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The Cover Shot



This is a huge double-eared yellow glazed white and blue interlacing flower Tin Qiao porcelain vase. Initially, the colour of the interlacing flowers and leaves are light blue.

After a while, the blue outline of branches and leaves deepens spontaneously as seen in the evolving hues of deep and light blue. It looks as if an artist is still drawing on it up till now.

We hope the new born specialty of Rehabilitation Medicine will add flying colours as the teamwork further strengthens.



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Editorial

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Editor



Dr. Ernest HM MA

Rehabilitation Medicine is a newly developed subspecialty of Medicine in Hong Kong since the 1990s. In September 2012, the status of the Specialty Board of Rehabilitation Medicine was recognised by the Hong Kong College of Physicians. As one of the medical specialties accredited by the Hong Kong Academy of Medicine, what are the common clinical problems managed by rehabilitation medical specialists? What are the distinct perspectives of rehabilitation physicians that enhance or complement clinical care services delivered by other clinical team members?

In this July 2013 Issue dedicated to Rehabilitation Medicine, we have invited senior rehabilitation physicians in Hong Kong's public and private sectors to share with us their experience and expertise in major medical rehabilitation problems. The spectrum of articles covers physical and visceral disabilities encountered by clinicians in daily practice. Although not repeatedly emphasised among the articles, the readers may appreciate the multidisciplinary team approach advocated by rehabilitation physicians in serving patients presenting with functional incapacity from organ system pathologies. The recent development of an ICF model serves to remind us the multi-dimensional variables (health and contextual factors) affecting patients' functional status, rehabilitation progress and outcomes. The importance of cross-specialty and cross-professional learning and a holistic problem solving approach is worthy of further exploration.

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Pulmonary Rehabilitation and Respiratory Support for Patients with Chronic Respiratory Insufficiency

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A brief overview of pulmonary rehabilitation programmes (PRP) and respiratory support for chronic respiratory insufficiency is summarised in Tables 1a and 1b

Table 1a - Global	Table 1b - Hong Kong
<p>Polio epidemic – 1980s manual mechanical ventilation; non-invasive ventilation (NIV) with negative pressure, then trend towards noninvasive positive pressure ventilation NIPPV Chest 1997 – ACCP /AACVPR on COPD PRP BTS 2001 “PRP services in the UK is very poor.” BTS /BLF PR Survey 2003 “PRP is still not available in most areas in the UK, when available are underused.” NICE 2004 Clinical Guideline on management of COPD in both primary and secondary care. CG 1.2.10.2 “ PRP should be offered to all patients functionally disabled by COPD (MRC 3 or above)” Cochrane review 2006; ATS/ ERS 2006 ACCP/ AACVPR 2007 COPD versus non-COPD Cochrane Review 2009 – early PRP after acute COPD exacerbations, reminder of preventive strategies</p>	<p>Pulmonary TB – 1970s Sanatorium based Since 1990s stable COPD in-patient PRP 8 weeks (gradually shifted to 2 to 3 weeks over 2 decades) Pioneer silicosis PRP; cancer rehabilitation, Post COPD acute exacerbation early in-patient PRP SARS Pulmonary Rehabilitation with shift to COPD ambulatory PRP in lieu of infection control issue. Community based PRP + patient empowerment (PEP) Home NIV for chronic type 2 respiratory failures Home based PRP, Pulse PRP for maintenance yearly Pre-LVRS, pre-lung transplant, postoperative and post-critical care PRP + neuromuscular rehabilitation Kyphoscoliosis or thoracic restriction-nocturnal NIV Spinal cord / neuromuscular diseases respiratory care -glossopharyngeal breathing, LTOT, home ventilation, tracheostomy care, in-exsufflator, palliative care, newer oxygen delivery and ventilatory support devices</p>

Pulmonary Rehabilitation (ATS and ERS 2006) “is an evidence-based, multidisciplinary, and comprehensive intervention for patients with chronic respiratory diseases who are symptomatic and often have decreased daily life activities. Integrated into the individualised treatment of the patient, pulmonary rehabilitation is designed to reduce symptoms, optimise the functional status, increase participation, and reduce health-care costs through stabilising or reversing systemic manifestations of the disease.” The recent ICF model re-affirms multidimensional interactions of individual, disability and co-morbid illnesses, psychosocial, environmental and rehabilitation team factors in influencing outcomes. The multidisciplinary team may include physicians, nurses, respiratory, physio-, and occupational therapists, psychologists, exercise specialists and/or others with appropriate expertise depending on the resources available. Chronic lung diseases include chronic obstructive pulmonary disease (COPD) and other conditions such as asthma, bronchiectasis, interstitial lung disease, restrictive chest wall disease, pulmonary hypertension, obesity-related respiratory disease and lung cancer.

Since publication of the 1997 ACCP/AACVPR evidence-based guideline on pulmonary rehabilitation, there have been many areas of new evidences being translated into daily clinical practice. The 2006 ATS/ERS statement on pulmonary rehabilitation highlighted the success factors for pulmonary rehabilitation, namely a multidisciplinary team approach, individually tailored programmes with attention to both physical and psychosocial functioning. The key elements of comprehensive patient assessment, education, exercise training with psychosocial support by the interdisciplinary team of professionals paved a big way towards returning patients to the best possible functioning in the community. The 2007 ACCP/ AACVPR evidence-based guideline on pulmonary rehabilitation was another landmark for both COPD and other types of respiratory conditions (Table 2).

Table 2 – Benefits of pulmonary rehabilitation (2007 ACCP/ AACVPR evidence)

Grade 1A (Strong recommendation 1A to 1C)	Grade 2B (Weak recommendation)
<ul style="list-style-type: none">*A programme of exercise training of the muscles of ambulation is recommended as a mandatory component of pulmonary rehabilitation for patients with chronic obstructive pulmonary disease (COPD).*Improves the symptoms of dyspnoea.*Improves health related quality of life.*Both low- and high-intensity exercise training produce clinical benefits*Addition of a strength training component increases muscle strength and muscle mass.*Unsupported endurance training of the upper extremities is beneficial in COPD and should be included .*6 to 12 weeks of pulmonary rehabilitation produces benefits in several outcomes that decline gradually over 12 to 18 months.	<ul style="list-style-type: none">*Pulmonary rehabilitation reduces the number of hospital days and other measures of health-care utilisation in COPD.*There are psychosocial benefits from comprehensive pulmonary rehabilitation programmes in COPD.*As an adjunct to exercise training in selected patients with severe COPD, noninvasive ventilation produces modest additional improvements in exercise performance.
Grade 1B	Grade 2C (Weak observational studies)
<ul style="list-style-type: none">*Lower-extremity exercise training at higher exercise intensity produces greater physiologic benefits than lower-intensity training in COPD.*Education should be an integral component of pulmonary rehabilitation; include information on collaborative self-management and prevention and treatment of exacerbations.*Beneficial for some patients with chronic respiratory diseases other than COPD.*Not support routine use of inspiratory muscle training as an essential component.	<ul style="list-style-type: none">*Pulmonary rehabilitation is cost-effective in patients with COPD. Longer programmes (12 weeks) produce greater sustained benefits than shorter programmes.*Maintenance strategies following rehabilitation have a modest effect on long-term outcomes.*Minimal evidence on benefits of psychosocial interventions as a single therapeutic modality.*Administering supplemental oxygen during high-intensity exercise programmes in patients without exercise-induced hypoxaemia may improve gains in exercise endurance.*Not support routine use of anabolic agents in COPD.



Grade 1C	No Recommendation Areas (evidence insufficient)
<p>*Supplemental oxygen should be used during rehabilitative exercise training in patients with severe exercise-induced hypoxaemia.</p> <p>*Some benefits, such as HRQOL, remain above control at 12 to 18 months.</p>	<p>*Expert opinions support the inclusion of psychosocial interventions as a component of comprehensive pulmonary rehabilitation programmes for COPD</p> <p>*Pulmonary rehabilitation for chronic respiratory diseases other than COPD should be modified to include treatment strategies specific to individual diseases and patients in addition to treatment strategies common to both COPD and non-COPD.</p> <p>*Insufficient evidence that pulmonary rehabilitation improves survival in COPD, nor the routine use of nutritional supplementation.</p>

The Cochrane systematic reviews Issue 1, 2009 intervention review provided a link between post-COPD acute exacerbations and pulmonary rehabilitation process. Pulmonary rehabilitation following exacerbation of COPD was supported by its significant positive effects on exercise capacity, health related quality of life, substantial reduction in unplanned admission and mortality. Apart from treatment for acute exacerbations and smoking cessation to reduce decline in lung function, the step before PRP enrollment is medical optimisation (Table 3)

Table 3 Role of medical optimisation in COPD.

