unrealistic[2]. Evidence from randomised controlled trials that systematically exclude frail elderly people applied indiscriminately becomes evidence-biased medicine. Guidelines based on such evidence are widely promulgated, but are only appropriate mainly for those up till 75-80 with single disease, while there are increasing numbers of people aged above 80 with multi-morbidity and increasing complexity in management. The prevalence of the most frequent chronic diseases occurring without any co-morbidity varies from 5% for hypertension, to 1% or less with diabetes and hip fracture[3]. Subjects with co-morbidity and disability were excluded in many randomised controlled trials of congestive heart failure. In hypertension trials for example, the Hypertension in the Very Elderly Trial (HYVET) used a target BP of 150/80. The intervention group had reduced all cause mortality, mortality from cardiovascular causes and from stroke, and fatal and non fatal stroke. Yet in a typical outpatient population with the same age group, the percentage with dementia, stroke, diabetes, heart failure, myocardial infarction, and impaired renal function is significantly higher than the active treatment group in the HYVET[4]. Furthermore, using the same target blood pressure as for HYVET, 64% of patients had poor blood pressure control as a result of adverse drug reactions, showing the difficulty in achieving a modest target blood pressure of 150/80 in those aged 80 years and over, with 4% requiring withdrawal due to postural hypotension, suggesting that implementation of HYVET recommendations in clinical practice may be difficult. It can be seen that guidelines for the majority of such patients should be derived from clinical trials carried out in a typical outpatient population with common patterns of co-morbidity.

A comprehensive geriatric assessment will identify problems in domains other than diseases, and enable formulation of management plans in addition to the prescribing of drugs. It is possible that management may not involve prescription of drugs at all, in managing functional or cognitive decline, or under nutrition.

Preventive care other than screening for chronic diseases and vaccinations is also important. Prevention of frailty and measures for maintenance of function may be provided in day care facilities, and delay the need for long term institutional care. Preventive measures could be incorporated in primary care settings that complement doctor consultations, which are limited by time constraints. These include nurse-led clinics, prescribed aerobic, resistance and balance training exercises, as well as activities to stimulate cognitive function. The role of traditional Chinese Medicine (TCM) would also have a place in primary care, since the emphasis of TCM is to maintain and promote health, rather than to provide cure for diseases. Traditional services do not include provisions for preventive measures of a maintenance nature, while desired outcomes tend to be measured in terms of admission to hospitals, rather than maintenance of old function, avoidance of long term institutional care or quality of life of the older person.

It is important to appreciate needs of the elderly from their perspective. The most frequently expressed opinion from a focus group study was that existing government medical services were inadequate. The

waiting time was too long, being one to two years for some specialties. There were concerns regarding the affordability of fees for drugs, there being a prescription charge of HKD 10 for each item. This was of particular concern for those who need long term medication for chronic conditions. However this is waived if the patient is receiving comprehensive social security allowance. Some suggested that a discount scheme should be offered to elders admitted to hospitals and emergency service. Staying in hospital for a fortnight would cost over one thousand HKD for example. They also requested better medications to be prescribed by doctors. Public hospital doctors were viewed as unwilling to prescribe better medications to the patients because of cost constraints. They tended to prescribe medications that were cheaper but had side effects and then prescribe another drug to deal with the side effect. The cheaper medications were usually viewed as ineffective. In general there were comments about the attitude of medical staff not being friendly or helpful. The staff may shout at them or were rude towards them, not really caring about the patients and ignoring their needs. They commented that staff should learn how to be polite and respect elders. The common opinion on elderly homes was that government subvented old age homes had much better quality than the private ones in terms of hygiene and cleanliness, and that there was insufficient number of RCHEs of good quality. The latter often had long waiting lists, while good quality homes were more expensive and largely unaffordable for many people. There was a consensus that the government should impose more supervision on private homes, as well as provide training for workers in these homes to improve quality of care[5].

In response to needs identified in surveys and focus group studies, a demonstration model of community care was initiated (Jockey Club Cadenza Hub: JCCH), as part of the Hong Kong Jockey Club Cadenza Project, an initiative to promote an elder-friendly Hong Kong [www.cadenza.org.hk]. The objectives are to support frail elderly people with multiple morbidities in the physical and psychological domain in the community using a case management approach; to support informal care givers; to carry out health promotion and health maintenance (optimising function for those with chronic conditions); to provide services designed from the user's perspective taking into account gaps in current services. It represents an innovative model of service delivery, integrating health, social, primary and secondary care of older people. The service is comprehensive and multidisciplinary in nature, the target population being the soon–to–be old and seniors in the community. The programme consists of three categories: health promotion and health maintenance programmes for the soon-to-be old and independent elderly; optimal lifestyle and disease control programmes for those with chronic conditions; and prevention of decline and regaining physical and or mental function in a day care setting.

A key feature of this experimental centre is the integration of social and health needs, to reflect that these are not separated from an individual's perspective. An important characteristic is that people would be attracted to come to the centre on a regular basis, as the environment is designed with the atmosphere of a club. At the same time activities relating to health are incorporated, but not dominant. Intergenerational mixing is encouraged. Other features that distinguish the centre from current existing services include walk-in–needs determined by professional staff; needs either met by the centre or directed to relevant care providers; various flexible programmes and products based on local evaluation of effectiveness for health and psychological benefits e.g. group programmes for chronic diseases; locally designed hip protector to fit HK Chinese elderly; emphasis on raising health literacy and empowerment; involves multiple partners and is multi-disciplinary; being a seamless one stop service. It is also run on a self-sustaining basis in the nature of a social enterprise to meet current service gaps in the government or private sectors. Such a centre may also be used as a basis for future development of the step care approach for combating depression, a major cause of global disease burden. Since inception, the users profile and requests for types of services provide a good reflection of the needs in the community. At any one time a large proportion of users of the Day care section consist of older people with dementia. Users found the concept of case management reassuring, as the nurse is seen as a liaison between all the different types of medical services in both public and private sectors, being able to spend time assessing patient needs and caring problems, checking medications, detecting health problems early and liaising with primary care doctors. In one case this type of community support resulted in the return of an elderly patient with stroke from long term residential care back home after case conference with various family members. Lifestyle modification programmes with an emphasis on behaviour change were also popular, suggesting that this model may complement pharmacological treatment by doctors for many lifestyle-related diseases. Group exercise programmes to prevent falls were devised as a combination of social as well as health promoting activities in a social setting with regular sessions over a 36 week period, unlike the traditional physiotherapy sessions lasting for a shorter duration and without the social component. It was designed as such to ensure good compliance with the exercises. Comments on factors that motivated elderly people to participate include noted beneficial effects on their activities of daily living with increased capacity to carry out housework and improved walking stability; regular and long term scheduling; manageable level of difficulty; comfortable and friendly environment with a group of peers.

To meet the needs of the elderly in our community, models of primary care need to be developed to complement existing medical model that is reliant on doctor consultation and drug prescription, and both the public and private sectors will have a role in meeting these needs.

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1. Pradaxa® (dabigatran etexilate) Product Insert. 2. Stangier J *et al. Clin Pharmacokinet* 2008; **47**:47-59. 3. Stangier J. *Clin Pharmacokinet* 2008; **47**: 285-295. 4. Stangier J *et al. Br J Clin Pharmacol* 2007; **64**:292-303. 5. Stangier J *et al. J Clin Pharmacol* 2005; **45**:555-563. 6. Blech S *et al. Drug Metab Dispos* 2008; **36**:386-399.

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Therapeutics of Alzheimer Disease

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This article has been selected by the Editorial Board of the Hong Kong Medical Diary for participants in the CME programme of the Medical Council of Hong Kong (MCHK) to complete the following self-assessment questions in order to be awarded CME credit under the programme upon returning the completed answer sheet to the Federation Secretariat on or before 30 September 2011.

Alzheimer disease (AD) is the commonest degenerative brain disease characterised by progressive cognitive decline, leading to impairment in self-care abilities. With the ageing of the Hong Kong population, the incidence of AD, which is age related, is expected to rise very significantly in the coming years. AD patients typically do not actively complain about dementia symptoms because of their insidious onset, the associated loss of insight and the common misconception that cognitive decline is normal in old age. On the other hand, the burden of the disease on families is severe, leading to physical and psychological morbidities and even increased mortality in family caregivers. AD is therefore a medical disease with major adverse social consequences.

The prevailing theory about the cause of AD is the amyloid cascade hypothesis. Abnormal metabolism of amyloid precursor protein leads to increased production of amyloid beta protein which precipitates into amyloid plaques. Amyloid beta protein somehow leads to hyperphosphorylation of Tau protein, which impairs the stability of microtubules in axons, leading to neurofibrillary tangles and eventually neuronal death. But whether amyloid plaques and neurofibrillary tangles are the causes or the effects of AD remains to be determined. An earlier phase one trial of an active vaccine of amyloid beta protein was abandoned because of the complication of meningoencephalitis. The vaccinated subjects continued to have progressive dementia, despite evidence of clearing of amyloid plaques on subsequent post-mortem examinations. Since then, more active and passive immunotherapies have been investigated. The more promising one is bapineuzumab, which is a humanised anti-amyloid beta monoclonal antibody. In its phase two trial, study "completers" and APOE epsilon4 noncarriers showed treatment effects in cognition and functional status. Vasogenic oedema of the brain on MRI was noted in 10% of subjects, but the subjects were not significantly symptomatic. Its phase three trial is on-going.

It has been well known for several decades that loss of cholinergic activity is an early and prominent feature of AD brain. Based on this important finding, several cholinesterase inhibitors (CheI) were developed. Currently three of these drugs – Donepezil, Rivastigmine, Galantamine have been licensed for treatment in mild to moderate AD. They have been shown to have modest effects on cognition and behaviour in AD patients and are moderately well tolerated. There is no head to head to compare the efficacy or side effect incidence among the three drugs. Before starting these drugs, patients and families should be warned that the effect is modest, but they may stabilise cognitive decline. The drug effect tends to be more noticeable in moderate AD.

Gastrointestinal side effects e.g. anorexia, abdominal pain, diarrhoea are quite common in Chinese patients, especially at high doses. These side effects may be avoided by stepping up the doses gradually and may lessen over time. The transdermal preparation of Rivastigmine has the advantage of having less GI side effects, but some patients complain of skin irritation from the patches. Apart from GI side effects, a meta-analysis of randomised trial data showed that syncope was more common with ChEI use. ChEI should therefore be used with caution in patients with cardiovascular disorders. Dizziness and frequency of urine may also be troublesome.

The other class of drug licensed for use in moderate to severe AD is memantine. It is believed to work by partially inhibiting the N-methyl-d-aspartate (NMDA) receptors. This may protect the NMDA receptors from the neurotoxic effect of over-stimulation by glutamate. Randomised placebo controlled trials have demonstrated modest cognitive benefits in moderate and severe AD. Post hoc analysis showed significant reduction in agitation and aggression, which was not consistently shown in randomised trials of ChEI. The effect of memantine in agitated AD patients has however not been specifically examined. Memantine is generally well tolerated, though it may potentiate the effects of anti-parkinsonian drugs and warfarin.

Memantine is therefore a good alternative of ChEI if there are GI side effects or when there is agitation or aggression in patients with moderate to severe AD. In a six-month randomised placebo controlled trial in moderate to severe AD patients, the addition of memantine to ChEI had a mild additive effect on cognition, behaviour and functional status and the combination was tolerated by patients. Whether this effect is sustained in the long term, and whether the ChEI and memantine combination is superior to memantine alone in moderate to severe AD warrant

further investigations. Both memantine and CheI's confer fewer benefits in vascular dementia, but they seem to be efficacious in AD patients with concomitant cerebrovascular disease.

Most AD patients are older people with multiple comorbidities and polypharmacy. The risk and benefits of the CheI or memantine should be considered carefully in each patient. If side effects are suspected, trial of dose reduction or stoppage should reverse the symptoms. But one has to bear in mind that stoppage of ChEI's may lead to significant cognitive decline within a couple of weeks. The use of AD drugs in late AD is controversial, even though some benefits in cognition have been demonstrated. In the later stage of AD, cognition may not be the primary concern for family caregivers or the quality of life of the patients.

AD is very commonly associated with neuropsychiatric symptoms e.g. delusion, agitation, aggression, depression and behavioural problems e.g. wandering, day night reversal. These problems cause more stress to caregivers than cognitive decline, and significantly impair the patients' quality of life. Anti-psychotic drugs are commonly prescribed for these neuropsychiatric and behavioural problems. Although they invariably cause sedation, there is scant evidence that they improve neuropsychiatric symptoms and none for behavioural problems like wandering, care refusal, shouting, inappropriate urination. There are short-term randomised trials which showed reductions in agitation and aggression with atypical anti-psychotic drugs. The long-term effects are however uncertain. Prospective studies, on the other hand, strongly suggest that long-term use of anti-psychotic drugs (typical or atypical) is associated with greater risks of sudden death, stroke, falls and mortality. Anti-psychotic drugs should therefore be limited to short term use if at all. When compared with the typical anti-psychotic drugs, the newer atypical anti-psychotic drugs have less severe side effects particularly in Parkinsonism, but some AD patients may remain very sensitive to them.

