Abstract Book of the 56th Anniversary Scientific Meeting

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Message from the President

As President of the Society of Physicians of Hong Kong, it is my great pleasure to welcome you all to this meeting. The Anniversary Scientific Meeting has been a regular feature of the Society for some years, and I would like to express my heartfelt thanks to Dr Tsang Wah Tak, Kenneth, the Vice President, for his hard work in convening a most distinguished panel of speakers today. I would also like to take this opportunity to thank the members of the Executive Committee for their contributions, and for Dr Lau Chu Pak, Chief Editor, for leading the Journal. My appreciation also goes to our Editors and Programme Directors for making 2012 a most successful year. Last but not least, your active participation today reflects your enthusiastic support of the Society. Thank you.

Dr Lam Tat Chung, Paul
(FRCP, FRCPsych, FHKAM (Medicine), FHKAM (Psychiatry), President)

Welcome message

Dear members and guests,

It always gives me great pleasure, on behalf of the Society, to welcome everyone once more to this Annual Scientific Meeting. This has almost become a tradition, in that we have a great meeting in November from both scientific and social points of view. This year’s meeting is again carefully planned to cater to each aspect of your professional needs. Practicing doctors are always busy and, more often than not, also stressed. We hope these sessions today will provide not only an update on various subspecialties within internal medicine, but also provide you with calm, pleasant and sociable circumstances for you to escape from your daily chores!

Have a great meeting.

With warmest regards,

Dr Tsang Wah Tak, Kenneth
(FRCP, MD (Glasgow, Hons), FHKAM (Medicine), Vice President of the Society of Physicians of Hong Kong, Organiser for the 56th Annual Scientific Program)

Message from the Chief Editor

Continued medical education is fundamental to good clinical practice. With the proliferation of medical literature, it is difficult to keep abreast of advances in a specific field, not to mention more general medical developments. The Journal of the Society of Physicians of Hong Kong serves this purpose, by bringing together experts in fields of medicine to give state-of-the-art synopses, in a crisp and practical style with actionable take home messages. The contributors to the current issue and those to preceding series should be congratulated for accomplishing this purpose and for doing it so excellently.

Dr Lau Chu Pak
(FRCP, MD, FHKAM (Medicine), Chief Editor)
Introduction

Dementia affects more than 6% of people in Hong Kong who are older than 70. Among these, 55% suffer from Alzheimer’s disease (AD) and another 15% have both AD and vascular dementia.

Degeneration of the cholinergic neural circuit with loss of the neurotransmitter acetylcholine is a key finding in AD. Acetylcholine is synthesised in the brain from choline and acetic acid, and is hydrolysed by the enzyme acetylcholinesterase.

Cholinergic Strategy

One current treatment strategy aims to increase the amount of acetylcholine available in the central nervous system and augment acetylcholine neurotransmission by using acetylcholinesterase inhibitors. Several drugs of this class have been developed, of which donepezil (Aricept) is widely prescribed for treating AD.

In a 24 week, double-blind, placebo-controlled trial of donepezil in 468 patients with mild to moderate AD, cognitive function, as measured by the AD Assessment Scale-Cognitive Subscale, improved significantly in the treated group by 12, 18 and 24 weeks. Significant improvements were also observed in ratings according to the Clinician Interview Based Impression of Change plus Caregiver Input (CIBIC plus), Mini-Mental State Examination (MMSE), and Clinical Dementia Rating – Sum of Boxes (CDR – SB) scales. Side effects were generally mild and transient, and were well tolerated by the patients.1

In a meta-analysis of 2,376 patients with mild to moderate AD, donepezil produced meaningful benefits relative to placebo in alleviating deficits in cognitive and clinician-rated global function. Increased improvements in cognition were observed at the higher dose of 10 mg/day versus 5 mg/day.2

A study in the United Kingdom (UK) evaluated the efficacy of donepezil in treating neuropsychiatric symptoms in AD;3 134 patients with mild to moderate AD were randomised to donepezil or placebo. After 12 weeks, patients on active treatment had significantly improved neuropsychiatric symptoms, as measured by the Neuropsychiatric Inventory (NPI), which includes agitation, anxiety, apathy, delusion, depression, disinhibition, elation, hallucination, irritability and motor activity. Caregiver distress was also significantly reduced.