<p>Long acting beta-agonist (LABA) + inhaled steroid TORCH study : reduces GOLD II exacerbations (NNT4; p<0.05) reduces FEV1 decline GOLD II-IV</p> <p>Long acting anticholinergic (e.g. Tiotropium) TORCH & UPLIFT studies: reduces GOLD II exacerbations (NNT11; p=0.08) TORCH study :reduces FEV1 decline GOLD II</p> <p>Flu Vaccine reduces severe complications and mortality by 50%</p> <p>Pneumococcal Vaccine reduces community acquired pneumonia; age >65 and <65 with FEV1<40% pred</p> <p>Oxygen therapy MRC & NOTT trial -long term oxygen therapy 15h/day ; for exercise, activities and sleep related hypoxaemia (nasal O2 = n+1 l/min)</p>	<p>COPD exacerbations ISOLDE study- more is worse (SGRO) ECLIPSE study – N predicts future recurrence TORCH study– declines FEV1 UPLIFT study – early treatment better</p> <p>Crisis Pack (supervised home use of short course steroid, antibiotics and short acting bronchodilators) Short acting beta-2 agonists and /or anticholinergics Slow release theophylline, mucolytics Newer PDE4 antagonists (to be further appraised) Inhalers techniques versus use of spacer / aerochamber Newer medication delivery devices,</p> <p>Breathing control and energy conservation skills Non-invasive ventilation - for acute, acute on chronic and sleep related hypercapnic respiratory failure</p>
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The GOLD 2013 guideline uses a combined assessment of symptoms (mMRC or CAT score) and risk (GOLD stage 1 to 4) to form groups A,B,C,D to guide the preferred choices of combination treatment for COPD. Despite the important evidence-based guidelines available, one needs to be aware of the several years' lag time in these publications. Local experience in pulmonary rehabilitation helps to enrich the answers to Who? When? What? Where? How? and Why? of efficacious pulmonary rehabilitation. In Hong Kong, most COPDs are moderate to severe (GOLD II onwards) by the time they first presented to hospitals. With awareness of late presentations, recent care paths are streamlined to provide early post-exacerbation PRP and serve milder COPDs to prevent further decline. 3-week intensive in-patient rehabilitation was found

to be as effective as 4-week in-patient rehabilitation in 2000s. Six minute walking distance increased by an average of 20%, quality of life as measured by a Chronic Respiratory Disease Questionnaire was significantly improved and unplanned re-admissions were reduced by 25%. Training with focus on lower limb ambulation capacity confirmed that 2-week in-patient training can achieve initial functional gain similar to 3-week programme. The benefits apply to older clients over age 70. After a course of 18 sessions of >1hr pulmonary rehabilitation symptom limited exercise training over a 11-day in-patient stay, one expects a 20% improvement in six-minute walk distance or 15% rise VO2peak. This can be followed by maintenance rehabilitation either at home or in an ambulatory day rehabilitation centre to augment the health gains or prevent the decline of functions after 6 months of programme completion. As international literature indicates, the author concurs that walking / lower limb exercises are most important and longer programmes (4 to 12 weeks) produce greater sustained benefits (last 12-18 months) than shorter programmes (benefits last 6 months).

Serving patients with chronic respiratory insufficiency reminds us to consider preventive interventions (esp. smoking cessation) and earlier diagnoses on a community basis using portable spirometry. With the advances of modern technology, clinical teams can track patients' progress receiving different types of oxygen delivery devices, monitoring proper inhaler use and high tech home ventilation (invasive and non-invasive), early warning signals of acute exacerbations and tele-rehabilitation to support home exercises and sustain longer term health gains post-rehabilitation. This will truly promote a high-tech home care paradigm for chronic visceral disabilities and strengthen the image of a caring community.

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Adverse reactions: Very common: vomiting, nausea. Common: anorexia, decreased appetite, anxiety, depression, insomnia, dizziness, headache, diarrhoea, dyspepsia, abdominal pain, application site reactions (erythema, pruritus, oedema), fatigue, asthenia, weight decrease. Uncommon: agitation, delirium, hallucinations, cerebrovascular accident, syncope, somnolence, cardiac arrhythmia (e.g. bradycardia, supraventricular extrasystole), gastric ulcers, gastrointestinal haemorrhage, hyperhidrosis, contact dermatitis, malaise. Rare: hypertension, application site hypersensitivity, pruritus, rash, erythema, urticaria, blister, dermatitis allergic. Very rare: tachycardia, atrioventricular block, atrial fibrillation, pancreatitis, fall, seizure. Not known: dehydration, aggression, restlessness, sick sinus syndrome, hepatitis. (PL April 2011 + US PI Aug 2012)

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Basic Principles of Electrodiagnosis and its Application in Pain Patients

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Dr. Alex CP CHOW

Neuropathic pain is common, and it develops as a result of lesions or disease affecting the somatosensory nervous system either peripherally or centrally. Examples of neuropathic pain conditions commonly encountered in clinical practice include painful peripheral neuropathies, entrapment neuropathies, traumatic nerve injuries, radicular and multi-radicular problems, cervical and lumbar spinal stenosis. Clinically, neuropathic pain is characterised by spontaneous ongoing or shooting pain, and amplified pain responses after noxious or non-noxious stimuli. Imaging studies including MRI are often utilised to support the clinical diagnosis, but false positives and false negatives are commonly encountered. Electrophysiological studies allow objective evaluation of the function of the neurological system. It helps to establish the presence or absence of a peripheral nervous system lesion, localise the disease site, and provide information about the nature of the disease process including chronicity, severity and prognostic information. It also helps to determine the relevance of an established peripheral neuropathic lesion to subjective clinical complaint.

There are four basic components for any electrodiagnostic measurement system:

1. Electrodes: interface between the subject and machine
2. Nerve stimulator
3. High-gain differential amplifier
4. Central processing device and recording display

The electrodiagnostic system amplifies and displays biological information derived from muscles and nerves recorded through surface or needle electrodes, and is generally displayed visually on a monitor or audibly through a loud-speaker. For nerve conduction studies, electrical nerve stimulation is used to stimulate a peripheral nerve. Surface skin electrodes are used to record a compound muscle or nerve action potential. The way an action potential is conducted along an axon depends on whether the axon is myelinated or unmyelinated. The velocity of nerve conduction depends on the diameter of the myelinated fibre. Large motor and sensory fibres conduct at a rate of 50 to 70 m/sec.

Nerve Conduction Studies:

Useful in determining the presence, the type and distribution of a neuropathy. Latencies and amplitudes of the evoked responses, and nerve conduction velocities are recorded. This leads to the differential diagnosis of the aetiology of a neuropathy, determining the location of nerve pathology, and progress of a disease

of peripheral nerve. In demyelination conditions, there will be a delay of the motor and sensory latencies, and slowing of the conduction velocities. In conditions associated with motor or sensory axonal degeneration, there would be a decrease of the amplitudes of the compound muscle action potential or sensory nerve action potential.

Needle electromyography

In electromyography, needle electrodes are used to record the electrical potential of the muscle membrane, and the configuration of the motor unit potential evaluated. The motor unit is the group of muscle fibres innervated by a single anterior horn cell.

The needle examination is useful to determine:

1. The integrity of an individual muscle and its nerve supply
2. The location or distribution of abnormality
3. Abnormality of the muscle itself

The examination proceeds through the following steps:

1. Evaluation of insertional activities: discharge from fibres produced by irritation of muscle fibres, usually lasting no more than 300 to 500 millisecond.
2. Activities of the muscle in a relaxed state: Should have no electrical activity present in normal muscles. Fibrillation potential and positive sharp waves are seen in loss of innervation or primary muscle fibre disease.
3. Assessment of motor unit potential seen on weak voluntary effort
4. Orderly recruitment of additional motor units when effort increases
5. Determination of the interference pattern seen on maximum voluntary effort.