Anxiety depression is common in AD patients. Tricyclic anti-depressants should be avoided because of their anti-cholinergic side effects. Selective serotonin re-uptake inhibitors (SSRI's) work just as well as they do in cognitively normal people. Even in the absence of clinical depression, Citalopram (a SSRI) has been shown to be as effacious as risperidone in reducing agitation and aggression, though SSRI's generally take a few weeks to achieve their full effects. When faced with severe agitation and aggression, atypical anti-psychotic drugs may therefore still have a role in the short term. When one intends to stop SSRI's, one should do so gradually as sudden withdrawal can lead to severe anxiety.

Sleep is often disturbed in AD. Apart from ensuring good sleep hygiene, zopiclone may help. Benzodiazepines should be used with caution because of risks of falls and day time somnolence. SSRI's do not improve sleep per se and may even impair it. More sedating anti-depressants like trazodone and mirtazapine may be useful in promoting sleep and reducing anxiety at the same time. Both drugs do not have anti-cholinergic side effects. Mirtazapine increases appetite which may be helpful in those AD with weight loss. The efficacy of these two drugs in reducing neuropsychiatric symptoms in AD is however unproven. Anticonvulsants e.g. sodium valproate and carbamazepine have shown some benefits in controlling agitation and irritability.

All in all, although there is as yet no disease-modifying drug for AD, there are effective drugs to slow cognitive decline and to control the neuropsychiatric symptoms. But most of these drugs have significant side effects which have to be actively looked out for. Anti-psychotic drugs are harmful. With the availability of alternative drugs, their use should be confined to the short term.

Behavioural problems of AD do not respond well to drugs. Psychosocial interventions may be more important in their management. Structured caregiver training programmes have been consistently shown to be effective in reducing caregiver stress and in improving their self efficacy in caring. Staff training in nursing homes can reduce the frequency of behavioural problems of in-residents with AD. In addition, cognitive stimulating activities and physical exercises have proven benefits in slowing cognitive decline in AD. In the home setting, AD elders usually have low motivation in sticking to these "healthy" activities. Day care is an excellent setting to engage AD elders in these activities, while providing some respite to the family caregivers at the same time. There is every hope that these non-pharmacological interventions when combined with judicial use of drugs can minimise the devastating effects of AD on the quality of life of the patients and their families.

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MCHK CME Programme Self-assessment Questions

Please read the article entitled "Therapeutics of Alzheimer Disease" by Prof. Timothy KWOK and complete the following self-assessment questions. Participants in the MCHK CME Programme will be awarded CME credit under the Programme for returning completed answer sheets via fax (2865 0345) or by mail to the Federation Secretariat on or before 30 September 2011. Answers to questions will be provided in the next issue of The Hong Kong Medical Diary.

Questions 1-10: Please answer T (true) or F (false)

1. Alzheimer disease is known to be caused by amyloid plaques and neurofibrillary tangles.
2. Progressive loss in short term memory is not a phenomenon of normal ageing.
3. Cholinesterase inhibitors can stop the cognitive decline from AD.
4. Cholinesterase inhibitor delivered by a skin patch has fewer gastrointestinal side effects than oral preparations.
5. AD patients with concomitant cerebrovascular disease do not benefit from cholinesterase inhibitors and memantine.
6. Memantine is better tolerated by AD patients than cholinesterase inhibitors.
7. Anti-psychotic drugs are effective in reducing wandering behaviours in AD patients.
8. SSRI's are as effective as anti-psychotic drugs in controlling agitation in AD patients.
9. Anti-psychotic drugs increase mortality in AD patients.
10. Cognitive stimulating activities can slow cognitive decline in AD patients.

ANSWER SHEET FOR SEPTEMBER 2011

Please return the completed answer sheet to the Federation Secretariat on or before 30 September 2011 for documentation. 1 CME point will be awarded for answering the MCHK CME programme (for non-specialists) self-assessment questions.

Therapeutics of Alzheimer Disease

Prof. Timothy KWOK

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Professor, Department of Medicine & Therapeutics, Prince of Wales Hospital, The Chinese University of Hong Kong

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐

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[1] IMS Health December 2010
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Depression and Suicide in the Elderly

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Introduction

Depression is common in the elderly and is a major public health problem. Depression in late life is associated with significant morbidity, including deficits in a range of cognitive functions and considerable influence on functional impairment and disability. In elders who have co-existing chronic medical conditions, the presence of depressive symptoms increases role impairment, utilisation of medical services and treatment costs,[1,2] decreases patients' compliance with their medical treatments[3] and alters disease course, leading to higher mortality and disability.[4,5]

Depression in the elderly can be divided into early-life onset, which recurs in old age, and late-life onset, which begins in old age. Late-life onset depression is the primary focus of this article.

Epidemiology

Beekman et al (1999) reported the prevalence of clinically significant depression among older people living in the community was 13.5% in a meta-analysis.[6] The prevalence of depressive episode was much lower, at around 2%. Copeland et al (2004) found that the prevalence of depressive symptoms ranged from 26%-40% among community dwelling older people in Europe in another review.[7]

In Hong Kong, the prevalence of clinically significant depressive symptoms was 9.7% among the community cohort of 55946 elderly. Depression was screened by the 15-items Chinese version of Geriatric Depression Scale (GDS) with a cut-off point at 8.[8] Another cohort study involving more than 3900 elders also reported a prevalence of depressive symptoms of 9.3% using GDS as screening.[9] The prevalence rates of severe depression in the Chinese elderly population were lower than those reported in Western studies but the prevalence rates of depressive symptoms approached those of most Western countries.[10]

Depressive disorders are common among elderly people in nursing homes. Recent studies have demonstrated a higher prevalence of depressive disorders in residential homes than in the community. Conservative estimate of the prevalence of depression in cognitively intact nursing home residents is 10-20%; for cognitive impaired patients the prevalence rises to 50-60%.[11] The prevalence of major depression was found to be 8.1% and the prevalence of minor depression was 14.1%, while a further 24% of the patients suffered from sub-clinical depression among nursing home residents in a recent study. [12]

Clinical Presentations

Two findings regarding the symptomatology of depressive disorders in late life stand out. One is the observation, across many cultures, that elderly people with depressive disorders complain less of a subjective lowering of mood than do younger patients, even when they appear depressed to the observer.[13] The other is that hypochondriacal preoccupation- an over-concern with and fear of bodily illness- is found consistently more often in older than in younger patients.[14]

It is often more difficult to diagnose depression in the elderly because of the overlap between the vegetative symptoms of depression and the symptoms of co-morbid physical illness. Elders underreport depressed mood and they are less likely to express suicidal ideation than younger age group. In addition, many depressed elders present with somatic complaints and minimise their psychological distress ('masked depression'). Masked depression is even more common in cultures where somatic illness is more readily accepted than mental disorders by the elderly.

Suicide attempts by older people should be taken seriously. Overdoses are rarely taken simply to attract attention. Any act of possibly deliberate self-harm should lead the physician to explore whether a depressive disorder is present. Even if the act of self-harm is not medically serious, it should not be ignored.

Characteristics of Late Onset Depression

Although some studies have not supported this view, most have shown that late-onset depression relative to early-onset depression is associated with higher medical morbidity and mortality,[15] greater disability,[16] and more neuropsychological[15,16] and neuroradiological abnormalities.[17-19]

Dysexecutive syndrome is considered to be a key to the neuropsychology of late onset depression, correlated with functional impairment in late life. Late-onset depression has a higher load of comordibity, of cerebrovascular disease, and of some genetic factors that may be different from early onset depression. Late-life depression is often associated with executive

dysfunction,[22,23] a neuropsychological expression of frontal system impairment, with a clinical presentation of depression resembling medial frontal lobe syndromes. Compared to elderly patients with early-onset depression and no vascular risk factors, patients with late-onset major depression and vascular risk factors have shown greater impairment in frontal functions, poorer insight, more psycho-motor retardation, less agitation and guilt, and more disabilities.[24,25]

The "vascular depression" hypothesis has served as the conceptual background for further subclassification of geriatric depression. One group of investigators further described a "vascular depression" subtype, subcortical ischaemic depression (SID), and defined it as a major depression with MRI evidence of subcortical lesions. Unlike most psychiatric disorders, which are described in purely phenomenological terms, subcortical ischaemic depression involves a measurable biological abnormality. The association of late-life depression with executive dysfunction led another group of investigators to describe the depression-executive dysfunction syndrome (DED). Although many patients with DED also meet criteria for SID or other "vascular depression syndromes", DED's focus on a functional abnormality rather than an anatomical one extends it beyond the vascular depression concept.[26]

Prognosis

Most older patients recover if given appropriate treatment. A meta-analysis by Cole and Bellavance indicated that 60% of patients either remained well or had relapses or recurrences from which they also recovered.[27]

Cole and Bellavance also looked, in another meta-analysis, at outcomes in community dwelling older adults with depressive disorders.[28] They found that after 2 years, 3.6% to 34.4% were completely well, 27% were continuously ill, and most of the remainder had died. No treatment or inadequate treatment of depressive disorders could result in poor recovery and chronic depressive illness.

Different types of depressive disorders may lead to different outcomes. Early evidence suggests that depressive disorders in old age - particularly late-onset depression-are associated with brain changes, which may result in lower rates of remission of symptoms in the acute phase of treatment. Psychotic late-life depression is also associated with poor outcome.[29]

Depression and Pseudodementia

Alexopoulos et al. studied 57 depressed inpatients subdivided by the presence or absence of "reversible dementia"-cognitive impairment that remits after recovery from a depressive disorder. Patients presenting initially with a depressive disorder and reversible cognitive impairment had an almost fivefold increased risk of developing dementia, compared with those who had a depressive disorder but intact cognitive function. [30]

Recent follow-up data demonstrate that patients with pseudodementia develop dementia at a rate of 9% to 25% per year.[31] In an epidemiological community study of dementia, Devanand and colleagues demonstrated that depressed mood was common in subjects with cognitive impairment who did not meet the criteria for dementia.[32] The evidence suggests that patients who present with cognitive impairment and depressive disorder are at increased risk of dementia, even though their confusion may lift with treatment of the depressive disorder.

Treatment

In general, antidepressants are as effective in the elderly as in younger patients,[33,34] with response rates of 50% to 60% in various clinical trials. These trials, as well as a more recent meta-analysis of published studies,[35] also suggest that in older subjects, there is little difference in efficacy among antidepressant classes.

Most clinicians choose first-line agents with more benign side effect profiles. Selective serontonin reuptake inhibitors are the recommended first-line antidepressant.[36] In general, it is acceptable to initiate doses at half the usual adult dosage and then titrate slowly for a few weeks to the optimal dose, if tolerated. An adequate medication trial requires 6 or more weeks of a recommended dosage. After remission of depressive symptoms, continuation of treatment during the next 6 months helps to prevent relapses in adults but the main risk period in older adults may be as much as 2 years. Beyond continuation treatment, guidelines for maintenance therapy to prevent recurrence have not been established for the elderly. Some advocate long-term treatment for patients who have recurrent depressive episodes.

Electroconvulsive therapy is safe and effective and has an 80% to 90% remission rate in elderly patients.[37] The most important adverse effect is memory impairment, which is often transient. However, ECT can be lifesaving for the most severely ill.

Psychotherapeutic interventions can be beneficial alone or in conjunction with pharmacological interventions in the treatment of geriatric depression.[38] Cognitive behavioural therapy and interpersonal psychotherapy, have been shown in randomised clinical trials to be efficacious as medications for cognitively intact elderly patients with mild to moderate depression.[39] A combination of formal psychotherapeutic interventions and pharmacological agents is more efficacious for moderate to severe depression than either form of treatment alone.

Short term treatments include cognitive behavioural therapy, interpersonal psychotherapy, and problem-solving therapy (PST) which are delivered over a period of two or four months, and have been shown to be effective for the older population. Research from Project IMPACT demonstrated the feasibility and cost-effectiveness of a primary care-based treatment programme that offered a choice of antidepressant medication and/or a brief, structured form of PST.[40]

Antidepressants medications bring to remission fewer

than 40% of depressed elders who have some degree of cognitive impairment. Cognitive deficits, in particular executive dysfunction have been associated with slow and/ or poor response to antidepressant treatment.[41,42] Studies comparing PST with treatment as usual in primary care and home care continue to support the usefulness of PST for depression in older adults.[43,44] PST has been adapted for depressed elderly with mild executive dysfunction, and recent data suggest that it is efficacious in reducing depression and disability in this population.