A 24-week, double-blind, placebo controlled trial of 325 Japanese patients with severe AD confirmed the effectiveness of donepezil 10 mg and demonstrated a significant dose-response relationship.4 Patients who completed the trial (n =189, MMSE 0–9) were given donepezil 10 mg for 52 weeks. Patients’ cognition scores, as measured by the Severe Impairment Battery (SIB), were maintained above or close to baseline for 24–36 weeks, whereas the expected deterioration was 11–20 points in 6 months. Medication was well tolerated.5

Findings from the Donepezil and Memantine for Moderate-to-severe Alzheimer’s disease (DOMINO) Study were published earlier this year.6 DOMINO randomised 295 community-dwelling AD patients in the UK, who had been treated previously with donepezil for at least 3 months, to receive donepezil, memantine, both medications, or placebo for 52 weeks. Patients who continued to receive donepezil had significantly higher MMSE scores and activities of daily living scores at the end of the trial.6

Early Intervention

Depletion of acetylcholine is a late event in the pathological changes of AD, which start 10 years or more before the emergence of clinical symptoms. Alternative treatment strategies that aim to mitigate the disease process much earlier in the course of its development seem appealing. Recent research efforts have tried to use immunisation as an intervention.
Active Immunisation

A vaccine, AN1792, against beta-amyloid protein, the toxic protein formed in the AD brain, was developed and tested in 2003–2005. It effectively removed senile plaques but clinical improvement was minimal. The phase II study was terminated due to the development of encephalopathy in 6% of patients.7

Passive Immunisation

Bapineuzumab (Pfizer) is a humanised monoclonal antibody against beta-amyloid. In a phase I study, MMSE at week 16 increased by 2.6 points over placebo for the medium dose (1.5 mg/kg). Three of 10 patients on a higher dose developed vasogenic oedema (one with micro-haemorrhage). In a phase II trial, 124 patients with mild to moderate dementia received an infusion of bapineuzumab every 13 weeks for six treatment sessions. A trend towards improvement in the treatment group was more apparent in the complete population, with 6% improvement in dementia rating scales. There was also a 25% reduction in cortical beta-amyloid. Better improvement was observed in non-Apo E4 carriers, and more adverse reactions occurred among ApoE4 carriers.9.7% of treated patients developed vasogenic oedema (dose related), with symptoms including transient headache, vomiting, confusion and gait disturbance.8

In July 2012 Pfizer terminated a phase III trial of bapineuzumab on ApoE4 positive patients due to lack of efficacy, but other trials on ApoE4 negative patients are being continued, with results expected soon.

Solanezumab (Lilly) is a humanised monoclonal antibody that targets soluble beta-amyloid. It is well tolerated with no evidence of inflammation in recipients and is undergoing phase II and phase III studies.9

Immunoglobulin Intravenous Infusion

Immunoglobulin, which is frequently used to treat immunodeficiency states, contains naturally occurring antibodies against beta-amyloid. In a retrospective study of 847 patients treated with intravenous immunoglobulin (IVIg) for any reason, 2% developed dementia, compared to 4.2% of 84,700 controls never treated with IVIG. There was a relative risk reduction of 42% in the IVIG treated patients.10

Other small series that used IVIG to treat AD were published in 200011 and 2004.12 Relkin and coworkers treated patients with mild to moderate AD in phase I and II studies with good outcomes,13,14 and are currently performing a phase III study on 360 patients in America, which is near completion.15

Medical Food

Souvenaid is a medical food developed by workers at the Massachusetts Institute of Technology. After an initial proof-of-concept study, a double blind, placebo controlled, trial for 24 weeks on 238 patients with mild AD was performed, and published as the Souvenir II study.16 The treated group had significantly improved memory. An open-label extension study for 24 weeks found further improvement in the treated patients. The results were presented at the Alzheimer’s Association International Conference, held in Vancouver, Canada, in July 2012. Figure 1 shows the ingredients of Souvenaid, which will soon be marketed in drink form in Europe.