When a needle is inserted into a normal muscle, it evokes a brief burst of electrical activity that lasts no more than 200-300 msec. When the needle is stationary in a relaxed normal muscle, no electrical activity is present. During a gentle voluntary muscle contraction, a single motor neuron discharges, and a motor unit with distinctive morphology can be identified. With increasing voluntary effort, the firing frequency of the individual motor unit increases and the other motor units gradually come into play. Normal motor units in healthy muscles are biphasic or triphasic. Motor units that cross the baseline more than five times are termed 'polyphasic', and are a measure of fibre asynchrony. Normal motor unit amplitude ranges



from 1 to 5 mV, and represents the sum of the action potential of each muscle fibre of the motor unit. The following are EMG findings in abnormal muscles:

1. Insertional activity (increased or decreased)
2. Spontaneous activity (in denervated muscles: fibrillation and positive sharp waves)
3. Abnormal motor unit morphology (polyphasic in regenerating muscle, large amplitude motor unit in chronic denervation) and recruitment pattern.

Clinical Correlations:

Traumatic or Compressive Neuropathy:

Neuropraxia is a mild form of nerve injury resulting in conduction block without associated axonal structural changes, commonly seen in compressive or ischaemic nerve injuries. Serial nerve conduction determinations along the course of the nerve enable the localisation of the conduction block. The prognosis is good and healing occurs within days or weeks.

In axonotmesis and neurometesis, there is disruption of the axon and the nerve distal to the injury undergoes Wallerian degeneration. The distal segment of the nerve becomes inexcitable after 7 to 10 days, resulting in a decrease in amplitudes of motor or sensory responses in nerve conduction studies. Spontaneous activities are seen in the involved muscle segments two to three weeks later. Serial nerve conduction and needle electromyography studies can determine the difference between neuropraxia and axonotmesis, and to monitor electrical signs of nerve recovery.

Nontraumatic Neuropathies:

Pathophysiologically, this can be broadly classified as demyelinating and axonal neuropathies. Segmental demyelination is associated with slowing of nerve conduction velocities. With axonal neuropathy such as diabetic neuropathy, there would be a reduction of the evoked motor or sensory responses. Needle electromyography will show the presence of denervation changes, and also provide early information about reinnervation before clinical recovery is evident.

Typical axonal neuropathy electrodiagnostic findings are:

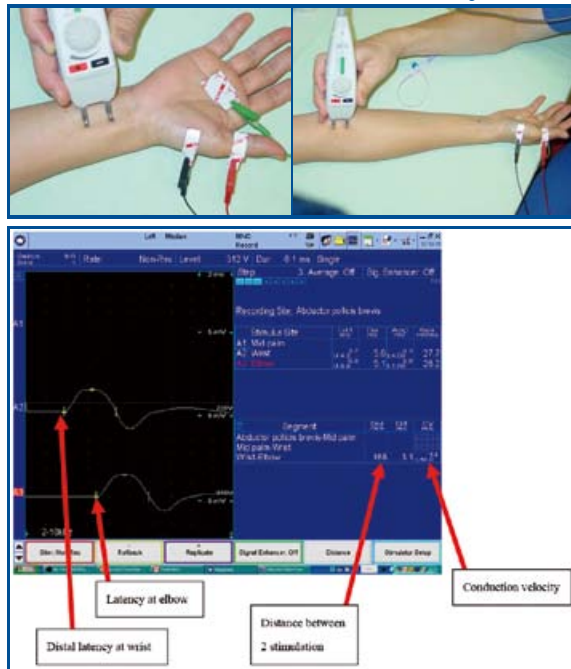
1. Abnormally low or absent sensory nerve action potential
2. Abnormally low or absent compound muscle action potential
3. Normal distal motor and sensory latencies
4. Normal or near normal motor and sensory conduction velocities
5. Denervation changes in electromyographic examination

Conclusion:

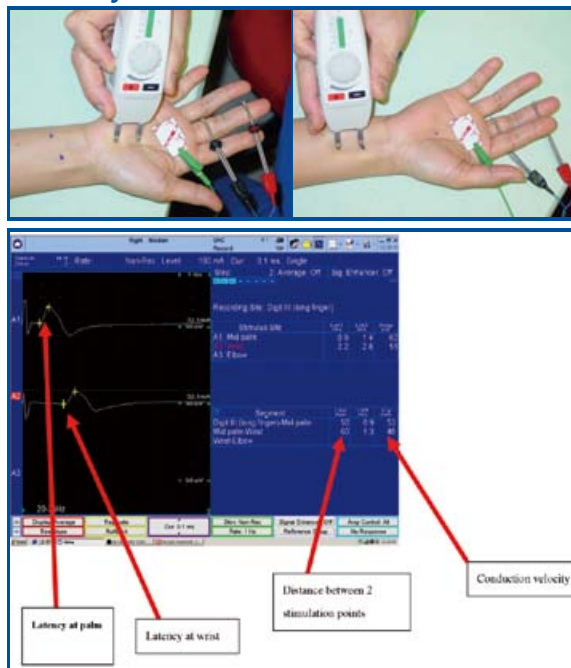
Conventional nerve conduction studies and needle electromyography measure the activity of motor fibre,

larger sensory fibres and the muscles, and are useful in localising neuromuscular disease sites and in providing information about the nature of the disease process. As sympathetic and small unmyelinated C fibres are not being evaluated, a normal study does not mean the patient has no pain. It also cannot directly determine the aetiology, and the aetiology must be inferred from symptoms, anatomic location and data obtained from the studies.

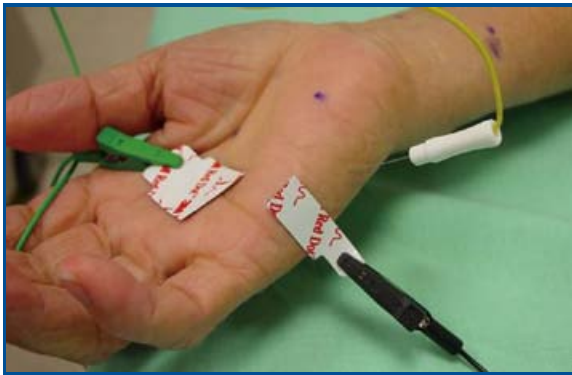
Motor Nerve Conduction Study:



Sensory Nerve Conduction Studies:



Needle Electromyography:



Polyphasic motor units



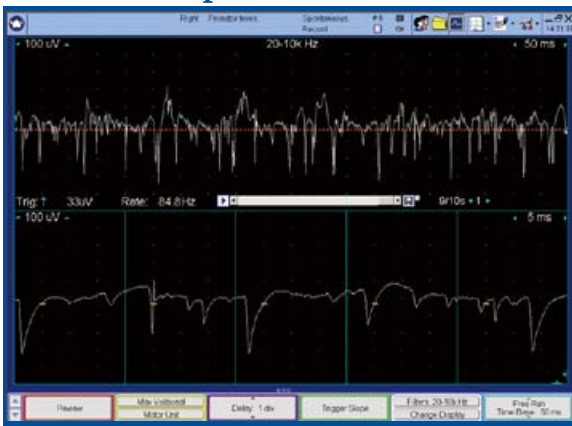
Fibrillations



Neurogenic interference pattern



Positive Sharp Waves



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Clinical Applications of Musculoskeletal Ultrasonography in Physical Medicine and Rehabilitation

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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 1 CME credit under the programme upon returning the completed answer sheet to the Federation Secretariat on or before 31 July 2013.

Introduction

Musculoskeletal ultrasound has been increasingly used by physiatrists especially in the last decade. It is regarded as an extension of clinical examination and being another stethoscope of physiatrists.

This imaging modality is noninvasive, safe, lack of radiation and of low costing. It is now commonly used in managing patients with musculoskeletal problems and also as a visual guidance for injection of neurolytic agents in patients with neurological diseases.^{1,2}

Similar to other imaging modalities, the applications of ultrasonography can offer diagnosis, therapeutic intervention and monitoring of treatment in certain kinds of musculoskeletal problems.³ It is especially useful to help in making diagnoses when patients' complaints largely outweigh objective clinical findings. When a diagnosis can be made early in the disease, subsequent treatment can be offered more aggressively and the disease can be modified in a way not affecting functional status of the patients. This will surely improve the patients' functional outcomes. It can provide dynamic muscle or tendon examination images, which can facilitate clinicians to view the muscle and synovial joint problems in different clinical settings. For neurological disease application, most of the time, musculoskeletal ultrasound does not require active participation of patients which may be beneficial in facing patients with limited motor control or cognitive impairment.²

Neurological diseases

Muscle spasticity is a common clinical problem as part of the upper motor neuron syndrome such as stroke, brain injury or spinal cord injury. Botulinum toxin injection to target muscle groups is frequently used to reduce spasticity so as to improve range of motion, function and to reduce pain. Dosing of botulinum should better be individualised for each patient based on the severity of spasticity, functional goal and the size of muscle.⁴ The last consideration can be helped by musculoskeletal ultrasound. Using musculoskeletal ultrasound to identify target structures for neurolytic agents' injection is a common practice nowadays.