Activity scheduling is a behavioural treatment for depression which encourages the patients to increase the number of pleasant activities and positive interactions with their environment.[45] Inproving social support might also help to reduce loneliness and depression, and improve adaptation to disability in the elderly. Besides, both mindful and non-mindful physical exercises were reported to have short term effects in reducing depressive symptoms among older persons.[46]

Suicides in the Elderly

In many countries the suicide rate of elderly persons (referring to those aged 65 years and above) is higher than in younger age groups.[47] In some Asian countries like Japan, Korea and China, the suicide rate in older people were very high compared with rates in younger people.[48] Elderly suicide rates (27.6 per 100,000) are 2 to 3 times that of the general population above average (13.6 per 100,000) in 2006 in Hong Kong. In most Western countries, the male to female ratio of suicide rate is approximately 3: 1, but in many Asian countries, there is a low male to female ratio. Recent studies showed that the suicide rate in women was higher than that in men in China. In the elderly, the male to female ratio was slightly over 1. In Hong Kong, the male to female ratio in elderly suicides was 1.3: 1.[48]

In older people, suicidal ideations, suicide attempts, and completed suicides occur most frequently in the context of major depression. Psychological autopsy studies have found depression to be the most common psychiatric diagnosis in elderly suicide victims and in suicide attempters. Conwell's group reported that 76% of elderly suicide victims had diagnosable psychopathology, including 54% with major depression and 11% with minor depression.[47] Chiu et al. reported that 86% of the elderly suicide subjects in Hong Kong suffered from a psychiatric problem before committing suicide. Among the psychiatric problems, major depression which was the most common diagnosis was found in 53% of the elderly suicide subjects.[49]

Depression is the principal risk factor for suicide in late life and for suicide's clinical precursor, suicidal ideation. Physical illness, interpersonal problems and bereavement are commonly associated with suicides in older people.[50] Life problems do not occur in isolation; a suicide is the end-point of a complex interaction of psychiatric, psychological, and demographic variables. Depression is a common mediating factor between life problems and suicides in older people and personality factors might determine how an individual reacts to life problems.[51]

The detection of suicide in the elderly (especially in men) is more challenging, as they are less likely to communicate their depressed mood and overt suicide intent and often present with symptoms of masked depression. Chiu et al. reported that 76.5% of suicide subjects in Hong Kong had consulted a doctor (including specialists or general practitioners) within 1 month before death in a psychological autopsy study.[49] This finding showed that elderly suicide subjects had a high rate of recent medical consultation and that primary care physicians can act as "gate-keepers" to detect and prevent suicide behaviour in older persons.

The Elderly Suicide Prevention Programme (ESPP) was implemented in Hong Kong in 2002. In this programme, 7 elderly suicide prevention teams, consisting of psychiatrists, nurses and social workers, worked in collaboration with hotline services, nongovernmental organisations, centres for the elderly, and general practitioners to screen for people with depression and those at risk of suicide. Older people identified as being at risk for suicide or with severe depression were seen in fast-track clinics and visited at home by nurses. The ESPP was associated with a reduced rate of completed suicides in elderly suicide attempters and might have contributed to a fall of suicide rate in women aged 85 years and older.[52]

Conclusion

Depression is a common but frequently unrecognised or inadequately treated condition in the elderly. Improved detection and early interventions are crucial in preventing disabilities and suicides. Geriatric depression is a multidimensional disorder with multiple risk factors. Treatment for the elderly patients with depression should involve biopsychosocial dimensions targeting mood, cognition and functional ability at the same time.

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AUC (ng.hr/ml)	14,564±4,138	2,459.2±525.8	6 : 1
Cmax (ng/ml)	1,801.9±123	545.4±155.1	3 : 1
Cmax (μM)	8.9±0.7	3.0±0.8	3 : 1
Tmax (hr)	3	2.2	3 : 2

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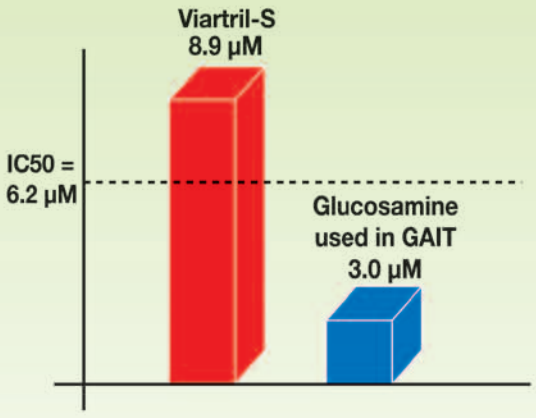

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Elderly Osteoporosis - Beyond Bone Density and Drugs

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Dr. Eddie SL CHOW

Introduction

It is very common for clinicians to encounter elderly patients with osteoporosis, or viewing it from another perspective, elderly persons at high risks of fragility fractures. Osteoporosis increases the risk of fractures in our elders, resulting in significant morbidities and mortalities. The hips, forearms and vertebrae are the common sites of osteoporotic fractures, of which hip fractures are of the most significant impact, especially in the short term. Despite a recent stabilising trend of age-specific incidences of hip fractures in Hong Kong, with the increasing size of our elderly population, the absolute number of hip fractures, with their impact, is expected to continue to increase[1,2].

Assessment – More Than Bone Mineral Density (BMD)

As other areas of Geriatric medicine, 'osteoporosis' assessments for elders include evaluations not only on bone health, but also comprehensive assessments of the full spectrum of bio-psycho-social domains. These may include, but not limited to, functional and fall risk assessment, cognitive assessment, and evaluation of personal and environmental contextual factors.

Initial investigations commonly utilised in the work-up of osteoporosis in elders are shown below. This also serves as an initial screening for common secondary causes of osteoporosis.
- Serum calcium and phosphate
- Complete blood count
- Creatinine / renal function test
- Alkaline phosphatase / Albumin / liver function test
- Thyroid-stimulating hormone
- Serum protein electrophoresis
- Lateral radiograph of lumbar and thoracic spine

Others:
- Vertebral fracture assessment
- Bone densitometry

Additional biochemical testing is carried out in selected patients based on clinical assessment. While bone turnover markers may have values in the assessment and management, they are not routinely checked in many local settings.

Bone mineral density (BMD) is an important predictor of bone strength. The most commonly used technique worldwide, including Hong Kong, is the dual-energy X-ray absorptiometry (DXA). The World Health Organization (WHO) established the definition of osteoporosis based on the BMD measurement by DXA. Osteoporosis is defined as BMD of 2.5 standard deviation (SD) or more below that of a "young normal" adult (i.e. T-score at or below -2.5)[3].

It is important to note that the relationship between BMD and fracture risk is a continuous one[4], and there is no BMD threshold for osteoporotic fractures to occur. Elderly persons with normal BMD can develop osteoporotic fractures. This is similar to the occurrence of stroke in elders with normal blood pressure. On the other hand, a non-osteoporotic fracture can also occur in an elder (e.g. pathological fracture).

Diagnosis Does Not Equate to Drug Treatment

Although BMD helps to establish the presence of osteoporosis and an increased risk for fracture, most fractures occur in postmenopausal women and elderly men at moderate risk[3,5]. This is one reason why BMD alone is not used as the sole decision factor for treatment[3,6]. Other skeletal abnormalities, in addition to low BMD, can contribute to bone fragility. A variety of non-skeletal factors, such as age and liability of falls, also contribute to the fracture risks.

Recent attention has been put on clinical risk factors (CRF) that significantly contribute to the fracture risk which is independent of BMD measurements or age. These CRFs are of cumulative effects and, combined with BMD, provide a useful estimation of the fracture risks and help the subsequent management decisions[4,7,8]. To serve the purpose, the development of FRAX® algorithms integrates the weight of clinical risk factors, with or without information on BMD, and computes the 10-year probability of hip fracture or a major osteoporotic fracture. A major osteoporotic fracture is defined as a clinical spine, hip, forearm, and humerus fracture. The FRAX® tool can be assessed on-line on www.shef.ac.uk/FRAX[9]. The model has also been calibrated for the use in Hong Kong.

FRAX® gives risk ratios for average doses or exposures for some CRFs despite a dose-response relationship between some factors and fracture risks, e.g. number of prior fractures, the use of alcohol and steroid. This should be remembered when interpreting the

FRAX® result[7,10,11,12] and clinical judgement should be employed for lower or higher exposures. For prior fractures, FRAX® includes not only symptomatic but also (subclinical) morphometric vertebral fractures detected during radiological evaluation. Vertebral fractures can be identified on lateral radiographs or via vertebral fracture assessment (VFA). VFA is a low radiation imaging of the spine now available on some bone densitometers and allows concurrent detection of significant vertebral fractures while measuring BMD[13,14].

Fall Risk Assessment and Interventions

Falls do not lead only to fragility fractures, but also other serious outcomes including head and brain injuries. Even the fear of a fall can lead to negative health outcomes in the elderly population. The American Geriatrics Society (AGS) and British Geriatrics Society (BGS) recommended elders to be enquired for any history of falls (in the past year) and walking or balance difficulties. Elders with a positive history should undergo a gait and balance assessment[15]. Recommended tests commonly used in Hong Kong include the Timed Up and Go test[18], Berg Balance Scale[19], and Tinetti Gait and Balance Scale[20,21]. Elders who fail to perform satisfactorily on the above tests, together with those presenting with fall-related problems, reporting recent multiple falls, and those reporting walking or balance difficulties represent a higher risk group and should undergo more comprehensive multi-factorial fall assessments[15]. Such assessments should include appropriate functional & environmental evaluations to be performed by clinicians with appropriate training and expertise, which are commonly available locally in Geriatrics Fall clinics.

To be effective in reducing falls, assessments have to be linked with appropriate interventions. For elders living in the community, effective interventions may include appropriate home modifications, exercises, minimising psychoactive drugs, rational reduction of medications; treatment of postural hypotension and foot problems, and the use of proper foot-wear[15]. Dementia represents another higher risk group for falls and fractures, and be an unfavourable prognostic factor in hip fracture rehabilitation. Unfortunately, there are still insufficient evidences to make any valid recommendations on fall intervention strategies for demented elders[15].

Physical Activities and Exercises

Physical activities and exercises, in particular weight-bearing exercises, are effective in increasing BMD at the lumbar spine and hip in postmenopausal women[22]. Exercise programmes targeting at strength, gait and balance, such as Tai Chi, can also reduce falls[15]. The American College of Sports Medicine (ACSM) recommended that fall-related exercise programmes for elders should include weight–bearing endurance and resistance activities aiming at preserving bone mass, and also activities designed to improve balance and prevent falls[16,17]. Taking account into the high prevalence of co-morbid medical conditions in the elderly, exercise prescriptions and programmes should be individualised taking into consideration of one's own physical capabilities and health profile. Regular reviews and adjustments of exercise progression are also needed. For osteoporotic elders, several forms of exercises are best avoided. These include twisting movements (e.g. golf swing), dynamic abdominal exercises (e.g. sit-ups), and excessive trunk flexion. Exercises involving abrupt, explosive or high-impact loading should also be avoided[17]. While elders should be encouraged to remain active, formal exercise training programs in elders, especially for those with multiple co-morbidities, could best be prescribed and monitored by qualified professionals like geriatric, rehabilitation, or exercise specialists, if available. Despite the focus of this article on osteoporosis, falls and fractures, it is important to note that physical activities and exercises offer benefits more than just bones and fractures. Readers interested in exercise prescriptions for the elderly may refer to the related recommendations by ACSM and the American Heart Association (AHA)[23].

Calcium and Vitamin D

Adequate daily calcium and vitamin D intake is safe, inexpensive and promotes bone health. The commonly recommended daily calcium intake ranged from 1000 to 1200mg[13,24,25]. There are controversies about the efficacy of calcium in fracture reduction and the potential risks of higher-dose supplementation on renal stones or cardiovascular diseases[25,26,27,28]. It is also important to pay attention to the possible worsening of constipation as a result of the calcium tablet intake. This is a common and troublesome issue to elders, but is easily overlooked by clinicians.

Apart from osteoporosis, vitamin D supplement in a dose of 700-1000 IU daily may reduce the risk of elderly falls[29]. The commonly recommended daily vitamin D intake ranged from 800-1000IU[15,24,25]. A daily intake of vitamin D up to 2,000 IU/day was regarded as safe by the National Osteoporosis Foundation (NOF) and Osteoporosis Canada[13,25].

Anti-osteoporosis Agents - Considerations Beyond Efficacies

National Osteoporosis Foundation (NOF) recommended that postmenopausal women and men aged ≥50 with the followings to be considered for drug treatment[25]:

1. A hip or vertebral (clinical or morphometric) fracture
2. A DXA hip (femoral neck) or spine T-score ≤ -2.5
3. Low bone mass and a WHO 10-year probability of a hip fracture ≥3% or major osteoporosis-related fracture ≥20%.