References

Coronary Artery Disease (CAD) is a highly preventable condition, with 90% of myocardial infarctions (MIs) attributable to modifiable conditions such as hypertension, hypercholesterolaemia, diabetes, tobacco smoking, obesity, and lack of exercise. However, over-aggressive lowering of blood pressure (BP), for example systolic BP < 120 mmHg in diabetes in the ACCORD trial, should be avoided, as this did not translate into reduced incidence of MI. Low-density lipoprotein cholesterol (LDL-C) levels of < 2.5 and < 1.8 mmol/L are recommended for patients with high and very high CAD risk, respectively. However, in low-risk individuals, lifestyle intervention is the mainstay of treatment if LDL-C is < 5 mmol/L. Current medications to increase high-density lipoprotein (HDL) have not yet been proven to affect clinical endpoints of CAD.

In patients with stable angina, the presence of myocardial ischaemia is the best indicator for revascularisation. In the COURAGE trial, an initial strategy of optimal medical therapy (OMT) was at least as good as percutaneous coronary intervention (PCI); however, in the subgroup of patients in whom a nuclear test was performed for ischaemia, ischaemia-driven PCI improved clinical outcome over OMT. A new technique using intracoronary flow-mediated reserve (FFR) has been reported recently. FFR guided therapy (FFR < 0.8) in the FAME-2 study was superior to OMT, but for patients with residual FFR reserve (FFR > 0.8), OMT was adequate. Drug eluting stents (DES), and more exciting biological degradable polymer and stents are associated with significantly less restenosis long-term compared to bare metal stents.

A universal definition for ST-elevation acute coronary syndrome (ACS) has been proposed. Using high-sensitivity troponin, ST-elevation ACS can be confidently ruled out by a single test in most patients. DES are superior to bare metal stents in ST-elevation ACS. Primary PCI is superior to thrombolysis, although it is important to reduce delay in door-to-balloon time. In both ST and non-ST elevation ACS, newer anti-platelet agents such as prasugrel and ticagrelor are superior to conventional agents in improving coronary outcome, particularly in patients after PCI.

Respiratory Cases Not to be Missed

The practice of respiratory medicine encompasses a wide spectrum of a clinician’s workload. As all students know, respiratory symptoms are often non-specific and clinical examination of the chest is often difficult, even for very experienced specialists. The advent of lung imaging, particularly computed tomography (CT) scans, has made the practice of respiratory medicine easier for specialists, as they can often resort to such modalities and thereby achieve an accurate diagnosis in a timely fashion. However, it is not so easy for general physicians to decide to perform a CT thorax and further investigations. Therefore, this presentation will describe and discuss a number of conditions that need to be assiduously looked for when approaching a patient with respiratory symptoms. Possibilities that need to be carefully remembered include: pneumothorax; empyema, or parapneumonic effusion; pulmonary embolism; bronchial carcinoma; tuberculosis; interstitial lung diseases; and parasitic lung diseases relating to the seasonal eating of crabs.
Introduction

The global economic downturn continues to impact the development of energy-based devices in cosmetic dermatology and innovative technologies that can be considered ‘game-changers’ in this field have become rarities. Nonetheless, there have been some developments of interest. Several energy-based devices have recently been advocated in cosmetic dermatology, including: high-intensity focused ultrasound for body contouring; microwave technology for the treatment of axillary hyperhidrosis; and new laser approaches to tattoo removal. This article will review the evidences on these modalities and also address their application in our local Asian population.