It can improve the accuracy of needle placement. Under direct visualisation, the needle can be adjusted

to avoid nerves, vessels, tendons and non-targeted structures which reduce the risk of the procedure. The length of the needle required to reach the target can be estimated by a preliminary scan when the depth of the target structures can be ascertained. By direct visualisation of the structures, we can avoid injecting into the fibrotic components of the muscle and thus enhance the therapeutic effects of the botulinum toxin. We can also visualise the injection to avoid the risk of spread of toxin outside the target structures especially when targeting the small muscles. We can also redirect the needle to multiple sites within the target muscles to achieve multiple motor point injections. Sometimes we can minimise our injectant to a lower dose for atrophic or smaller muscles by improving accuracy of the needle placement. It can help to locate the target easily even when there are anatomic variations in patients and when patients come with different levels of spasticity resulting in distorted postures.²

The usually encountered spasticity patterns in commonly seen neurological diseases include flexed elbow, wrist and palm in thumb deformity in the upper limbs, adductor spasticity, equinus varus in the lower limbs. Musculoskeletal ultrasound can help to identify the complex overlapping architecture of upper limb muscles and is useful in locating deep muscles that have limited surface anatomy such as flexor hallucis longus and tibialis posterior in the lower limb.²

It is not uncommon for us to combine a nerve stimulator with ultrasound for botulinum toxin injections to ensure both anatomical and functional accuracy of our injections.⁵ With ultrasound, all of these muscles are quickly, accurately and easily targeted. In our clinical experience, the target muscle is usually able to be located in less than 1 minute and the injection procedures for individual muscles are usually completed within 3 minutes even with subsequent nerve stimulation backup. Although there is no evidence that proves the combined technique is more effective than ultrasound alone.

We also use musculoskeletal ultrasound to locate target nerve injection, for example obturator nerve block by alcohol or phenol for patients with marked adductor spasticity.^{6,7} Besides, nerve stimulation is usually used concomitantly to serve the purpose of more accurate functional location of our targets.



For patients with focal dystonia and myoclonus, local injection of botulinum toxin will be another good management option and musculoskeletal ultrasound will again serve its role in providing accurate localisation.

Hypersialorrhoea is also commonly encountered in a wide range of neurological disorders such as dementia, Parkinsonism and stroke.⁸ Besides its cosmetic implication, it may also cause aspiration pneumonia in severe cases. Besides clinical palpation, musculoskeletal ultrasound is also helpful to locate the salivary glands and obviously nerve stimulation is of no use in this situation. Musculoskeletal ultrasound can help to isolate the salivary glands and to avoid the adjacent muscles involved in chewing and swallowing. The parotid and submandibular glands are most often targeted for injection. The European Academy of Neurology has stated that Botulinum toxin is probably safe and effective in correcting drooling in patients with Parkinson's disease and should be considered a treatment option.

Musculoskeletal conditions commonly seen in rehabilitation settings

Because of its sensitivity in detecting inflammation and intra-articular fluid, ultrasound is not uncommonly used in rheumatological disease and geriatric medicine. One of the common applications is to investigate joint pain, for example, shoulder pain in post-stroke hemiplegia.⁹ Shoulder pain is a common complication after stroke, which is reported in 5% to 84% of the stroke patients. Shoulder subluxation is not uncommon to be associated with shoulder pain after stroke. Inferior shoulder subluxation after stroke has been reported with the incidence of up to 81%.¹⁰ A variety of methods have been used to assess shoulder subluxation and, of these, palpation and plain radiographs are the most extensively reported in research studies. Ultrasonography has recently been used to assess shoulder subluxation in patients with stroke for the measurement of acromion-greater tuberosity distance, which demonstrates both intra-rater reliability and discriminant validity.¹¹

Besides subluxation, post-stroke shoulder pain may be overlapped with other musculoskeletal problems, like shoulder impingement syndrome or tendonopathy. A case series using magnetic resonance imaging (MRI) findings in painful hemiplegic shoulders showed that these patients were more likely to have synovial capsule thickening or enhancement which may be suggestive of the underlying adhesive capsulitis.¹² However, due to limitation of the availability of MRI, it is impossible to use it to investigate all the post-stroke shoulder pain patients after the basic history, clinical examination and plain radiograph.

In contrast, ultrasonography has been shown to be able to illustrate these capsular or rotator-cuff pathology by competent clinicians. Furthermore, as it can provide dynamic images, clinicians can detect intra-tendon or intramuscular ruptures during manipulation of the shoulder, which is not possible by using MRI. Clinicians can perform ultrasound guided injection therapy when

it is indicated for those inflammatory conditions and monitor the disease progress although we still lack clinical trials to confirm its efficacy to the patients with post-stroke shoulder pain.

For the other kind of patients with shoulder pain, like those with osteoarthritis, they may be benefited by intra-articular visco-supplement injections under ultrasonography guidance when the pain is refractory to other standard non-operative interventions.¹³

The other muscle pain problem, which is not uncommonly seen in the rehabilitation settings, would be the myofascial pain syndrome. The diagnosis is still mainly based on the history and clinical examination by ruling out the other inflammatory diseases. Recently, it was found that ultrasonography is useful for detecting local twitch responses (LTRs) of myofascial trigger points, especially for the LTRs in the deep muscles, like the lower back muscles.¹⁴ This imaging technique can assist clinicians to provide injection therapy under ultrasonography guidance without causing any injury to the other vital organs. In fact, a case series using ultrasound-guided pulsed radiofrequency treatment of the myofascial pain syndrome had shown significant clinical benefits.¹⁵

Conclusion

In conclusion, the role of musculoskeletal ultrasound is expanding as the technology advances and more physiatrists are being trained in this aspect. Besides its main use to diagnose pathological changes, it is now largely used to assist physiatrists in performing interventional procedures.

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MCHK CME Programme Self-assessment Questions

Please read the article entitled "Clinical Applications of Musculoskeletal Ultrasonography in Physical Medicine and Rehabilitation" by Dr. Mandy PM FUNG and Dr. Eric MP YEUNG 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 31 July 2013. 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. Despite the usage of musculoskeletal ultrasound, we cannot avoid injecting the botulinum toxin to the fibrotic components of the muscles in patients with spasticity.
2. Musculoskeletal ultrasound cannot facilitate the clinicians to locate the target muscles when patients come with different levels of spasticity resulted in distorted posture.
3. Musculoskeletal ultrasound can facilitate the clinicians to identify the needle placement to flexor hallucis longus and tibialis posterior in patients with equinovarus in the lower limb.
4. It is uncommon to combine nerve stimulator with ultrasound for botulinum toxin injections to ensure both anatomical and functional accuracy of the injections.
5. We can use musculoskeletal ultrasound to locate obturator nerve block by alcohol or phenol for patients with marked adductor spasticity.
6. The European Academy of Neurology stated that Botulinum toxin plays a role to control drooling in patients with Parkinson's disease.
7. Musculoskeletal ultrasound is reliable to measure acromion-greater tuberosity distance in patients with post-stroke shoulder subluxation.
8. Patients with painful hemiplegic shoulder were less likely to have positive signals suggestive of adhesive capsulitis by MRI.
9. Intra-articular visco-supplement injection under ultrasound guidance cannot offer any extra clinical benefit when the pain due to osteoarthritis of shoulder is refractory to other standard non-operative interventions.
10. Musculoskeletal ultrasound can only detect the local twitch responses of myofascial trigger points in the superficial back muscles.

ANSWER SHEET FOR JULY 2013

Please return the completed answer sheet to the Federation Secretariat on or before 31 July 2013 for documentation. 1 CME point will be awarded for answering the MCHK CME programme (for non-specialists) self-assessment questions.