The above recommendations are not rules. Clinical decisions on drug treatment also need to take account into patient factors, including personal preferences, co-morbidities, limitations of FRAX in application to individuals, risk factors not captured by FRAX (e.g. falls), the cost-benefit and compliance considerations of various modes of fracture prevention (which includes but not limited to anti-osteoporosis drug treatment), and also the willingness to pay by the concerned society. Decisions to treat therefore have to be made on a case-by-case basis.

Current FDA-approved agents for postmenopausal osteoporosis include bisphosphonates (alendronate, ibandronate, risedronate and zoledronic acid), calcitonin, oestrogens (oestrogen and/or hormone therapy), raloxifene and teriparatide[25]. Strontium ranelate was also approved for treatment of postmenopausal osteoporosis in some European countries. Alendronate, risedronate, zoledronic acid, and teriparatide are approved for osteoporosis for elderly men in the USA[25].

In clinical settings, apart from considerations on anti-fracture efficacies, drug cost, practical intake and compliance considerations also dictate the choice of agents. While readers may refer to various guidelines for the relative efficacies of different agents[13,24,25], the following discussions will try to highlight some practical considerations related to our elders.

Bisphosphonates: -Bisphosphonates may be given in oral form or by injection/infusion. Instead of daily intake, oral bisphosphonates are nowadays commonly taken once weekly or monthly. Side effects of oral bisphosphonates include gastrointestinal problems such as dysphagia, oesophagitis and gastric ulcer. Oral bisphosphonates only work in an empty stomach. Patients are therefore commonly instructed to take oral bisphosphonates as the first thing waking up in the morning, with an empty stomach and followed immediately by 200-250ml of plain water. For at least 30-60minutes (depending on the bisphosphonates chosen) after medication intake, patients should remain upright (sitting or standing) and should not eat, drink other fluid or take any other medications. The complexity of intake instructions commonly imposes challenges to elderly patients and their care-takers, and results in compliance issues that clinicians must be aware of. Ibandronate and zoledronic acid can also be given less frequently in non-oral preparations (slow intravenous injection/infusion depending on the drug used). Renal function and calcium levels are to be checked before injection and the two IV bisphosphonates are contraindicated in patients with uncorrected hypocalcaemia. Patients receiving IV zoledronic acid infusion are given paracetamol to reduce common acute symptoms of arthralgia, headache, myalgia and fever. There are concerns on bisphosphonate-related osteonecrosis of the jaw (BRONJ), atrial fibrillation and atypical fractures. These concerns are routinely included in the author's discussion with patients/families before treatment. It is also the author's practice to advise patients to undergo dental check-up, partly as a practice to promote good elderly dental care and partly on the possible concern on BRONJ.

Oestrogen agonist/antagonist or Selective Oestrogen-Receptor Modulators (SERMs) – Raloxifene:- Apart from its benefit in osteoporosis, raloxifene is associated with a reduced risk of invasive breast cancer. There is an increased risk in deep venous thromboembolism (DVT) with raloxifene, which needs to be stopped (at least 3 days) before a planned surgery or a long period of remaining still (e.g. long flight or car trip). Raloxifene may also cause hot flashes and leg cramps[30].

Strontium renelate:- Strontium ranelate was approved in some European countries for osteoporosis. It both inhibits bone resorption and stimulates bone formation. It absorption is reduced by food, milk and related products. Patients are therefore advised to take the 2-g sachet once daily at bed-time, at least two hours after eating. Strontium should be used with caution in patients at increased risk of DVT.

Hormonal Replacement therapy (HRT):- The use of oestrogen/hormonal replacement therapy is nowadays more limited after the Women's Health Initiative showing its association with myocardial infarction, stroke, invasive breast cancer and thromboembolic events[31]. American and Canadian guidelines recommended that oestrogen/hormone therapy can be used in menopausal women requiring treatment for osteoporosis together with vasomotor symptoms[13,25]. If osteoporosis is the only target, non-oestrogen treatment should be considered first.

Teriparatide:- Teriparatide is a powerful bone-forming agent administered by daily subcutaneous injections. The usual duration of use is 18 months. It raised the risk of osteosarcoma in rats and is not advised in patients with elevated risks of osteosarcoma. Teriparatide can cause hypercalciuria and hypercalcaemia, both are generally mild and resolve spontaneously with/without stopping of calcium supplement[13].

RANK ligand (RANKL) inhibitor/human monoclonal antibody:- Denosumab may be available in Hong Kong shortly. It is given by subcutaneous injections every six months. Denosumab significantly reduced the incidence of new spine fractures, hip fractures and non-spine fractures over three years[32].

Additional Notes:- It is worth taking note that evidences of benefits for most anti-osteoporosis agents are shown in patients with satisfactory renal functions (with creatinine clearance of more than 30-40ml/min). Many elderly patients may have a renal function lower than this. Physicians should be aware of this when considering anti-osteoporosis agents. In addition, the issues of polypharmacy and drug interactions are very common in elderly. This also warrants special attention.

Conclusions

Osteoporosis is a disease of high relevance to elderly care. Its impact and management is closely related to other giants of geriatric medicine like falls, dementia (affecting the risk of falls and drug compliance), polypharmacy (additional concern on drug interactions) and immobility (worsening osteoporosis and imposing concern on drug choices). A good practice of osteoporosis medicine may serve as a marker of good geriatric care to our senior citizens.

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Dermatological Quiz

Dermatological Quiz

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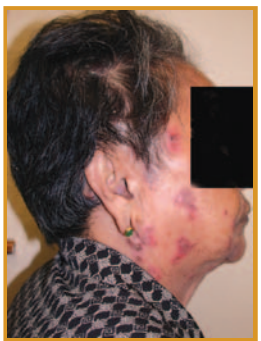

Fig a: Crusted lesions over the face

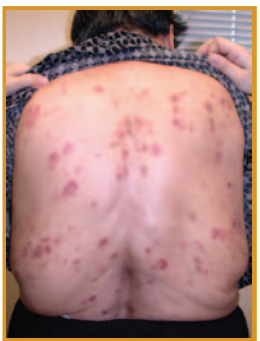

Fig b: Similar lesions over the back

This 60-year-old woman complained of pruritic and painful lesions over her face and trunk, especially over the upper chest and back for three months. Only on direct questioning revealed a history of mild blisters. For her past health, she had hypertension which was treated with an ACE-inhibitor. On examination, there were multiple erythematous crusted and scaly lesions over her face (Figure a) and trunk (Figure b). No blisters could be detected and no mucosal lesions were seen in the oral cavity.

Questions:

1. What is your preliminary clinical diagnosis?
2. What are the differential diagnoses?
3. What important possible underlying cause should be considered in this patient?
4. How do you explain the absence of oral mucosal involvement in this subtype of disease?

(See P.41 for answers)

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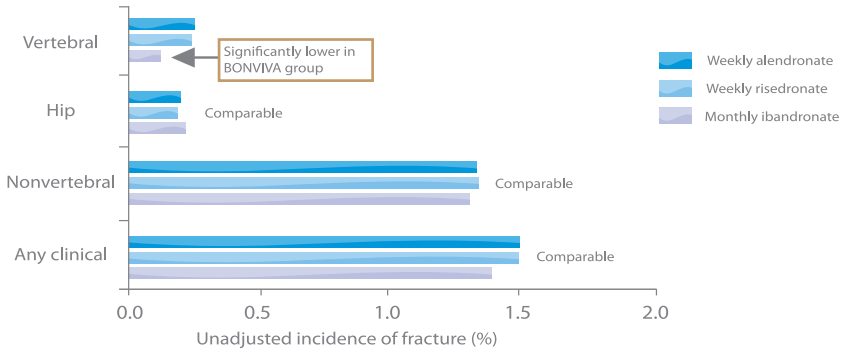

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Reference 1: Harris ST, et al., Risk of fracture in women treated with monthly oral ibandronate or weekly bisphosphonates: The eValuation of IBandronate Efficacy (VIBE) database fracture study, Bone 2009;44:758-765. Further information available. Full prescribing information available upon request

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An Aggressive Medical-Nutritional Approach to the Management of Refractory Pressure Sores

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Ageing is associated with significant changes in body composition: bone mass, lean mass, and water content all decrease, while fat mass increases. The basal metabolic rate, which is closely related to physical activity, is the principal component of total energy expenditure. Reduced basal metabolic rate in older persons reflects the loss of muscle mass resulting in decreased strength and functionality.

Acute and/or chronic diseases (often resulting from multiple pathologies) with related limitations in physical, psychological, mental, cognitive and/ or social functions would contribute to loss of independence resulting in immobility. These factors compromise nutrient and fluid intake and increase the risk of under-nutrition and pressure ulcers by 74%[1], particularly in institutionalised and hospitalised elders.[2] Pressure ulcers are caused by a local breakdown of soft tissue as a result of compression between a bony prominence and external surface. The severity is classified by the depth of tissue damage as stage I through stage IV.[3] Pressure sores are associated with an increased mortality and decreased quality of life, and their absence is also now regarded as an indicator for quality of patient care. On the other hand, pressure ulcers incur considerable costs associated with treatment and increased length of stay of the patient in the hospital.

Older adults are at high risk of developing pressure ulcers. 70-73% of those who develop pressure ulcers are over 65 year-old.[4] The incidences of pressure ulcers in hospitalised elder patients and in the outpatient setting are 8.8%.[5] & 1.61% respectively.[6] The incidence in nursing homes in Hong Kong is 25.16 %.[7]

Malnutrition is one of the important factors for pressure ulcer development in the hospital, nursing home and also home care settings.[5,8,9] Subjects with malnutrition have an adjusted odds ratio of 2.6 of having pressure ulcers in acute care facilities and 2.0 for residential aged care facilities. Severe pressure ulcers in terms of stage and number are associated with increases in the severity of malnutrition.[10] The relationship has also been observed in animal models where severe protein energy malnutrition increases infection in wounds, decreases collagen deposition and reduces tensile strength in the wound healing process.[11]

Physicians should always pay attention to the occurrence of malnutrition in an elderly patient especially in the presence of pressure sore; and offer aggressive treatment. A common mnemonic to remember the aetiology in geriatric patients is MEALS ON WHEELS[12] referring to Table 1. However, the diagnosis of malnutrition remains in a high index of suspicion and the recognition of underlying multiple contributing factors, which should be optimised.

A clinical evaluation of malnutrition includes: [13-16]
1) Dietary history and weight changes
2) Anthropometric measures
3) Biochemical index
4) Physical examination

Specific tools for screening and assessment may include:
1) Malnutrition Universal Tool (MUST),
2) Mini-Nutritional Assessment-Short Form (MNA-SF),
3) Subjective Global Assessment (SGA)
4) Short nutritional assessment questionnaire (SNAQ)

Recent guidelines from the Japan Society of Pressure Ulcers and also the European Pressure Ulcer Advisory support the role of nutrition in the pressure ulcer healing.[17,18] The majority of sick elderly patients require at least 1.0-1.2 g/dl protein/kg per day and 20-30kcal/Kg per day of non-protein energy. Some literature suggested that a slightly higher protein amount (1.5g/kg per day) should be considered in a malnourished elder to improve nitrogen balance and restore lean body mass.[19] Restoration of body cell mass and wound healing are more difficult in elders, preventative nutritional support with adequate intake of energy; protein and micronutrients should be considered in every elderly patient.

Nutritional support, mostly in the form of high protein oral nutritional supplements, can significantly reduce pressure ulcer incidence by 25% in at-risk patients compared with standard care.[20] Enteral Nutrition (EN, including oral and enteral routes) should always be the first choice.[21] However, age-associated changes in the gastrointestinal tract which impair nutrient absorption, particularly during a critical illness; in patients who are unable to receive EN (e.g., uncontrollable diarrhoea, high-output fistulae, gut failure); or when EN alone cannot meet the energy and nutritional requirements (e.g. when tube feeding is poorly tolerated, the patient simply dislikes the taste of EN, or the patient cannot follow the instruction due to cognitive deficits or delirium); Parenteral Nutrition (PN) or in combination to the enteral route as Dual Nutritional Augmentation (DNA) can be recommended. Traditional Total Parenteral Nutrition (TPN) has the problems of inconvenience due to the insertion of a central catheter and the frequent associated mechanical and septic complications. Peripheral Parenteral Nutrition (PPN)

using an accessible subcutaneous vein can offer a safe, efficient and useful route for intravenous nutrition. A dual regime of EN and PPN may facilitate the healing of high grade pressure sores, despite traditional wound care such as wound dressing, antibiotic treatment and debridement having been offered in our experience. However further studies need to be conducted to confirm this effect.