High-Intensity Focused Ultrasound in Body Contouring

High-intensity focused ultrasound (HIFU) has been used in medicine for many years, for example, to treat prostate carcinoma and uterine fibroids. More recently, HIFU has been used to manage skin laxity in cosmetic dermatology. Depending on its frequency, HIFU can incur mechanical or thermal injury to the targeted tissue, and both techniques have been used for body contouring. The first HIFU device to obtain CE approval involves mechanical injury to targeted fat tissues. Despite many years of research and development, it failed to obtain United States Food and Drug Administration (FDA) approval. Indeed, there has been conflicting evidence concerning its role in body contouring; early studies suggested positive results after even a single treatment, but subsequent data were less promising, including our own study which failed to demonstrate any significant improvement among 53 Chinese patients.1,2

More recently, a HIFU device that results in thermal damage to subcutaneous tissue gained FDA approval for body contouring. In a multicenter, randomised, sham-controlled, single-blind trial, 180 patients received either sham-control, three passes of treatment at 47J/cm² per pass (141 J/cm² total) or 59J/cm² per pass (177 J/cm² total). The anterior abdomen and flanks were treated, and the clinical outcome was defined as change in waist circumference at the iliac crest level at 12 weeks post-treatment. Compared with the sham group, there were significant changes among both the low- and high-energy HIFU treated groups, with better results among the group treated with higher energy.3,4 Adverse effects were mild and included bruising, discomfort during treatment and swelling. Physical and laboratory examinations at 12 and 24 weeks were normal.

We are conducting our own study to assess the use of this device among Hong Kong patients. Although preliminary data (from 12 subjects) are promising (Figure 1), a larger sample size is necessary to confirm this positive trend.

Microwave Thermolysis of Sweat Glands

Axillary hyperhidrosis is a common condition that can have a significant psychosocial impact. Conventional treatments, including the use of topical aluminum chloride, are only partially effective. Botulinum A toxin has been used to treat axillary hyperhidrosis, but repeated treatment is necessary. While liposuction can lead to a more long-term solution, it is associated with scarring, making it a less attractive option. Microwave thermolysis of sweat glands is a new modality now approved by the FDA for treating axillary hyperhidrosis. The results of pre-clinical simulations and animal studies indicated that absorption profiles at a frequency of 5.8 GHz have low amounts of absorption at the epidermis and maximal absorption at the dermal/hypodermal interface. The targeted zone was shown to be largely independent of skin thickness.5 In a prospective clinical trial among 120 patients, 81 received two microwave treatments and a control group of 39 received sham treatment. Active treatment significantly reduced axillary hyperhidrosis, with lowering of the hyperhidrosis disease severity scale (HDSS) from 3–4 to 1–2 among 69% of the patients.

![Figure 1. A) Baseline, B) 3 months post-HIFU treatment](image-url)
Microwave thermolysis involves marking the hair-bearing area, injecting local anaesthesia to both armpits and then performing the treatment. The device involves a suction component to suck the skin into the applicator, followed by delivery of microwave energy and then cooling to protect the skin. The whole procedure takes about 1 hour. Common adverse effects include bruising due to the suction, transient swelling that lasts a few days, and transient numbness of the treated area (Figure 2). Hair loss may also occur, which can be an issue for male patients. Transient muscle weakness and compensatory hyperhidrosis can rarely occur.

Recent Advances in Tattoo Removal

Q-switched (QS) lasers have been used to remove tattoos, most effectively for certain colors (black and blue), whereas others (green, red and yellow) are a lot more resistant. Green tattoos can be particularly challenging, and more recently, a new approach has been used to treat resistant tattoos. The R20 method proposed by investigators from Boston involves treating the same area with a QS Alexandrite laser at 20 minute intervals four times during the same treatment session. In a recent paper, 18 tattoos in 12 subjects were treated, with half of the tattoo treated by R20 and the other half by a single treatment. The R20 method was associated with a greater degree of clearing, without any increase in adverse effects.9 I have practised R20 for the last 2 years and while there is some improvement in the clinical outcome, I believe that the impact is not significant. More recently, a picosecond laser has become commercially available and recent data indicate impressive results in the treating resistant tattoos. In a study of 12 subjects treated with a picosecond laser, 75% experienced more than 75% improvement after two to four treatment sessions, with hypo- and hyper-pigmentation being the main adverse effects.10 In the future, such lasers may prove a promising development in treating pigmented lesions.

Conclusion

While the global recession has impacted the development of energy-based devices in cosmetic dermatology, there are still several promising innovations that have received FDA approval for body contouring, treatment of axillary hyperhidrosis, and tattoo removal.