Clinical Applications of Musculoskeletal Ultrasonography in Physical Medicine and Rehabilitation

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Answers to June 2013 Issue

A Brief Review on Treatment of Atopic Dermatitis (AD) in Adults

- 1. F 2. F 3. F 4. F 5. T 6. F 7. F 8. F 9. F 10. F

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Comprehensive Visceral Rehabilitation in a Local Context - Cardiac Rehabilitation and Beyond

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Introduction

Cardiovascular disease is the second leading cause of mortality in Hong Kong¹. As an area of visceral rehabilitation, and with its benefits in mortality, hospital admissions and quality-of-life², cardiac rehabilitation is now a standard component of contemporary management for patients with cardiac diseases³.

The Rehabilitation

Cardiac rehabilitation (CRP) was defined as 'the coordinated sum of activities required to influence favourably the underlying cause of cardiovascular disease, as well as to provide the best possible physical, mental and social conditions, so that the patients may, by their own efforts, preserve or resume optimal functioning in their community and through improved health behaviour, slow or reverse progression of disease'⁴. A comprehensive rehabilitation programme in the New Territories West Cluster (NTWC) was developed by the Centre in Tuen Mun Hospital (TMH) as part of the comprehensive visceral rehabilitation (VIR) services. It is one of the first in Hong Kong in successfully utilising the mutual strength of hospital and community public gymnasium to provide a seamless continuum of rehabilitation. In addition to cardiac patients, the visceral rehabilitation team serves patients with other diseases like lung and renal conditions, concurrent medical diseases, complicated diabetes mellitus, recent stroke / transient ischaemic attack, vascular and other diseases. To serve the unique needs in the NTWC region, the visceral rehabilitation team also looks into rehabilitation expertise areas including work, driving, cognition and sexuality.

The Process and Components

Cardiac rehabilitation programmes can be divided into different phases which have variations in different localities. In the NTWC, current VIR and CRP are divided into 4 phases: Phase I for in-patients; Phase II (outpatients/day-patients) with comprehensive visceral rehabilitation including exercise training, risk factor reduction and psychosocial management; Phase III being the transition stage from hospital-based rehab to the phase VI community-based life-long maintenance of exercise and health behaviours. CRP consists of baseline assessment, risk stratification, nutritional counselling, risk factor management, psychosocial management, physical activity counselling, exercise prescription, and training⁵. Rehabilitation specialists, in collaboration with organ specialists and allied health professionals, receive referrals and conduct exercise and risk factor assessments. After recruitment, the team

of rehabilitation specialists, clinical exercise specialists, rehab nurses, physiotherapists, occupational therapists and NGO social workers defines the exercise risks and goals, determine and monitor appropriate training and risk factor modification strategies. Taking into account the characteristics of exercises, patient assessment and aerobic training are mainly performed with treadmills in the Centre. For suitable patients, cardiopulmonary exercise testings are performed to provide comprehensive rehabilitative information. The aerobic exercise component commonly consists of appropriately supervised and ECG-monitored exercise sessions. The levels of exercise supervision (un-supervised, professionally supervised, or medically supervised) are usually guided by various factors including rehabilitation goals, training intensity, exercise risk, compliance and sustainability as assessed by the rehabilitation team⁶. Selected patients may undergo other forms of training, e.g. ergometry, strength training, if indicated. A higher number of sessions were found to be associated with better outcomes⁷. The NTWC Rehab Centre has a close collaboration with local community partners to facilitate medical and psychosocial risk factor modifications. In addition, after the initial stages of hospital-based rehabilitation, suitable patients will continue further community-based training in the public gymnasium. The rehabilitation team visits the gymnasium regularly to provide exercise advices and coaching. Benefits of the service on various outcomes were encouraging compared to international references^{8,9,10}.

Advanced Rehabilitation

In the NTWC, working-age patients constitute one major patient group in visceral rehabilitation. This covers a wide range of vocations including commercial driving, blue-collar manual work, police, fire-fighting and others, on top of white-collar office workers. The high and variable cardiovascular demand on different manual duties imposes special challenges to the rehabilitation team. Within the limitations, the team provides appropriate counselling with/without additional information from work simulation to support the return-to-work for patients, with or without modifications¹¹. The additional concern on public safety, e.g. for commercial driving, further complicates the issue. As a consequence, the rehabilitation team provides advices and support not only from the medical perspectives but also from the vocational rehabilitation, retraining and relocation perspectives.

The VIR team has close collaborations with clinical psychologists, dietitians and sex therapists to address special patient needs. Sexuality is an 'interesting' but 'hidden' issue in rehabilitation. It is a 'two-persons



issue' involving both the patient and one's partner. The myth of viewing sexuality as equivalent to purely the performance of sexual intercourse is common among patients. Other common issues include the worries of risks associated with sexual activities, and the impact of medications, including those for visceral diseases and sexual dysfunction. In general, there is a transient and mildly elevated absolute risk of cardiac events related to sexual intercourses under specific situations (comfortable pattern with a familiar person under a familiar situation)^{12,13}. While medical guidelines may provide information on the associated risks of sexual intercourses¹⁴, it is more important for the rehabilitation team to facilitate proper patient understanding of sexuality and to correct common myths¹². From one co-author's experiences serving the role of a sex therapist, the initial steps of the 'PLISSIT model' of sexuality rehabilitation¹⁵, namely the provision of a permissive environment (P) and limited information (LI), are useful in addressing most myths and worries for couples. Addressing the topic also helps illustrating the benefits of rehabilitation and promotes patient compliance to a healthy life-style.

Conclusion

Visceral and cardiac rehabilitation can have a positive impact on patients with cardiac and visceral diseases. Apart from exercise training and risk factor modifications, comprehensive rehabilitation also requires the attention to psychosocial domains. The service in the NTWC Rehabilitation Centre illustrates one feasible model addressing the unique and specific needs of patients in the locality.

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Stroke and Spasticity

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Introduction

Spasticity is not an uncommon sequel after strokes. It is estimated that about 35% of post-stroke patients would have spasticity that requires treatment. Nevertheless, spasticity is part of the manifestations of upper motor neuron syndrome (Table 1). To manage spasticity properly, one should also consider the effects on other manifestations such as muscle weakness. Occasionally, the paretic lower limb may require an increase in tone due to spasticity to provide splinting effect to support standing. The reduction in spasticity would be detrimental in such a case. There should be good indications before treatment for spasticity is given.

Table 1. Upper Motor Neuron Syndrome

Abnormal behaviours (positive symptoms)	Deficits (negative symptoms)
Reflexes release phenomena	Decreased dexterity
Hyperactive proprioceptive reflexes	Paresis/Motor weakness
Increased resistance to stretch	Fatigability
Relaxed cutaneous reflexes	
Loss of precise autonomic control	

Table 2. Indications for managing spasticity

Pain or spasm
Contracture
Interfering with function such as mobility
Interfering with proper hygiene care
To reduce deformity
To improve positioning
To improve orthotic fitting

Approach in managing spasticity

The common indications for treating spasticity in a patient after stroke are shown in Table 2. The treatment given should be provided by a step-cared approach (Figure 1), in which the simple measurements such as physical stretching programme and exclusion and treatment of noxious factors should be introduced first. Common clinical problems such as constipation, wound infection, arthritic pain or urinary tract infection could increase spasticity to a stage of interfering with the patient's functioning. Removal of these precipitating factors will lessen the spasticity.

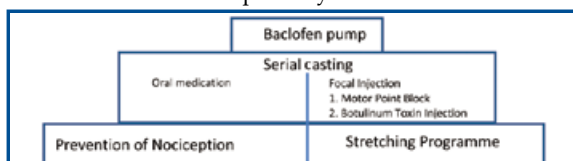


Figure 1. Step-cared approach in management of spasticity

When treatment is needed, it is usually in the form of either oral medication or injection. There are not many oral medications that are useful for management of spasticity (Table 3), the commonest used oral medication locally is baclofen as it has less severe complication or dependency. However, its effect on reducing spasticity is still not satisfactory in most cases with side effects of drowsiness or weakness of the normal muscles. Focal injection to manage spasticity has been a more acceptable approach so that only the spastic muscles would be injected whilst those normal muscles would not be affected by medications.