Other amino acid, metabolites of amino acid, vitamin and minerals may also facilitate the wound healing process.

Glutamine enhances nitrogen metabolism and immune response. It is an important fuel source for rapidly dividing cells that is rapidly depleted in hypercatabolic patients. It functions as a fuel source for fibroblasts and epithelial cells required in the healing process.

Arginine is considered conditionally essential during critical illness because it is utilised more quickly. It functions as a substrate for protein synthesis, which is required for collagen deposition, cell proliferation, vasodilatation, immunity and T lymphocyte function and it enhances a positive nitrogen balance.[22]

Beta-hydroxy-beta-methybutyrate (HMB) is the metabolite of leucine. HMB helps to decrease protein breakdown.[23]

Vitamin C is mandatory for enzymatic hydroxylation of collagen and secretion of procollagen. ;[24] Vitamin C supplementation as 1000mg ascorbic acid for 1 month accelerates the healing rate and reduces the pressure ulcer area, probably by increasing leukocyte ascorbic acid concentrations compared with the placebo group. However, current evidence doses not support the routine use of vitamin C supplement in the absence of scurvy in patients with pressure ulcer.[25]

The multidisciplinary team approach is of utmost importance in the caring of nutritional support provision in patients having severe pressure sores. The team includes physicians, orthopedic surgeons, geriatric/ wound care nurses, dietitians and preferably to have the support from pharmacists. The team requires screening of nutritional deficits, assessment the stage of pressure sore & correlations with the treatments, estimation of the amount of nutritional supplements, in particular to peri-operative wound debridement stage and identification of the most appropriate feeding route modality. Other party involvements such as catering and senior management is also vital for the success of nutritional support division. The need of on-going monitoring, evaluation and adjustment of the mode and content of nutritional supplement could be ideally achieved by excellent communication between different disciplines. The ideal nutritional chain is illustrated in figure 2. [26]

We illustrate with a patient as followings:
A 59 year-old gentleman has a background medical history of tuberculous meningitis resulting in paraplegia. He suffered from chronic pressure sores. He required repeated debridements in 1999 through 2005, and a posterior thigh flap for the pressure sore before that, in additional to traditional methods of wound dressing and antibiotic use. On presentation to us, his pressure sore was recorded (figure 1a). After 38 days of dual route of supplement, his pressure sore improved (figure 1b).

Conclusion

Adequate dietary assessment of dietary intake and aggressive nutritional therapy by a multidisciplinary professional team is important for pressure ulcer management. The team approach comprises the physician, orthopedic surgeon, geriatric/ wound care nurse, and the dietitian. Each discipline has a unique role in pressure sore management. They are equally important at all stages of the journey of wound healing. A dual oral and peripheral parenteral regime accelerates the healing of high grade pressure sores refractory to the traditional method of treatment. Each individual case needs to be examined and the indications for nutritional and surgical treatment tailored accordingly.

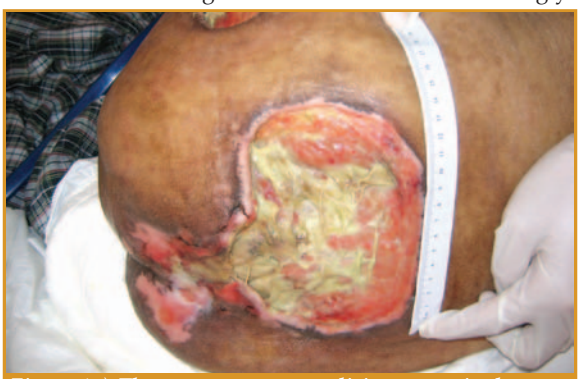

Figure 1a) The pressure sore condition on arrival to our hospital.

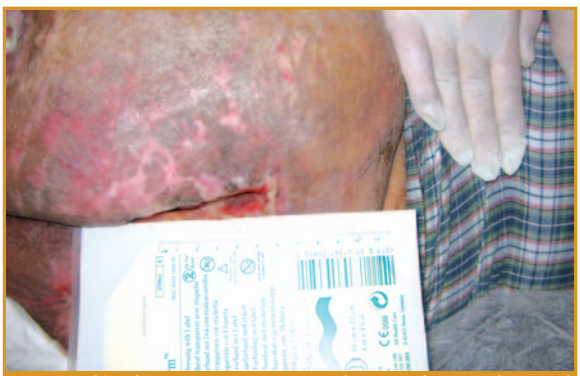

Figure 1b) The pressure sore condition after traditional methods and also the 38 days of dual nutritional augmentation

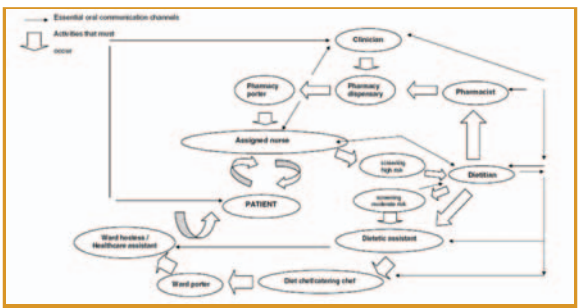

Figure 2. P Howard et al. (26) The ideal nutrition chain delivery to patient who has severe pressure sore. Excellent communication skills are required at all levels.

Table 1: Mnemonic "Meals on Wheels"
Medications (e.g. Digoxin, Thephylline, Fluoxetine)
Emotional cause (Depression)
Alcoholism
Late life paranoia
Swallowing problem (Dysphagia)
Oral problems
Nosocomial infections (Tuberculosis, Clostridium difficile, Helicobacter pylori)
Wandering (Dementia)
Hyperthyroidism, Hyperparathyroidism, Hypoadrenalism
Enteral Problems (Malsbsorption)
Eating Problems (instability to self feed)
Low salt, Low fat diet
Shopping and social problem

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Is Growth Hormone an Anti-ageing Remedy?

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Growth Hormone and Ageing

Growth hormone (GH) is a peptide hormone secreted into the blood stream from the anterior pituitary gland in pulses, normally during sleep. The pulsatile release of GH is a result of the interacting stimulatory (by growth hormone releasing hormone (GHRH)) and inhibitory (by somatostatin (SS)) inputs from the hypothalamus, through the negative feedbacks of GH[1]. GH mediates its physiological effects in the tissues through its direct peripheral action as well as indirectly via the serum insulin like growth factor I (IGF-I). The latter is secreted from the liver in response to GH stimulation. Apart from its important role in stimulating linear growth in childhood, GH has a number of metabolic effects that persist throughout life[1,2]. GH is secreted throughout life in humans. Circulating GH concentrations are maximal during the pubertal growth spurt but then decline with age. The mean daily GH secretion declines at an average rate of 14% per decade, and the mean 24-hour GH concentration is undetectable in 25% of normal elderly persons aged 50 years old and over[3-6]. Serum GH level has a very short half-life, and a single measurement of serum GH level is difficult to interpret. The 24-hour GH secretion can reflect the GH secretory status. Alternatively, one can use the serum IGF-I level, as a surrogate index of GH-IGF-I axis sufficiency, as the serum IGF-I level has very little diurnal variations. By the young IGF-I standard, 80% of healthy old men are GH deficient[7]. The GH secretory response to GH-RH is still preserved in healthy ageing. The responses of GH release to other stimuli are variably affected by ageing. The acute response to exercise is reduced, but the response to arginine, via inhibition of SS, is not affected. Moreover, the pituitary's GH secretory response to GHRH and GH secretagogue (GHS) stimulation is maintained[8-11].

The age-related decline in GH secretion is initially regarded as analogous to that in adult GH deficiency (GHD) due to pituitary diseases that occur in middle-age adults or elderly persons, as both have similar patterns of bodily changes. Both GHD and ageing are associated with increased total fat mass with central abdominal fat distribution and decreased skin thickness (thinner skin), muscle mass and strength (sarcopenia), bone mass/density and exercise capacity. These ageing-related bodily changes show associations with the GH and IGF- I declines in ageing[1]. Moreover, replacement of GH to GHD in adults restores the GH and IGF- I levels, and reverses these bodily changes. In terms of adverse effects, physiological GH replacement in GHD in adults is quite well tolerated[12]. Hence, researchers hypothesise that replacing GH in healthy elderly persons would also achieve similar effects. However, the GH secretory response to GH-RH is still preserved in healthy ageing, while this is impaired in GHD due to pituitary diseases.

Is Growth Hormone (GH) an Anti-ageing Drug?

GH Shows Benefits on Body Composition

GH replacement improves the body composition. Replacement of recombinant human growth hormone (rhGH) to healthy elderly persons can increase circulating GH and IGF-I concentrations to the normal young adult range. Rudman et al showed that GH replacement in healthy elderly persons improved the body composition. They administered rhGH injections three times per week subcutaneously to elderly men 61-81 year old, who had low baseline serum IGF-I concentrations. The rhGH replacement increased the serum IGF-I concentrations into the youthful range. The treatment was associated with a significant 14.4% decrease in fat mass, 8.8% increase in lean body mass, and 1.6% increased in bone density in lumbar vertebrae. The skin thickness increased by 7.1% (p=0.07). Rudman et al interpreted their findings enthusiastically. They commented that the effects of 6 months of GH therapy led to improvements in lean body mass and fat mass, which were interpreted to be "equivalent in magnitude to the changes incurred during 10 to 20 years of ageing"[13]. Because of these initial findings and the related over-interpretations, interests in the use of GH as "anti-ageing" therapy became widespread, and the off-label use of growth hormone (rhGH) as an anti-ageing drug was common, though there was insufficient evidence to support its efficacy or safety. From 1990 to 2004, there was a 10-fold increase in the number of persons using GH as an "anti-ageing" therapy. It was estimated that 20,000 to 30,000 in the US were using GH as non-indicated off-label use for this purpose. Increasing off-label use was also common in other places, including Asia[14].

GH has No Benefits on Muscle Strength, Physical and Cognitive Functioning

One of the hallmark of ageing is the gradual loss of muscle mass and strength[15], which are related to subsequent decline in physical function and the risk of falls in elderly people[16]. GH replacement in healthy elderly persons did not improve their muscle strength

or physical functioning, despite improvement in lean body mass. Papadakis et al showed no muscle strength improvement despite a 4.3% lean body mass increase after a 6-month therapy of GH in healthy elderly persons[17]. Similar negative results were found by other studies[18-21]. GH, when used together with resistance exercise, conferred no additional benefits in improving the muscle strength[19, 22, 23]. GH replacement in healthy elderly persons also did not improve their cognitive function. In a 6-month randomised controlled trial of GH versus placebo in healthy elderly persons, there was no improvement in the cognitive function[17].

GH Replacement: Risks Outweigh Benefits in Healthy Elderly Persons

Adverse effects are very common after GH replacement treatment in healthy elderly persons. Ankle oedema, carpal tunnel syndrome, arthralgia and gynaecomastia were commonly reported after 6-month of GH therapy[13, 17, 24, 25]. Long-term risks are unknown in humans, as most clinical trials of GH were of short-durations and small sample sizes. Hence, Liu et al performed and reported a systematic review and meta-analysis of GH clinical trials in humans[26]. In this meta-analysis of 31 randomised controlled studies of 220 elderly persons who had received GH (107 person-years), the mean initial daily GH dose was 14 μg per kg of body weight and the mean treatment duration was 27 weeks. In elderly persons treated with GH and compared to those not treated with GH, the overall fat mass significantly decreased and lean body mass increased. There was no change in body weight. Mild decline in the total cholesterol level was present but became non- significant after adjustment for body composition changes. There was no significant improvement in cognitive functioning, physical function, and other outcomes, including bone density and other serum lipid levels[26].

Regarding the risks of GH use, GH was reported to be relatively well tolerated in young adults with GHD[12], but not in elderly persons[26]. Healthy elderly persons who were treated with GH were significantly more likely than placebo treatment to experience soft tissue oedema (50% versus 8%), arthralgia (21% versus 5%), carpal tunnel syndrome (19% versus 1%), and gynaecomastia (6% versus 0%). Other risks like diabetes mellitus and impaired fasting glucose were also more common in the GH-treated elderly persons[26].

Based on findings from experimental studies, other potential risks are possible concerns if GH replacement is given on a long-term basis as an anti-ageing therapy. The first important concern is increased cancer risks related to high normal (i.e. IGF-I levels are on the high side of the normal range) serum IGF-I levels after GH treatment. In previous epidemiological studies, high normal IGF-I levels were associated with increased risks of colon cancer[27], prostate cancer in men[28, 29], and breast cancer in women[30, 31]. Another concern is possible shortening of life-span (i.e. pro-ageing) rather than increased longevity (anti-ageing) with GH treatment. Currently, there are no human published data, and this concern is derived from studies in animal models. On one hand, life span was shortened in transgenic mice that over-express GH[32, 33]. On the other hand, 40% to 60% increased life spans were demonstrated in GH-deficient Ames and Snell dwarf mice[34,35], as well as in growth hormone receptor knockout mice[36, 37].