References

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New Directions in Managing Type 2 Diabetes Mellitus

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Introduction

Type 2 diabetes mellitus (T2DM) is a growing healthcare problem as a consequence of changing lifestyles and population aging. Individuals with T2DM have substantially higher prevalence of microvascular and macrovascular complications than those without. The landmark trial on T2DM, the United Kingdom Prospective Diabetes Study (UKPDS), recruited more than 3,800 newly-diagnosed patients, and randomly assigned them to intensive therapies with a sulphonylurea or insulin, or to dietary restriction. The benefit of intensive glycaemic control (glycosylated haemoglobin [HbA1c] 7.0% vs. 7.9%) on any diabetes-related endpoint was demonstrated after 10 years of randomised treatment, but most of the risk reduction was related to a 25% risk reduction in microvascular endpoints. Although there was a trend towards reduced rates of myocardial infarction in the intensive therapy group, it did not reach statistical significance. The authors concluded that intensive glycaemic control could substantially reduce the risk of microvascular complications, but that its effect on macrovascular disease in patients with T2DM remained uncertain. As expected, patients in the intensive treatment groups had more hypoglycaemic episodes, and higher weight gain than those who were treated conventionally.

Glycaemic Control and Macrovascular Complications

The debate on whether aggressive glycaemic control in T2DM could reduce cardiovascular (CV) events has been intensified by the publication of data from three shorter-term clinical studies: Action to Control Cardiovascular Risk in Diabetes (ACCORD);2 Action in Diabetes and Vascular Disease: Preterax and Diamicron Modified Release Controlled Evaluation (ADVANCE);3 and the Veterans Affairs Diabetes Trial (VADT).4

ACCORD
To determine whether intensive therapy targeting normal HbA1c levels could reduce CV events, ACCORD recruited more than 10,000 patients, with median HbA1c of 8.1%, who were randomly assigned to either intensive therapy (target HbA1c <6.0%) or standard therapy (target HbA1c 7.0%–7.9%).2 These patients had either established CV disease or additional CV risk factors. However, this study was stopped prematurely, after a mean follow-up of 3.5 years, owing to higher mortality in the intensive therapy group. The authors conjectured that intensive glucose lowering may cause unrecognised harm in high-risk patients with T2DM.

ADVANCE
The ADVANCE study randomised more than 11,000 patients to either intensive control with modified-release gliclazide plus other drugs as required, to achieve HbA1c ≤6.5%, or standard control. After a median follow-up of 5 years, intensive control (HbA1c 6.5% vs. 7.3%) had no significant effect on major macrovascular events, CV death, or death from any cause.5 These findings suggested that aggressive glycaemic control in this group of patients had failed to reduce CV events and all-cause mortality.

VADT
Concordant with ACCORD and ADVANCE, VADT also showed that aggressive glycaemic control among patients with T2DM appears to have no significant effect on macrovascular complications. In VADT, 1,791 military veterans who had suboptimal glycaemic control, were randomised to receive either intensive or standard glucose control. The goal in the intensive therapy group was an absolute HbA1c reduction of 1.5% relative to the standard therapy group. After a median follow-up of 5.6 years, intensive glycaemic control (HbA1c 6.9% vs. 8.4%) was not associated with any significant reductions in the rates of major CV events or death.4

UKPDS post-trial monitoring
In contrast to ACCORD, ADVANCE and VADT, the UKPDS 10-year post-trial monitoring follow-up data showed significant reductions of myocardial infarction and death from any cause.5 Despite an early loss of glycaemic differences upon completion of the randomised component of UKPDS, the benefit of having been in the intensive treatment group was sustained for over a decade, with the consequent emergence of statistically significant benefits on CV events and total mortality. In other words, UKPDS suggested that early and intensive glycaemic control in newly-diagnosed patients could reduce both microvascular and macrovascular complications, with an enduring legacy effect on CV diseases. Nevertheless, pursuing intensive glycaemic controls may not necessarily translate into fewer CV events among high-risk patients with established T2DM, as was the case in the study populations in ACCORD, ADVANCE and VADT, who had durations of disease ranging from 8.0 to 11.5 years. Taken together, these prospective studies suggest that the timing...
of glycaemic control, early or late, is also important in determining the beneficial effect of aggressive glycaemic control on CV events.