Table 3. Oral drug for treatment of spasticity

Drug	dosage	Half-life	Mechanism of action	Side-effects
Baclofen	10-80+mg	3.5 hrs	Presynaptic inhibitor by activation of GABA receptor	Drowsiness, Weakness, Potentiate convulsion
Diazepam	4-60+mg	27-37+ hrs	Presynaptic inhibition by facilitating postsynaptic effects of GABA	Drowsiness, Dependence, Fatigue
Dantrolene	25-400mg	8.7 hrs	Reduces calcium release, interfering with excitation-contraction coupling in skeletal muscle	Weakness, Hepatotoxicity
Clonidine	0.1 – 0.4 mg	12-16 hrs	Alpha2-adrenergic agonist	Hypotension, Drowsiness, Swelling of feet

Nerve or Motor-point block

Nerve or Motor-point block has been used to manage focal spasticity in Rehabilitation Medicine for many years. It requires a simple stimulator which could deliver a current of up to 5mA with connection to a Teflon-coated needle. This needle is also connected to an injection syringe. The injected medication could be either 5 or 6% phenol or 60 to 100% alcohol. When the needle is near the nerve or motor-point of the target muscle, much less current is required to elicit observable twitching of the muscle. When only about 0.5mV of current is needed to elicit muscle twitching, the needle should be very near to the target nerve or motor-point, the medication in the syringe could then be injected. It is known that if a sensorimotor nerve such as the median or tibial nerve is blocked by phenol or alcohol, about 10% of patients will have dysaesthesia. To avoid such a complication, the phenol or alcohol block should be more specific to either the motor branch of the nerve or motor-point of a targeted muscle.



Botulinum Toxin injection

Botulinum toxin reduces spasticity in a different approach by blocking the release of acetylcholine from nerve endings, resulting in blocking the neuromuscular junction and reducing muscle contraction. It is injected directly into the targeted muscles. To enhance the accuracy of injection to the desired muscle, guided methods such as electrical stimulating, EMG or ultrasonographic guiding has been used. These different guided methods should be more or less equally effective when performed by trained physicians. Ultrasonographic guiding could have an advantage to be used on those post-stroke patients who are taking warfarin, to avoid puncture of small vessels during the penetrating and injecting process. Although there is a general guide for the dosage of Botulinum toxin to various muscles, yet there are many other factors including the patient's weight, duration of therapy, muscle bulk, number of muscles being injected simultaneously, Ashworth score and results of previous therapy that should be considered for an individualised and optimal dosage.

Being a toxin, there is a limit of the maximal dosage that could be given to an individual. If a post-stroke patient has spastic muscles on both upper and lower limbs, it is not uncommon that the total dosage to optimally control spasticity would be over the safety limit. A combined motor-point block and Botulinum toxin could be used to optimally control spasticity whilst the dosage used is within the safety limit. The usual choice is for the large and superficial muscles to have motor-point block and for the small and deep muscles to have Botulinum toxin injections. The effects of Botulinum toxin or motor-point block used will last for about 3 months due to nerve sprouting or re-innervation.

Combined team effort

It is important to have an objective or goal for reducing spasticity such as those listed in Table 2. The effects of treatment should be ideally monitored by using appropriate assessment tools, examples of which are shown in Table 4. To achieve the goal, reduction of spasticity is just the starting point and additional work would be needed from the members of a rehabilitation team such as training of the weakened antagonistic muscle, gait training, activities of daily living training and etc. Communication with team members is important so that the involved members would be aware which muscles have been injected and the expected effects. In some selected cases, treated concomitantly with serial casting could reduce spastic contracture and normalise the range of movement of the affected joint.

Table 4. Examples of clinical assessment scales to monitor treatment of spasticity

Modified Ashworth Scale
Visual analog scale (VAS) for pain
Goal attainment scale
Jebsen Taylor Hand Function test
Ambulation index
Goniometric assessment of joint movement

Conclusion

The management of spasticity after stroke by a systemic step-cared approach usually can produce optimal results with attainment of desired goals. Although it is rarely needed in post-stroke spasticity, baclofen pump has been reported to be of use in occasional difficult cases.

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Clinical applications of technology in rehabilitation

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Technology advanced at a tremendous speed after the computer era. Now we can control our home appliances at our finger tips thousands of miles away from home with affordable equipment. For our patients with disability, they may not be able to control their home appliances even within short distances since these technologies are usually designed for normal people. However, with modifications, these technologies may become life-jackets for the disabled people. On the contrary, not every patient accepts hi-tech equipment engaged in their daily life and some may not have the ability to use them^{1,2}. Clinical applications of technology in rehabilitation is thus an art rather than just protocol-driven.

Advancement of training methods

Most technological advancements in medicine are concentrated in the investigations and treatments of patients with minimal patient-technology interactions or interfaces during development. In rehabilitation medicine, however, apart from investigations and treatments, advanced technologies also bring in new training methods². These new technologies allow disabled people to interact with the training equipment. At the same time, these hi-tech equipment also produce feedback to disabled people and therapists. This creates training methods with very high efficiencies we can never imagine².

Partial weight supported gait trainer (PWSGT) is one of the good examples. In the past, gait training usually required two to three therapists for one dense hemiplegic and each session may only allow the patient to walk for a few metres. With the help of PWSGT nowadays, patients can complete hundreds of gait cycles with the help of one therapist³. This application can help start rehabilitation earlier for suitable paraplegic patients through simulated lower limb ambulation.

Home applications of technology for patients

After a training programme has been completed, patients have to reintegrate into the real world. However the remaining disabilities can hinder independent living of the disabled patients. Environmental control is the key for the patients to re-open the door to the real world⁴. As the cost for such systems is decreasing and the mode of control becomes easily accessible, more and more patients can benefit from this area of technology.

With the advancement of smart phones, internet and wireless communication platforms in recent years, environmental control can easily be operated with user friendly interfaces and great feasibility⁵. This is a great example of communication technology helping patients with disability, which was a dream of the past generations.

Difficulty in prescription

As we all know, every patient is unique. Although the advanced technology is usually flexible and user friendly, these systems still have inherent limitations creating barrier for a precise prescription. Of course we can modify the system to accommodate the special needs of the patients. However, after modification, these systems may not be working as good as it was designed and usually the warranty will become void.

Furthermore, due to heterogeneity of patients & needs, it is difficult to conduct randomised control trials (RCT) to prove the efficacy of these new technologies. If you really want to prove it, it takes a huge number of patients and extremely long duration for the trials. It is further complicated by the speed of new technologies development. Most of the time, new technology appears before the older technologies were proven useful. The waiting period for RCT evidence may actually decrease the earlier acceptance of useful technologies into rehabilitation practices. PWSGT is a concrete example of this phenomenon⁶.

Expensive Hi-tech equipment

Due to enormous developmental cost, high-technology equipment are usually expensive. In the past, a set of virtual reality equipment may cost two to three million HK dollars that few rehabilitation centres could afford. Although the cost for computer equipment is decreasing, high-technology equipment remains expensive as the patent and development costs of the equipment are still the main determinants of the equipment price.

Thanks to the advancement of low cost video games in recent years, some training equipment can be replaced with this simple affordable solution proven to be as effective as some of the expensive equipment⁷. Furthermore, the training can be extended to the home environment and even family members can operate. This also helps to enhance the training motivation and acceptance by patients. Application of technology always requires innovation.



Future trend of rehabilitation technology

There is little doubt that future rehabilitation training trends will be computer-based and robot driven training. This definitely saves time and manpower for the therapists. At the same time, these technology allow rehabilitation physicians and therapists gather more information to tailor-make the training and perform advanced bio-medical engineering research.

With the help of functional magnetic resonance imaging (fMRI) technique, we are now able to understand more about the mapping of the brain functions. Researchers have started to explore the possibility of integration of the computer and the human brain. Different kinds of brain-computer interfaces were being developed. Prototypes of brain-waves operated robots were developed and successfully operated in human subjects⁸. But there is still a long way to the mass production phase of such equipment.

Conclusion:

Technology helps everyone including disabled people in need. However careful selection of equipment and innovative application of the technology still require the enthusiastic rehabilitation physicians and therapists to provide holistic and practicable function-based solutions. We are very hopeful that future quality of life of disabled people will be greatly enhanced by the integration of technology and the human body.