Growth Hormone use in Special Clinical Conditions

GH was given to critically ill adults in an attempt to improve the clinical course. However, this was found to be dangerous, as the mortality was much higher in the GH treated persons than the placebo group[38]. GH was also investigated in elderly patients with hip fractures. Overall, these studies showed no benefits on clinical outcomes[39, 40]. Stimulation of GH release from the pituitary was also investigated, using the new orally active GH-secretagogue (ghrelin mimetic MK-0677) in several studies. In a one-year randomised controlled study of healthy elderly persons, the lean body mass showed an increase but there was again no functional gain[41]. The use of this GH-secretagogue (MK-0677) was also tested in a recent study involving elderly hip fracture patients. Unfortunately, despite a good increase in plasma IGF-1 levels, there was no improvement in most functional performance measures. Furthermore, the risk of congestive heart failure was increased in the MK-0677 treated group and the study was terminated prematurely, because of this unfavourable safety profile[42].

Sevigny et al also studied the use of the growth hormone secretagogue MK-0677 (ibutamoren mesylate) in Alzheimer's disease (AD). Despite a 72.9% increase in serum IGF-I levels at 12 months, MK-0677 did not slow the rate of progression of both cognitive and activity of daily living functions in these patients with AD[43]. Growth hormone was also reported to be ineffective in amyotrophic lateral sclerosis in another clinical trial[44]. On the other hand, GH may be used in elderly patients with malnutrition on a short-term basis for its anabolic effects. In a randomised placebo-controlled trial, low dose and short-term use (3 weeks) of GH in elderly patients with protein-energy malnutrition (PEM) was reported to be safe, and led to a faster improvement in both the nutritional and mobility status[45]. In malnourished haemodialysis patients, GH is now being tested in another clinical trial to investigate its effectiveness in this clinical population[46].

Conclusion

In summary, the literature published on randomised controlled trials evaluating GH therapy in healthy elders is limited but suggests that it is associated with small changes in body composition, absence of functional benefits and increased rates of adverse events. Animal studies also pointed to increased risks of cancers as well as shortening of life span with GH replacement, though there are no human data on mortality or reduced longevity after GH treatment yet. On the basis of this evidence, GH cannot be recommended as an anti-ageing therapy in healthy elderly persons. However, treatment of adult GH deficiency secondary to pituitary diseases in adults is a separate consideration. In elderly patients PEM without contraindications to GH, limited low dose and short-term use of GH is relatively safe and beneficial in speeding up the nutritional and functional recovery.

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Mean BMI: 26.3 kg/m²
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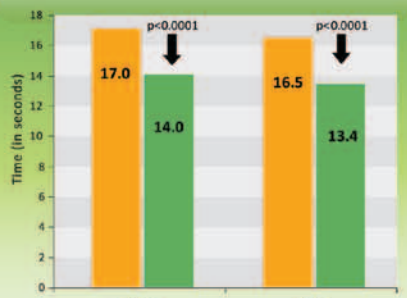
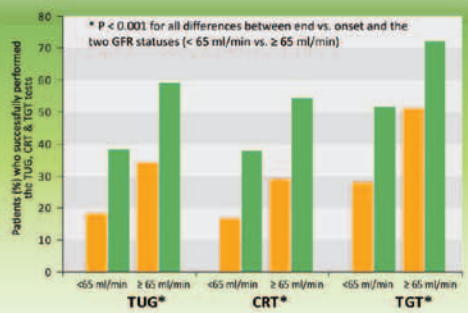


The average time (in seconds) used for the performance of the Timed Up and Go Test (TUG) and Chair Rising Test (CRT) at onset and end of the observation

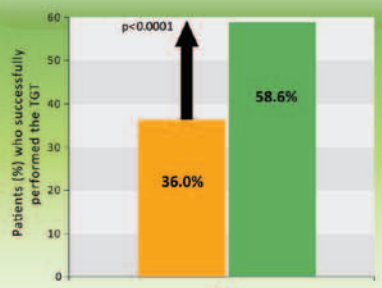
Remark: A mean increase of 2.6 sec. in the performance of the TUG results in a 24% increased risk for non-vertebral fractures. (Zhu et al J Bone Miner Res 2008; 23: S119)

Fig. 1



The percentage of patients (%) who successfully performed the Timed Up and Go Test (TUG), Chair Rising Test (CRT) and Tandem Gait Test (TGT) according to their GFR status (< 65ml/min; ≥ 65 ml/min) at onset and end of the observation.

Fig. 3



The percentage of patients (%) who successfully performed the Tandem Gait Test (TGT) with ≥ 8 steps at onset and end of the observation

Fig. 2

Patients grading their level of Fear of Falls at onset and end of the observation.

Fig. 4

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Reference: Schacht E, Ringe JD. Rheumatol Int (Sep 2010)
DOI 10.1007/s00296-010-1607-y

Towards More Rational and Comprehensive Public Health Care Services for the Elderly Population

Dr. CH LEONG

Dr. CH LEONG

Let us look at the facts. The society of Hong Kong is ageing and ageing fast. Today, one in seven is 65 years old and above. By 20 years' time, one in four of us will be in that age bracket. The Elderly expectedly need more health care and extended health care — chronic ill health and complicated health problems plague elders more than young people. To wit, some 49% of our public hospital beds are occupied by patients over the age of 60. To be fair, Hong Kong offers a reasonable age-friendly public health care service — "no one will be devoid of care due to lack of means" is an undisputed motto of the government. Furthermore, many elders for one reason or another could apply for fee exemption or reduction. Many public clinics have different queues and separate booking systems for elders. All 18 districts have elderly care centres catering for their primary care needs. Both the Department of Health and the Hospital Authority offer consultations, advices and care to the inmates of elderly homes through their outreach geriatric and psycho-geriatric teams.

Needless to say, there are service gaps which we as a caring society should do our utmost to plug while at the same time realising that it would be fool hardy to expect a total elderly care needs package could be provided in a defined time schedule.

Two recent introductions to streamline elderly health care services by the government deserve special commendation. For years there have been a divide between public health care services and social services (**醫社分離**). Elderly patients admitted to hospitals are discharged as soon as their medical conditions are stable, oblivious to the fact that if they are without planned post-discharge support, they and their carers will be at a loss of what to do at home or in residential homes hampering recovery and rehabilitation. Worse, many may end up requiring early unplanned readmissions into hospitals because of avoidable injuries or other medical reasons. It is on this basis that the Elderly Commission, supported by government funding, launched a pilot scheme, the Integrated Discharge Support Programme for the Elderly (IDSP) three years ago where all elder patients admitted to hospitals will be assessed and if needed a planned discharge supportive programme will be worked out with their carers to ensure that the elders will be supported by professionals until they are fully rehabilitated. The success of these pilot studies has prompted government to extend this scheme to all the seven clusters of the Hospital Authority on a regular and recurrent basis.

Cooperation between health and social care has therefore taken a new dimension (**醫社合作新里程**). It is heartening to see that such services and cooperation have extended into the private sector. The Baptist Hospital, for example, is collaborating with NGOs in the Kowloon Tong and Homantin areas to take these services on board.

Many people have forgotten that having a good set of teeth and proper oral hygiene are essential elements of total health. While government is providing services for medical conditions, it has resisted doing the same for dental and oral needs for our public. Government dental policy is to provide education on oral hygiene — "if you take care of your teeth regularly, you should be able to retain 80% of your teeth at the age of 80", both government and the dental profession would preach. Yet, how do the less well-to-do elders maintain good dental hygiene when there is no public dental service? It is therefore most gratifying to witness government coming forth to extend free "outreach dental services" to elders in residential homes. NGO's are asked to bid for public funds to provide oral check-up and simple services to elders in residential homes. Complicated dental problems discovered will be referred to the necessary service provisions. It is a mammoth task, and the workload will be tremendous; after all most elders will have some dental problems after decades of neglect. There are always those who would criticise that this service is far from enough. To be fair, it is a good start. Hopefully success will lead to further expansion of services both to other elders and the general public in need.

The above two possible actions are examples of how persistent rational lobbying by the profession and the public could bear results. Much more need to be done.

At the end of the day, the Elderly are not a burden to society. Given the right and timely care, they will continue to participate and be actively involved in the society for years and years to come.

國家衛生部港澳臺辦公室李維處長專訪

李維處長

1、 中國內地與香港的交流日益密切。在醫療方面，香港的醫生同業也十分有興趣與內地進一步交流。請問現在在內地取得內地醫師資格有沒有新的發展呢？

答： 隨著 CEPA 惠港政策逐步開放，在 CEPA 附件 7 中規定：凡是符合條件的醫師可以不通過考試取得全國通用並且終身有效的《內地醫師資格證書》。

2、 請問香港醫生如果想申請《內地醫師資格證書》需要什麼資格？

答： 申請人應具備的資格是：同時具備下列條件並符合《中華人民共和國執業醫師法》及其有關規定的香港特別行政區永久性居民的中國公民，可申請內地醫師資格認定。

(1) 2007 年 12 月 31 日前已取得香港特別行政區合法行醫資格滿 5 年的香港特別行政區永久居民；
(2) 具有香港特別行政區專科醫師資格證書；
(3) 在香港特別行政區醫療機構中執業。

3、 申請時需要提交什麼資料？

答： 申請需要提交的資料是：
(1) 內地醫師資格認定申請表；
(2) 6 個月內二寸免冠正面半身彩色照片 2 張；
(3) 香港特別行政區永久性居民身份證明材料（正反面）；
(4) 與擬申請醫師資格類別相應的醫學專業學歷證明；
(5) 香港特別行政區行醫執照或者行醫權證明；
(6) 與擬申請醫師資格類別相應的香港特別行政區專科醫師執照或者專科醫師資格證明；
(7) 香港特別行政區相關醫療機構的在職證明或者執業登記證明；
(8) 執業期內無不良行為記錄的證明；
(9) 無刑事犯罪記錄的證明；
(10) 代理費。

詳情請參看“中華人民共和國衛生部香港醫師內地行醫服務網”申請需知一欄。
網址：www.statehealthservice.cn

4、 常見問題：

(1) 什麼是內地《醫師資格證書》？
答： 《醫師資格證書》是對證書持有人醫療技術方面知識和技能的認可，說明證書持有人達到了國家對醫師行醫的相關標準和要求，具備了在內地行醫的資格。證書一般通過考試或認定的方式取得。該證書終生有效。

(2) 香港特別行政區醫師可申請獲得內地醫師資格類別為？
答： 臨床、口腔、中醫。其中臨床和口腔類別可通過認定或考試獲得；目前，中醫為通過考試獲得。

(3) 香港醫師在內地合法行醫需要哪些步驟？
答： 香港醫師在內地合法行醫需要 2 個步驟：
第一步：首先經過申請資格認定、或參加內地醫師考試取得內地《醫師資格證書》，獲得從業資格；
第二步：之後向擬行醫所在地衛生局申請註冊，取得內地《醫師執業證書》，獲得在當地合法行醫的行政許可。 二證齊全方為合法行醫。

5、 國家衛生部在積極推動“港醫內地資格認證”的政策同時可大大加速中港醫療合作發展。請問衛生部對這個惠港政策的發展與期望是什麼？

答： 希望有越來越多的香港醫生能取得內地行醫的資格，能把一些先進的醫療理念和經驗帶到內地；同時，希望這一政策能為香港醫生創造更多就業機會，創造便捷的到內地行醫的機會。

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of nonfatal MI + fatal CHD in patients with hypertension ($p=0.0005$)[1]

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time to first occurrence of major CV events in patients with diabetes ($p=0.0005$)[2]

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59% RRR

of nonfatal MI in patients with CHD ($p=0.0001$)[3]

CHD

22% additional RRR

of major CV events in patients with CHD ($p<0.001$)[4]

Highest Risk

ACS

16% RRR

of major CV events in patients with ACS ($p=0.005$)[5]