ADA/EASD Joint Position Statement

In light of these findings and other available evidence, the American Diabetes Association and the European Association for the Study of Diabetes (ADA/EASD) recently developed a joint position statement, which advocates the individualisation of glycaemic targets. The ADA/EASD recommend that diabetic patients with advanced complications, multiple comorbidities and limited life expectancy should have a less stringent HbA1c targets than young individuals without complications (Figure 1). Diet, exercise and health education should remain the foundations of any T2DM management program. Furthermore, all treatment decisions should be made in conjunction with the patient, and focused on their preferences, needs and values.

Conclusion

Our goal in clinical practice should be to achieve good glycaemic control with an appropriate and effective treatment regimen soon after diagnosing T2DM. Some anti-hyperglycaemic medications may lead to weight gain, which in turn translates into higher insulin resistance. Both dipeptidyl peptidase-4 inhibitors and glucagon-like peptide-1 receptor agonists have no weight-gain side effect when combined with metformin, which distinguishes them from other two-drug combinations in the ADA/EASD algorithm (Figure 2). In addition, they have lower risk of hypoglycaemia when added to metformin monotherapy. Hence, these combinations allow aggressive glycaemic control, without jeopardising patients’ wellbeing by causing weight gain and hypoglycaemia. Apart from targeting early optimisation of glycaemic control, clinicians should focus on comprehensive CV risk factor management, including smoking cessation, lipid lowering and blood pressure control, to prevent or delay the development of microvascular and macrovascular complications.

References:
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Updates on Systemic Lupus Erythematosus

Key words: Systemic lupus erythematosus (系統性紅斑狼瘡), diagnosis (診斷), clinical features (臨床特徵)

Introduction

Systemic lupus erythematosus (SLE) is a multisystem autoimmune disease with great variability in disease presentation and clinical course. The diagnosis is based on clinical and laboratory features consistent with the disease, in the absence of another autoimmune disease that could explain the clinical findings.

Prevalence in Hong Kong

People of Chinese ethnicity have higher prevalence and more severe disease than Caucasians. The prevalence of SLE in Hong Kong is 58.8/100,000, but in Caucasians it is

Clinical Manifestations

The presenting symptoms of SLE can vary, from general to organ-specific manifestations. Constitutional symptoms such as fatigue, poor appetite and weight loss are common, and can be the presenting symptoms or complications due to inflammation. About 40% of SLE patients have fever as the initial presentation, which poses a diagnostic challenge since fever may also result from infections or malignancies.

Organ involvement can be diverse. Theoretically, any organ may be involved in SLE; however, it tends to affect certain organs more often, with skin and joint manifestations the two most common presenting features. The most common cutaneous manifestation of lupus is “butterfly” rash or malar rash; this presents as acute erythematous elevated lesion with malar distribution, which may be pruritic or painful, that typically spares the nasolabial folds (Figure 1). Discoid lupus is a manifestation of chronic cutaneous lupus that may result in permanent scarring without proper treatment. Discoid lupus begins as erythematous papules or plaques with scaling that may become thick and adherent with a hypopigmented central area. When the lesion progresses, follicular plugging, scarring and central atrophy may be apparent.

Malar rash and discoid lesions are examples of lupus erythematosus-specific cutaneous lesions; non-specific lesions include alopecia, urticaria and vasculitis rash. Photosensitivity – abnormal skin reaction to ultraviolet (UV) radiation – is present in more than half of SLE patients. UV light can induce both lupus erythematosus-specific and non-specific lesions and may also exacerbate systemic disease. Therefore, lupus patients are advised to practice UV protection.

Joint involvement is another common presenting feature of lupus. Most of the time, lupus arthritis responds to treatment and joint erosion is uncommon. Joint deformity with ulnar drift and subluxation of the metacarpophalangeal joints may occasionally be encountered due to Jaccoud’s arthritis, which causes laxity of the joint capsules, tendons and ligaments as a result of fibrosis and synovial vasculitis.