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Dietetic Service for Post-stroke Patients

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Eating problem after strokes

Dysphagia is highly prevalent following strokes with estimates ranging from 30%–65%^{1,15,16,20,29}. Although many patients regain functional swallowing spontaneously within the first month following strokes, some patients will maintain difficulty in swallowing beyond 6 months^{9,15,28}. The impairment of swallowing places the patients at risks of weight loss, malnutrition, fluid depletion, aspiration and related complications²⁷. The aim of nutritional intervention is to establish an optimal nutritional status and to eliminate or reduce the risk of developing medical complications associated with dysphagia⁴.

Diet Modification

Modifying the consistency of solid food and/or liquid is a mainstay of compensatory intervention for patients with dysphagia. Dietitians will provide nutritional intervention based on the speech and language therapist's recommendation and patient's energy requirements.

In 2002, a joint task force from the American Dietetic Association and the Speech-Language Association established the National Dysphagia Diet (NDD)^{5,21}. It is comprised of four levels of food modification with specific food items recommended at each level (Table 1):

Level	Description	Examples of recommended foods
Level 1: pureed	Homogeneous, cohesive, and pudding like. No chewing required, only bolus control	Pureed: meats, starch (like mashed potatoes), and vegetables with smooth sauces without lumps Pureed/strained soups Pudding, soufflé, yogurt
Level 2: mechanically altered	Moist, semi-solid foods, cohesive. Requires chewing ability	Cooked cereals with little texture Moistened ground or cooked meat Moistened, soft, easy to chew canned fruit and vegetables
Level 3: advanced	Soft-solids. Requires more chewing ability	Well moistened breads, rice, and other starch Canned or cooked fruit and vegetables Thin sliced, tender meats/poultry
Level 4: regular	No modifications, all foods allowed	No restrictions

(Adapted from Groher ME, Crary MA. Dysphagia: Clinical management in adults and children. Maryland Heights, MO. Mosby, Elsevier; 2010)

Liquid viscosity

Patients who struggle to swallow thin liquids are usually prescribed thickened liquids. Using properly thickening agents to achieve the recommended consistency of liquids, one can help to reduce the incidence of choking and prevent fluids from getting into the lungs.

There are three levels of liquid consistency prescribed by NDD⁵:

- **Nectar-like** - Liquids must be thickened to a nectar consistency such as maple syrup, Ensure, pear/apricot nectar or eggnog consistency.
- **Honey Thick**- Liquids that are honey thick must be thickened to the consistency of honey, these cannot be taken by a straw.
- **Pudding Thick/ Spoon Thick**- liquids that are pudding thick need to be taken with a spoon.

Fluid intakes in this patient group should be closely monitored by a health care team to reduce the risk of dehydration. General guidelines for the determination of fluid requirements are given in Table 2^{3,7}. Fluid requirements are higher with increased losses from fever, diarrhoea, vomiting, and sweating.

Adult patient group (age, yr)	Fluid requirements, mL/kg
Young, active (16-30)	40
Average adult (25-55)	35
Older patient (56-65)	30
Older patient (66-75)	25-30
Elderly patient (>75)	25

Enteral nutrition support in stroke patients

Patients with severe dysphagia, enteral nutrition (tube feeding) should be provided until swallowing improves. Polymeric formulas are frequently used and are generally well-tolerated with patients with a functional gastrointestinal tract³². These formulas are nutritionally complete and contain macronutrients in the form of isolates of intact protein, fats and carbohydrate polymers¹⁸. When necessary, commercial products (e.g., fibre powder, protein powder, or MCT oils) can also be added to polymeric formulas to meet the patients' nutritional needs².



Transition from enteral to oral feeding

As swallowing difficulties improve, dysphagic patients with a feeding tube are candidates to resume normal oral feeding. Before discontinuing tube feeding, patients must demonstrate a safe and efficient swallow on a consistent basis and must be able to consume adequate nutrition requirements orally¹⁷. During the transition to oral feeding, close monitoring of the swallowing ability, hydration, electrolyte balance, body weight, and development of respiratory complications is necessary¹⁸.

Modifiable risks observed in stroke adults

In a large single centre study²² of 1008 stroke patients aged 15 to 49, it was observed that young stroke adults had high prevalence of dyslipidaemia (60%), smoking (44%) and arterial hypertension (39%). In addition, the Stroke in Young Fabry Patients Study (SIFAP)²⁵, with 4467 stroke patients aged 18-55 showed high incidence of smoking, physical inactivity, arterial hypertension, dyslipidaemia, alcohol consumption, and short sleep were observed in men and physical inactivity, obesity, central obesity, atrial hypertension, dyslipidaemia, obesity and diabetes mellitus were observed in women.

Benefit of exercise in stroke prevention

Cross-sectional studies showed that people who were physically active had lower ischaemic stroke incidence²³. Reviewing on physical activity in the prevention of ischaemic strokes, Middleton and his team also found out that exercise reduces stroke risks¹⁹.

Research showed that post stroke aerobic exercise was found to be beneficial in reducing recurrent stroke risks^{12,13,24}. Insulin resistance and impaired glucose tolerance are common in patients after strokes especially during the subacute and chronic stages^{10,11,30}. That is why stroke patients are prone to macrovascular and microvascular accidents.

Recently, a preliminary study on the effect of resistive training on insulin resistance showed that it helps to improve insulin sensitivity and reduce hyperinsulinaemia¹⁴. The postulated mechanism of exercise on stroke prevention includes increased cerebrovascular function as well as enhancing brain ischaemic tolerance (Fig. 1)⁸.

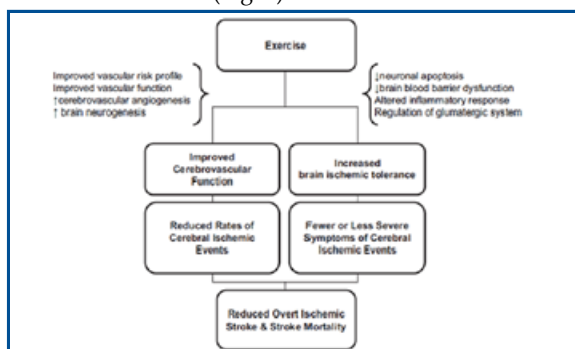


Fig 1: Neuroprotective mechanisms linking exercise to reduced overt stroke rates.

(Source: Middleton LE, Corbett D, Brooks D, et al 2013)

Exercise recommendation

Some studies supported that stroke risk reduction is positively related to the intensity of the exercise. 35% lower incidence of strokes was observed in intense exercises (at least 5.5 METs (Metabolic Equivalent of Task) or the stationary cycling group)³¹. On the contrary, Deplanque (2012) found out that low and moderate exercising groups had low stroke risks. Most studies supported the benefit of moderately intense exercises in stroke risk reduction⁶. Stroke prevention guidelines recommend no less than 30 minutes of moderately intense exercise per day to control stroke risks⁸.

Stress management and recurrence of stroke

It is obvious that stress management is beneficial on the reduction of stroke risk factors. A recent study (26) on stress reduction through mind-body intervention on the Black population positively related meditation to a significant reduction of mortality, incidence of myocardial infarct and stroke due to better control of blood pressure and stress.

Calls for action

In conclusion, risk factors of stroke are modifiable and the changes are lifestyle related. Besides treating hyperlipidemia and hypertension, being physically active, keeping ideal body weight, eating a healthy diet, stop smoking, and stress reduction are of equal importance in prevention of stroke and cardiovascular incidence. In order to prevent stroke recurrence in the future, there is an urgent and strong urge for multi-disciplinary effort in primary and secondary prevention of stroke.

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The Hong Kong College of Paediatricians (HKCPaed) and the Royal College of Paediatrics and Child Health (RCPCH) will be holding a Joint Diploma in Child Health Clinical Examination in Hong Kong in October 2013, awarding DCH (HK) and DCH (International) to successful candidates.

The DCH Clinical Examination will be held on **31st October 2013 (Thursday)**.

The DCH Clinical Examination is open to registered medical practitioners in Hong Kong. Candidates who have already successfully passed the DCH written examination, namely Part IA since January 2004 or Foundation of Practice since February 2013, are eligible to apply. In addition, candidates who passed the Part IA examination in May 2005 or thereafter should have at least 6 months of Paediatric practice (resident medical officer or intern within 5 years prior to the date of the DCH Clinical Examination) in a recognized institution with acute hospital admissions. There are no exemptions from the Part IA or Foundation of Practice examination.