References: 1. Sever PS, Dahlöf B, Poulter nR, et al; for the ASCOT investigators. Prevention of coronary and stroke events with atorvastatin in hypertensive patients who have average or lower-than-average cholesterol concentrations, in the Anglo-Scandinavian Cardiac Outcomes Trial-lipid lowering Arm (ASCOT-lA): a multicentre randomised controlled trial. Lancet. 2003;361(9364):1149-1158. **2.** Colhoun hm, Betteridge DJ, Durrington Pn, et al; on behalf of the CARDS investigators. Primary prevention of cardiovascular disease with atorvastatin in type 2 diabetes in the Collaborative Atorvastatin Diabetes Study (CARDS): multicentre randomised placebo-controlled trial. Lancet. 2004;364(9435):685-696. **3.** Athyros VG, Papageorgiou AA, mercouris BR, et al. Treatment with atorvastatin to the national Cholesterol education Program goal versus 'usual' care in secondary coronary heart disease prevention: the GReek Atorvastatin and Coronary-heart-disease evaluation (GReACe) study. Curr Med Res Opin. 2002;18(4):220-228. **4.** laRosa JC, Grundy Sm, waters DD, et al; for the Treating to new Targets (TnT) investigators intensive lipid lowering with atorvastatin in patients with stable coronary disease. N Engl J Med. 2005;352(14):1425-1435. **5.** Cannon CP, Braunwald e, mcCabe Ch, et al; for the Pravastatin or Atorvastatin evaluation and infection Therapy-Thrombolysis in myocardial Infarction 22 investigators intensive versus moderate lipid lowering with statins after acute coronary syndromes. N Engl J Med. 2004;350(15):1495-1504. **Detailed information is available upon request.**

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				* HKMA – KLN East Community Network; HA – UCH; HKCFP - CME Course for Health Personnel 2011 **1**	* Joint Surgical Symposium – Mechanical Circulatory Support for the Management of Heart Failure **2**	* HKMA Power-lifting Team – Power-lifting Induction Class 2011 * HKMA MPS CME – Mastering Difficult Interactions with Patients * HKMA MPS CME – Mastering Professional Interactions **3**
* HKMA Joint Professional Table-Tennis Tournament 2011 * HKMA Badminton Tournament * HKMA MPS CME – Mastering Adverse Outcomes **4**	* A Visit to Cleveland Clinic and Johns Hopkins – Report of the GB Ong Travelling Fellowship / A Lady with Hematuria **5**	* HKMA Tai Po Community Network – Recent Advance & Practical Management on Allergic Rhinitis & Sinusitis for General Practice * FMSHK Officers' Meeting * HKMA Council Meeting **6**	* HKMA MPS CME – Mastering Difficult Interactions with Patients * HKMA Central, Western & Southern Community Network –Certificate Course on Urology (Session 3) * HKMA Joint Professional Volleyball Tournament 2011 **7**	* HKMA MPS CME – Mastering Professional Interactions * HKMA Joint Professional Volleyball Tournament 2011 * HKMA YTM Community Network – Obesity is a Chronic Disease: Co-morbidities and Management * HKMA Kln East Community Network – Recent Updates on Cervical Cancer Prevention and Vaccination * HKMA Structured CME Programme with Hong Kong Sanatorium & Hospital Year 2011 – Enhancing Poise, Well-being and Generosity in Clinical Practice **8**	* HKMA Shatin Doctors Network - Update in Management of Hypertension **9**	* HKMA MPS CME – Mastering Professional Interactions * HKMA Refresher Course for Health Care Providers 2011/2012 **10**
* HKMA MPS CME – Mastering Adverse Outcomes * HKMA Certificate Course on Family Medicine 2011 **11**	**12**	**13**	* HKMA MPS CME – Mastering Adverse Outcomes * Hong Kong Neurosurgical Social Monthly Academic Meeting – Special Lecture – Neuro-opthalmology **14**	* HKMA NT West Community Network –Fulfilling The Unmet Needs in the Management of CV High Risk Patients **15**	**16**	* HKMA MPS CME – Mastering Professional Interactions **17**
* HKMA MPS CME – Mastering Difficult Interactions with Patients * HKMA Badminton Tournament * 2011 Paediatric Update No. 3 Clinical Audit **18**	**19**	* HKMA YTM Community Network – New Alternative Local Treatment for Bacterial Vaginosis * HKMA Kln West Community Network - Lecture Series on BPH & Common Urological Diseases for Men after 50s' – LUTS & BPH in Primary Care Clinics * HKMA Tai Po Community Network - Quadrivalent HPV Vaccine - The Added Value of HPV 6 & 11 in HPV Vaccination * HKMA MPS CME – Mastering Your Risk * FMSHK Executive Committee Meeting **20**	* HKMA MPS CME – Mastering Difficult Interactions with Patients * HKMA Central, Western & Southern Community Network –Certificate Course on Urology (Session 4) * HKMA Golf Tournament **21**	* HKMA MPS CME – Mastering Difficult Interactions with Patients * HKMA MPS CME – Mastering Adverse Outcomes * HKMA Kln East-Statin Therapy in Cardiovascular Risk Factor Management **22**	**23**	* HKMA MPS CME – Mastering Difficult Interactions with Patients * HKMA YTMCN and Kowloon Central Cluster – Certificate Course on Bringing Better Health to Our Community (Lecture 4) **24**
* HKMA MPS CME – Mastering Adverse Outcomes * HKMA Tennis Tournament **25**	**26**	* HKMA MPS CME – Mastering Your Risk * HKMA Kln West Community Network - Lecture Series on BPH & Common Urological Diseases for Men after 50s' - Clinical Advances in Prostatic Diseases * HKMA Tai Po Community Network – Update on the Treatment of Osteoporosis **27**	* HKMA Central, Western & Southern Community Network –Certificate Course on Urology (Session 5) * HKMA MPS CME – Mastering Professional Interactions **28**	* HKMA MPS CME – Mastering Adverse Outcomes * HKMA CME – Management of Menopause * HKMA NT West Community Network –Updates on Glucoma and ARMD **29**	**30**	

Date / Time	Function	Enquiry / Remarks
1 1:00 pm **THU**	**HKMA – KLN East Community Network; HA – UCH; HKCFP - CME Course for Health Personnel 2011** Organiser: HKMA – KLN East Community Network, Chairman: Dr. Danny Ping-kwan MA, Speaker: Dr. Cindy Mei-yun CHAN, Venue: Lei Garden, apm, Kowloon	Mr. Alan LAW Tel: 2527 8285 1 CME Point
2 8:00 am – 9:00 am **FRI**	**Joint Surgical Symposium – Mechanical Circulatory Support for the Management of Heart Failure** Organisers: Department of Surgery, The University of Hong Kong & Hong Kong Sanatorium & Hospital, Chairman: Dr. Wing-Kuk AU, Speakers: Dr. Ka-Lai HO & Dr. Hau-Fung TSANG, Venue: Hong Kong Sanatorium & Hospital	Department of Surgery, Hong Kong Sanatorium Hospital Tel: 2835 8698 Fax: 2892 7511 1 CME Point (Active)
3 2:00 pm **SAT**	**HKMA Power-lifting Team – Power-lifting Induction Class 2011** Organiser: The Hong Kong Medical Association, Venue: Weightlifting Room, Wanchai Sports Ground, 20 Tonnochy Road, Wanchai, Hong Kong	Miss Sharon HUNG; Ms. Dorothy KWOK Tel: 2527 8285
(7,18,21,22,24)	**HKMA MPS CME – Mastering Difficult Interactions with Patients** Organiser: The Hong Kong Medical Association, Speakers: Various, Venue: Tsim Sha Tsui; Mongkok; and The Hong Kong Medical Association Central Premises, Dr. Li Shu Pui Professional Education Centre, 2/F., Chinese Club Building, 21-22 Connaught Road Central, Hong Kong	HKMA CME Department Tel: 2527 8452 2.5 CME Points
(8,10,17,28)	**HKMA MPS CME – Mastering Professional Interactions** Organiser: The Hong Kong Medical Association, Speakers: Various, Venue: Tsim Sha Tsui; Mongkok; and The Hong Kong Medical Association Central Premises, Dr. Li Shu Pui Professional Education Centre, 2/F., Chinese Club Building, 21-22 Connaught Road Central, Hong Kong	HKMA CME Department Tel: 2527 8452 2.5 CME Points
4 12:00 pm **SUN**	**HKMA Joint Professional Table-Tennis Tournament 2011** Organiser: The Hong Kong Medical Association, Venue: Cornwall Street Table-Tennis Sports Centre	Miss Alice TANG; Miss Sharon HUNG Tel: 2527 8285
1:00 pm *(18)*	**HKMA Badminton Tournament** Organiser: The Hong Kong Medical Association, Venue: MacLehose Medical Rehabilitation Centre	Miss Alice TANG; Miss Sharon HUNG Tel: 2527 8285
(11,14,22,25,29)	**HKMA MPS CME – Mastering Adverse Outcomes** Organiser: The Hong Kong Medical Association, Speakers: Various, Venue: The Hong Kong Medical Association Central Premises, Dr. Li Shu Pui Professional Education Centre, 2/F., Chinese Club Building, 21-22 Connaught Road Central or Mongkok	HKMA CME Department Tel: 2527 8452 2.5 CME Points
5 7:30 pm – 8:30 pm **MON**	**A Visit to Cleveland Clinic and Johns Hopkins – Report of the GB Ong Travelling Fellowship / A Lady with Hematuria** Organiser: Hong Kong Urological Association, Chairman: Dr. Joseph WONG, Speakers: Prof. Sidney YAP / Dr. Wilson CHAN, Venue: Multi-disciplinary Simulation and Skills Centre, 4/F, Block F, Queen Elizabeth Hospital, Kowloon	Dr. Hing-hoi HUNG / Ms Tammy HUNG Tel: 2958 6006 / 9609 6064 Fax: 2958 6076 / 8344 5115
6 1:45 pm **TUE**	**HKMA Tai Po Community Network – Recent Advance & Practical Management on Allergic Rhinitis & Sinusitis for General Practice** Organiser: HKMA Tai Po Community Network, Speaker: Dr. Chun-kuen CHOW, Venue: Tai Po	Ms. Joyce Tel: 2664 3808 1 CME Point
8:00 pm – 10:00 pm	**FMSHK Officers' Meeting** Organiser: The Federation of Medical Societies of Hong Kong, Venue: Gallop, 2/F., Hong Kong Jockey Club Club House, Shan Kwong Road, Happy Valley, Hong Kong	Ms. Sonia CHEUNG Tel: 2527 8898 Fax: 2865 0345
8:00 pm	**HKMA Council Meeting** Organiser: The Hong Kong Medical Association, Chairman: Dr. Kin CHOI, Venue: HKMA Head Office, 5/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Hong Kong	Ms. Christine WONG Tel: 2527 8285
7 1:00 pm *(21,28)* **WED**	**HKMA Central, Western & Southern Community Network – Certificate Course on Urology (Session 3 – Session 5)** Organiser: HKMA Central, Western & Southern Community Network, Speakers: Various, Venue: The Hong Kong Medical Association Central Premises, Dr. Li Shu Pui Professional Education Centre, 2/F, Chinese Club Building, 21-22 Connaught Road Central, Hong Kong	Mr. Alan LAW Tel: 25278285 1CME Point
7:00 pm *(8)*	**HKMA Joint Professional Volleyball Tournament 2011** Organiser: The Hong Kong Medical Association, Venue: HK Playgroung Association, Southern Centre, Wan Chai, Hong Kong	Miss Alice TANG; Miss Sharon HUNG Tel: 2527 8285
8 1:00 pm **THU**	**HKMA YTM Community Network – Obesity is a Chronic Disease: Co-morbidities and Management** Organiser: HKMA YTM Community Network, Chairman: Dr. David Tzit-yuen LAM, Speaker: Dr. Elaine Yun-ning CHEUNG, Venue: Jade Ballroom, Level 2, Eaton Smart, Hong Kong, 380 Nathan Road, Kowloon	Mr. Alan LAW Tel: 25278285 1CME Point
1:00 pm	**HKMA Kln East Community Network – Recent Updates on Cervical Cancer Prevention and Vaccination** Organiser: HKMA Kln East Community Network, Chairman: Dr. Gary Ka-kui AU, Speaker: Dr. Ivy Chiu-fai LI, Venue: Lei Garden, apm, Kowloon	Mr. Alan LAW Tel: 2527 8285 1 CME Point
2:00 pm	**HKMA Structured CME Programme with Hong Kong Sanatorium & Hospital Year 2011 – Enhancing Poise, Well-being and Generosity in Clinical Practice** Organiser: The Hong Kong Medical Association, Chairman: Dr. Sze-yuen NGAN, Speaker: Dr Peter WH LEE, Venue: The Hong Kong Medical Association Central Premises, Dr. Li Shu Pui Professional Education Centre, 2/F., Chinese Club Building, 21-22 Connaught Road Central, Hong Kong	HKMA CME Department Tel: 2527 8452 1 CME Point
9 1:00 pm **FRI**	**HKMA Shatin Doctors Network - Update in Management of Hypertension** Organiser: HKMA Shatin Doctors Network, Speaker: Dr. Chi-chiu KUM, Venue: Jasmine Room, Royal Park Hotel, Shatin	Miss Candice TONG Tel: 2527 8285 1 CME Point
10 2:30 pm **SAT**	**HKMA Refresher Course for Health Care Providers 2011/2012** Organiser: The Hong Kong Medical Diary, Speaker: Mr. Nelson LAM, Venue: OLMH	HKMA CME Department Tel: 2527 8452 2 CME Points