Renal disease is a major cause of morbidity and mortality in SLE patients. The 10-year survival and renal survival (survival without dialysis) of Hong Kong Chinese patients with biopsy-proven lupus nephritis are 94% and 81%, respectively. Despite recent improvement in the overall survival rate of lupus as a whole, the chance of progression to renal failure has not been changed significantly. Lupus nephritis is confirmed by renal biopsy, which is essential to determine the type of disease. Classification is based on the World Health Organization system, revised by the International Society of Nephrology/Renal Pathology Society. Different types have different prognoses and immunosuppressive treatment is therefore tailored according to the type of nephritis and the patient’s medical condition.

Haematological abnormalities are common in lupus patients. These include anaemia, leucopaenia and thrombocytopenia. Half of SLE patients have anaemia, which can be immune-mediated, for example, autoimmune haemolytic anaemia due to lupus activity. More often, anaemia
is non-immune-mediated due to chronic inflammation or iron deficiency. Leukopenia is another common feature of lupus. Although it can be due to active lupus, side effects of immunosuppressive agent should not be overlooked as a possible cause.

Thrombocytopenia is usually autoimmune and frequently caused by anti-platelet antibodies. Two rare conditions, antiphospholipid syndrome and thrombotic thrombocytopenic purpura, should not be missed, since they may give rise to severe complications due to thrombosis.

Cardiac, pulmonary, hepatic, gastrointestinal and neuropsychiatric involvements are not uncommon. Detailed evaluation is prudent if any symptoms related to these organ systems arise.

Complications

The cumulative SLE survival rate in Hong Kong was 92% at 5 years and 83% at 10 years. Infection is the most common cause of mortality and hospitalisation. Lupus patients are predisposed to infection because of intrinsic immune problems and immunosuppressive treatment. Accordingly, fever should be carefully worked-up and infections should be treated aggressively.

In the Framingham Offspring Study, the incidence of coronary events in women with SLE at age 35–44 years was 50 times higher than healthy women of similar age. Lupus patients have accelerated atherosclerosis that results in heart attacks, stroke and peripheral vascular disease. Therefore, it is essential to optimise traditional cardiovascular risk factors.

Half of lupus patients have osteopenia, and 17% have osteoporosis. Chronic inflammation, steroid use and premature ovarian failure may contribute to accelerated bone mineral loss. Detecting and preventing osteoporosis is therefore necessary, particularly for patients taking long-term steroids.

New Diagnostic Criteria

The American College of Rheumatology (ACR) classification criteria, which have been used for 29 years, were expanded and modified in 2012, by an important lupus collaboration called Systemic Lupus International Collaborating Clinics (SLICC). To fulfill the new SLICC criteria for SLE, a patient must satisfy at least four criteria, including at least one clinical and one immunologic criterion, or must have biopsy-proven lupus nephritis in the presence of antinuclear antibodies (ANA) or anti-double-stranded DNA antibodies. The SLICC classification criteria are more sensitive, but no more specific, than the current ACR criteria; they are also more clinically relevant than the ACR criteria, allowing the inclusion of more patients with clinically defined lupus.

Antibodies Test

SLE is fundamentally an antibody-driven autoimmune disease. The presence of auto-antibodies, most importantly ANA, helps to establish the diagnosis. With the use of a human cell line and enzyme-linked immunosorbent assay, the sensitivity of ANA for SLE approaches 100%. Therefore, there is a very low probability that a patient with a negative ANA result has SLE. However, ANA is not specific to SLE. Several rheumatic and non-rheumatic conditions are associated with positive ANA, which therefore warrants further investigations guided by the clinical features and organs involved.

Treatment is also individualised. In general, for mild rash and photosensitivity, avoiding UV exposure and topical steroid cream may suffice. Non-steroidal anti-inflammatory drugs are useful for mild arthritis. Hydroxychloroquine is a safe disease-modifying agent that is useful to treat cutaneous lupus and joint inflammation, although there is a small risk of retinopathy in long-term use.