Date / Time	Function	Enquiry / Remarks
11 SUN 2:00 pm	**HKMA Certificate Course on Family Medicine 2011** Organiser: The Hong Kong Medical Association, Speakers: Dr. Gigi Wai-chi CHAN & Dr. Pui-ki TSANG, Venue: Queen Elizabeth Hospital, Kowloon	HKMA CME Department Tel: 2527 8452 3 CME Point
14 WED 7:30 am	**Hong Kong Neurosurgical Social Monthly Academic Meeting – Special Lecture – Neuro-opthalmology** Organiser: Hong Kong Neurosurgical Society, Chairman: Dr. Xian Lun ZHU, Speaker: Dr. Carmen CHAN, Venue: Seminar Room, G/F, Block A, Queen Elizabeth Hospital, Kowloon	Dr. Gilberto LEUNG Tel: 2255 3368 Fax: 2818 4350 1.5 CME Point
15 THU 1:00 pm	**HKMA NT West Community Network –Fulfilling The Unmet Needs in the Management of CV High Risk Patients** Organiser: HKMA NT West Community Network, Dr. Bernard Bun-lap WONG, Venue: East Ocean Seafood Restaurant, Yuen Long	Mr. Alan LAW Tel: 2527 8285 1 CME Point
18 SUN	**2011 Paediatric Update No. 3 Clinical Audit** Organiser: Hong Kong College of Paediatricians, Chairman: Dr. Better YOUNG & Dr. Chun-fai CHENG, Speakers: Various, Venue: Hospital Authority Head Office, M Floor, Lecture Theatre, 147 Argyle Street, Kowloon	Ms. Vanessa WONG Tel: 2871 8773 Fax: 2785 1850 3 CME Points
20 TUE 1:00 pm	**HKMA YTM Community Network – New Alternative Local Treatment for Bacterial Vaginosis** Organiser: HKMA YTM Community Network, Chairman: Dr. David Tzit-yuen LAM, Speaker: Dr. Claire Tai-wah LAU, Venue: Jade Ballroom, Level 2, Eaton Smart, Hong Kong, 380 Nathan Road, Kowloon	Miss Candice TONG Tel: 2527 8285 1 CME Point
1:00 pm	**HKMA Kln West Community Network - Lecture Series on BPH & Common Urological Diseases for Men after 50s' - LUTS & BPH in Primary Care Clinics** Organiser: HKMA Kln West Community Network, Chairman: Dr. Kai-sing TONG, Dr. Ming-kwong YIU, Venue: Crystal Room I-III, 30/F, Panda Hotel, Tsuen Wan, NT	Miss Candice TONG Tel: 2527 8285 1 CME Point
1:00 pm	**HKMA Tai Po Community Network - Quadrivalent HPV Vaccine - The Added Value of HPV 6 & 11 in HPV Vaccination** Organiser: HKMA Tai Po Community Network, Speaker: Dr. Kuen-kong LO, Venue: Tai Po	Mr. David YIM Tel: 8206 2752 1 CME Point
6:30 pm (27)	**HKMA MPS CME – Mastering Your Risk** Organiser: The Hong Kong Medical Association, Speaker: Dr. Ka-lam HAU, Venue: The Hong Kong Medical Association Central Premises, Dr. Li Shu Pui Professional Education Centre, 2/F., Chinese Club Building, 21-22 Connaught Road Central, Hong Kong	HKMA CME Department Tel: 2527 8452 2.5 CME Points
8:00 pm – 10:00 pm	**FMSHK Executive Committee Meeting** Organiser: The Federation of Medical Societies of Hong Kong, Venue: Council Chambers, 4/F., Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong	Ms. Sonia CHEUNG Tel: 2527 8898 Fax: 2865 0345
21 WED 11:30 pm	**HKMA Golf Tournament** Organiser: The Hong Kong Medical Association, Venue: Hong Kong Golf Club	Miss Alice TANG; Miss Sharon HUNG Tel: 2527 8285
22 THU 1:00 pm	**HKMA Kln East-Statin Therapy in Cardiovascular Risk Factor Management** Organiser: The Hong Kong Medical Association, Chairman: Dr. Danny Ping-kwan MA, Speaker: Dr. Yu-tak HUNG, Venue: East Ocean Restaurant, Tseung Kwan O, Kowloon	Mr. Alan LAW Tel: 2527 8285
24 SAT 1:00 pm	**HKMA YTMCN and Kowloon Central Cluster – Certificate Course on Bringing Better Health to Our Community (Lecture 4)** Organiser: HKMA YTMCN and Kowloon Central Cluster, Speakers: Dr. Hiu-ming CHAN & Dr. Chung-ping HO, MH, JP, Venue: Block M, Lecture Theatre, Queen Elizabeth Hospital, 30 Gascoigne Road, Kowloon, Hong Kong	Miss Candice TONG Tel: 2527 8285
25 SUN	**HKMA Tennis Tournament** Organiser: The Hong Kong Medical Association, Venue: Kowloon Tong Club	Miss Alice TANG; Miss Sharon HUNG Tel: 2527 8285
27 TUE 1:00 pm	**HKMA Kln West Community Network - Lecture Series on BPH & Common Urological Diseases for Men after 50s' - Clinical Advances in Prostatic Diseases** Organiser: HKMA Kln West Community Network, Chairman: Dr. Gin-pang LEUNG, Speaker: Dr. Lung-wai CHAN, Venue: Crystal Room I-III, 30/F., Panda Hotel, Tsuen Wan, N.T.	Miss Candice TONG Tel: 2527 8285 1 CME Point
1:45 pm	**HKMA Tai Po Community Network – Update on the Treatment of Osteoporosis** Organiser: HKMA Tai Po Community Network, Speaker: Dr. Chi-kin CHEN, Venue: Tai Po	HKMA CME Department Tel: 2527 8452 1 CME Point
29 THU 1:00 pm	**HKMA CME – Management of Menopause** Organiser: The Hong Kong Medical Association, Speaker: Dr. Siu-keung LAM, Venue: Eaton Hotel	HKMA CME Department Tel: 2527 8452 1 CME Point
1:00 pm	**HKMA NT West Community Network – Updates on Glucoma and ARMD** Organiser: HKMA NT West Community Network, Speaker: Dr. Anita Sin-yee NG, Venue: East Ocean Seafood Restaurant, Yuen Long	Mr. Alan LAW Tel: 2527 8285 1 CME Point

Course / Meeting

11-14/10/2011	**PALS Course 2011** Organisers: Hong Kong College of Paediatricians, the Heart Institute for Children, Hope Children's Hospital, Illinois, USA & Hong Kong Paediatric Nurses Association, Speakers: Various, Venue: A & E Training Centre, Tang Shiu Kin Hospital, CME Accreditation: 12 points for provider course (Hong Kong College of Paediatricians), Enquiry: Ms. Kitty HO/Vanessa WONG, Tel No: 2871 8769, Fax No: 2785 1850, Email: enquiry@paediatrician.org.hk, Website: http://www.paediatrician.org.hk/entcnews.htm
27/10/2011	**Acne – Integrative Approach: Myths & Controversies (暗瘡 - 中西醫處理方法及謬誤)** Organiser: Association for Integrative Aesthetic Medicine, Hong Kong, Chairman: Dr. Ka-lam HAU, Speakers: Prof. Feili HUANG, Dr. Chi-kong OR & Dr. King-man HO, Venue: 2/F, Chinese Club Building, 21-22 Connaught Road Central, Central, Hong Kong, Enquiry: Miss Echo LEUNG, Tel: 3575 8600, Fax: 2301 2414, CME/CNE accreditation are under application
14/1/2012	**Hong Kong Surgical Forum – Winter 2012** Organiser: Department of Surgery, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Queen Mary Hospital & Hong Kong Chapter of American College of Surgeons, Venue: Underground Lecture Theatre, New Clinical Building, Queen Mary Hospital, Pokfulam, Hong Kong, Registration & Enquiry: Forum Secretary, Hong Kong Surgical Forum, Tel: (852) 2819 9691 / (852) 2819 9692, Fax: (852) 2818 9249, E-mail: hksf@hku.hk, Web-site: http://www3.hku.hk/surgery/forum.php

Answer to Dermatological Quiz

1. Pemphigus foliaceus

2. The picture of pruritic, weeping crusted lesions often lead to a wrong diagnosis of subacute eczema or bullous impetigo. Also, its predilection over the seborrhoeic area may mimic seborrhoeic dermatitis. Other blistering dermatoses like pemphigus vulgaris, linear IgA dermatosis and subcorneal pustular dermatosis should be considered.

3. Drug-induced pemphigus should also be considered in this patient who was taking an ACE-inhibitor. Various drugs especially ACE-I (captopril, enalapril, lisinopril), penicillamine, penicillin and NSAIDs (phenylbutazone, piroxicam) had been reported as culprits. Clinically it is similar to pemphigus foliaceus with erythematous scaly crusted patches. Large bullae on normal looking skin and oral mucosal lesions (characteristic in idiopathic pemphigus vulgaris) are rarely seen.

4. In the immunopathogenesis of pemphigus, the main antigen target is desmoglein (Dsg) within the epidermis. Dsg1 is expressed throughout the epidermis, but more intensely in the superficial layer, whereas Dsg3 is expressed in the lower epidermis; while in mucous membranes, Dsg3 is predominant. In pemphigus foliaceus, the circulating autoantibody is anti-Dsg1, which explains its superficial lesions over the skin and absence of mucosal lesions. In pemphigus vulgaris, circulating antibodies are anti-Dsg3 (mucosal dominant type) or anti-Dsg1 and 3 (mucocutaneous type). This explains its suprabasal involvement within the epidermis and the frequent involvement of mucosal membranes.

Dr. Lai-yin CHONG
MBBS(HK), FRCP(Lond, Edin, Glasg), FHKCP, FHKAM(Med)
Private Dermatologist

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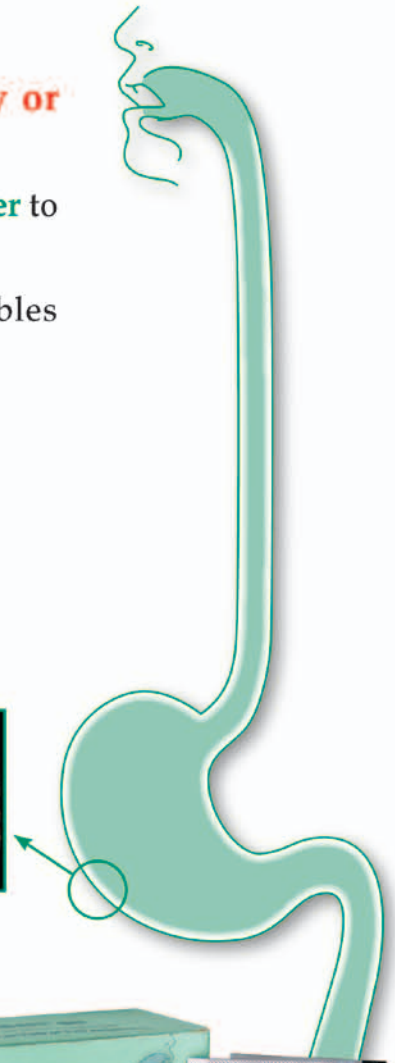

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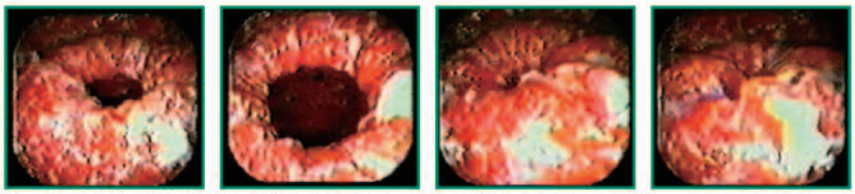

Cosentino F. et al., Società Italiana di Endoscopia Digestiva, VII Simp. Naz, Napoli, 1992

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References

1. C. Mandelli et al.: Sucralfate gel vs sucralfate granules in the treatment of upper gastrointestinal lesions. Current Ther. Res. 1990; 47: 637-643
2. Kochhar et al.: Rectal sucralfate in radiation proctitis. Lancet 1988: 400
3. Kochhar et al.: Radiation-induced proctosigmoiditis. Prospective, randomized, double-blind controlled trial of oral sulphasalazine plus rectal steroids versus rectal sucralfate. Dig Dis Sci 1991 ; 36(1): 103 – 107
4. D. Vaira et al.: Gastric retention of sucralfate gel and suspension in upper gastrointestinal disease. Aliment. Pharmacol. Ther. 1993; 7: 531 – 535.

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