Conclusion

The clinical manifestations of SLE are diverse. The new SLICC classification criteria will help clinicians to diagnose this multisystem disease. Collaboration among different specialties and allied health professionals is essential to providing the best care to lupus patients.

References

Gastro-oesophageal reflux disease (GERD) is becoming more common in the Asia-Pacific region, and is closely associated with the similarly increasing prevalence of obesity. Fortunately, most patients suffer from mild GERD, and serious complications, for example, adenocarcinoma of the lower oesophagus, are still relatively rare.

Proton pump inhibitors (PPIs) are an effective first-line treatment for GERD that provide quick and complete resolution of symptoms and improve patients' quality of life. However around 30% of patients respond poorly to PPIs. The manifold reasons include: inappropriate advice or compliance to the drug; nocturnal symptoms; functional heartburn; non-acid reflux and extra-oesophageal manifestations.

In particular, non-acid reflux can now be better documented following the introduction of 24-hour combined oesophageal multichannel intraluminal impedance and pH monitoring. Reflux episodes can be characterised by pH (acidic, weakly acidic and weakly alkaline), and composition (liquid, mixed and gas). Our study in normal, healthy, volunteers showed similar reflux episodes in Chinese subjects to those in Caucasian populations. Patients with functional heartburn had a higher percentage of weakly-acidic reflux and lower percentage of acid reflux than those suffering from erosive oesophagitis. As more and more patients with extra-oesophageal manifestations of GERD are recognised, we expect to see more patients who are refractory to standard PPI therapy.

References
The only PPI approved for Preventing recurrent PUB

3 days infusion + 28 days oral therapy

First 3 days infusion:
Bolus infusion of 80mg over 30 mins followed by intravenous infusion of 8mg/hr over 3 days

Followed by 28 days oral therapy:
40mg Nexium oral for 28 consecutive days

Abbreviated Prescribing Information

Presentation: Enteroseal film-coated tablets. Treatment of erosive reflux esophagitis: 40 mg once daily for 4 weeks. Long-term management of patients with healed erosive reflux disease: 20 mg once daily. Symptomatic treatment of GERD: 20 mg once daily. In combination with an appropriate antibiotic/anti-FIL regimen for the eradication of Helicobacter pylori. Healing of H. pylori associated duodenal ulcer OR as prevention of relapse of peptic ulcers in patients with H. pylori associated ulcers: 20 mg once daily for 7 days. Prevention of gastric ulcer associated with NSAID therapy: 20 mg once daily for 4–8 weeks. Prevention of gastric and duodenal ulcers associated with NSAID therapy: Equivalent doses at 20 mg once daily. Prophylactic treatment after IV induced prevention of relapse of peptic ulcers: 40 mg once daily for 4 weeks after IV induced prevention of relapse of peptic ulcers. Treatment of Zollinger-Ellison Syndrome: 40 mg twice daily initially; 40–160 mg daily for maintenance, with doses above 80 mg daily, doses should be divided as twice daily. Solution for injection (sodium): Treatment of GERD in patients with erosive reflex disease or severe symptoms of reflux as an alternative to oral therapy when oral intake is not appropriate. 20–40 mg once daily. Preventing or delaying endoscopy for acute bleeding gastric or duodenal ulcers: 80 mg IV bolus infusion over 30 mins followed by IV infusion of 800 mg over 5 days. Followed by oral acid suppression (lansoprazole).

Contraindications: Hypersensitivity to any component of enteroseal tablets or to substituted benzimidazoles. Precautions: Eclampsia, gastric malignancy, before treatment; severe renal & hepatic impairment; Pregnancy & lactation. Warning: Ketocazole, itraconazole, roxithromycin, cisapride, erythromycin, clarithomycin, inducers of CYTP450 3A4, disopyramide, trimipramine, cimetidine, phosphinodisulfonate; warfarin; clonidine; diltiazem; digoxin; ethanol; endotoxins; hypercalcemia; use of nonsteroidal anti-inflammatory drugs. Full local prescribing information is available upon request.


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