The DCH Syllabus, which has been introduced since November 2009, will serve as the basis for assessments for the DCH Clinical Examination to be held in Hong Kong in October 2013. The Syllabus is available for viewing at the following link on the RCPCH Website:

[http://www.rcpch.ac.uk/training-examinations-professional-development/assessment-and-examinations/examinations/clinical-e-3#DCH Syllabus](http://www.rcpch.ac.uk/training-examinations-professional-development/assessment-and-examinations/examinations/clinical-e-3#DCH%20Syllabus)

Application:

Candidates who wish to sit the DCH Clinical Examination in Hong Kong MUST apply through the Hong Kong College of Paediatricians. Application form, details of application and the format of examination can be found on the HKCPaed website at http://www.paediatrician.org.hk/index.php?option=com_content&view=article&id=45&Itemid=46. Examination Fee is HK\$ 8,100. Available places are limited and will be allocated on a 'first come first served' basis.

Opening date: 24 June 2013

Closing date: 22 July 2013



Life on the Run

Dr. Carolyn KNG

MBBCh (Wales), FRCP (Edin, London), FHKAM, FHKCP
Consultant, Department of Integrated Medical Services, Ruttonjee Hospital

With the Hong Kong Marathon drawing in record numbers of runners, it seems the running boom is more than a passing fad. From 1076 runners in 1997, this has grown exponentially to over 72000 participants in 2013. Whether it is to lose weight or feel good, running is an inexpensive and easily accessible activity that anyone can do. Popular road races are now so crowded you may well be stepped on at the start line.

For those who prefer to run in wide open spaces, alternative options exist. In the form of longer and more challenging routes, these are called ultramarathons.

Beyond the Marathon

An ultramarathon is any sporting event involving running longer than the marathon distance of 42.195 kilometres (km). Technically, running 43 km fulfils the criterion but it does not sit quite right with the true spirit of the sport. For most runners, 50km races are the gateway into "ultras," as ultramarathons are commonly known. Races are either solo or team events. Some are multi-day and can involve orienteering skills. Often subject to inclement weather, altitude and rugged terrain, the unpredictable elements add excitement and appeal to the race. Moreover, a race marked on your calendar keeps you motivated to train, in spite of detractors. It offers an interesting route with aid stations providing nourishment and encouragement by volunteers. At the end, a medal and an inherent sense of accomplishment awaits the finisher.

Why Ultra-running?

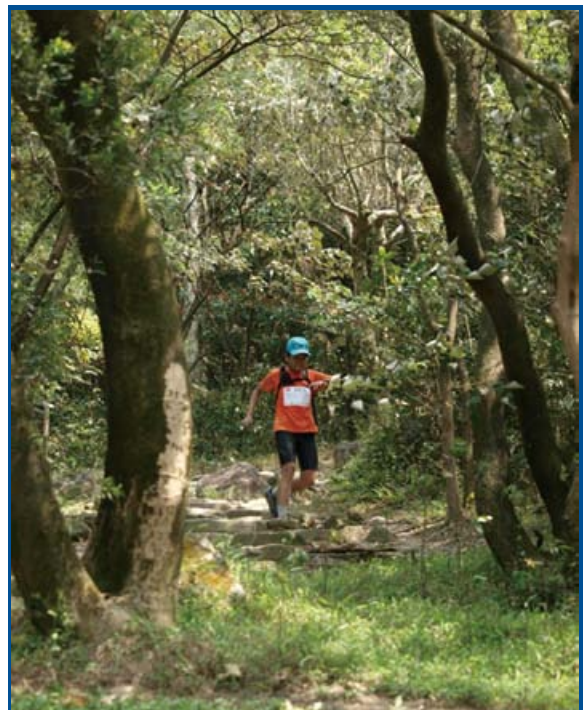
Most people think it is a crazy sport and question the motivation for such extreme endeavours. The common reasons given by ultra-runners are a passion for running, a love of nature and a spirit for challenges. You gain a special kind of awareness about yourself when alone out there. Listening to the quiet sounds of your feet, running forces you to focus on moving forward. When fatigue sets in, you rely on mental fortitude to power your body to the finish line where a sense of accomplishment awaits.

There is no distinct process by which a runner evolves into an 'ultra-runner'. I started running 17 years ago to get fit. Having discovered the abundance of trails in the Hong Kong country parks, my running miles gradually grew longer. My first ultra, the Oxfam Trailwalker 100km was an unplanned affair. I was a last minute replacement for an injured walker on a

Hong Kong Medical Association team. At the finish line, I vowed never such folly again. Little did I know then that I would complete another 16 Trailwalkers in Hong Kong, Japan and New Zealand with race times ranging from 15 to 30 hours. With smaller numbers of participants, longer distances and variable conditions, the competition is not versus others as much as with oneself.

In fact, running an ultra is not as difficult as running a marathon. You can take it really slowly. The race strategy is not about being fast. Rather, it is about not stopping. Therefore, training is based on long runs at less intense speeds. Compared to marathon speed training, you rarely need to push until near maximum heart rates. Ultras could be perfect for those who prefer a slow and steady pace.

The local abundance of trails combined with easy accessibility is the reason for the growing popularity of the sport. In the coming year, Hong Kong will host three 100km races, a 168km race and many other mountain marathons. It is fast becoming a leading trail running destination in Asia.





The Ultra-lifestyle

From being the most private and self-obsessed pursuit, ultras can also be a most sociable activity. Training is mostly done alone, fitting in the balance between work and family commitments. Often, one resorts to waking early for an early run or sleeping late after pounding pavements. Setting time aside for 100 kilometres per week requires good time planning. Competitive runners easily run over 200 kilometres weekly.

Conversely, the weekends are filled with opportunities to train longer distances (usually around 50 km) with friends or clubs. Training or racing connects you to a new group of friends. It is a small but warm fraternity of friendly folks with a common passion, where one's professional background is irrelevant. For team events, camaraderie and friendship result from months of training together. Thanks to Facebook, and a plethora of running apps, training is logged and shared during weekdays. And overseas races provide an excellent excuse to travel together and enjoy post-race indulgence in food and sightseeing.

In case I have stimulated your interest, here are some suggested races.

Starting at home

With more than 5 ultras at home, it is sensible to start locally. Races are held on most local trails, such as the annual Oxfam Trailwalker (Maclehose trail), Raleigh (Wilson trail) and the Greenpower (Hong Kong trail). The ultimate race in Hong Kong is by invitation only. Of the 5 racers invited to the exclusive HK 4 Trails Ultimate Challenge which covers 298km and cumulative elevation of 14400m over 4 long distance trails within 3 days, only 3 completed the challenge.

For beginners, the annual Round the Island 64km time trial is a good event to start with. The route ingeniously links catchwaters, country park trails and roads on Hong Kong island. It is famed for delicious home baked brownies at checkpoints and the eclectic finishers' T-shirt printed with every runner's name.

Off the beaten track, the HK100 starting in Sai Kung or the Lantau100/50 offers or will offer breathtaking scenery on trails you never knew existed. Two new races are scheduled at the end of 2013, namely the HK168 km and the North Face 100km. It is amazing that a small place like Hong Kong has such a variety of trails.

Going further afield

On paved roads, the world's oldest and largest ultramarathon is the 90km Comrades Marathon in South Africa. On deserts, the most famous race is the Marathon des Sables, where temperatures reach 50 degrees Centigrade. The route across the Sahara Desert covers 251km in six days. For prestige and history, the Western States Endurance Run in California since 1974 is the oldest 100 mile trail race.

The queen of the ultras, the Ultra Trail du Mont Blanc (UTMB) takes in mountains and high altitude passes, with a 168km circuit of the Mont Blanc Massif in France, Switzerland and Italy. It involves 9600m of positive height gain and the scenery is spectacular. A similar race closer to home is the Ultra Trail Mt. Fuji (UTMF).

It is impossible to list all the ultramarathons worldwide, only a few to fuel your imagination and interest. Just as I ventured into this exciting sport, perhaps you too will be inspired to put on your running shoes and shoot for your first ultra.

It will definitely be an unforgettable experience.



Rental Fees of Meeting Room and Facilities at The Federation of Medical Societies of Hong Kong (Effective from October 2009)

Venue or Meeting Facilities	Member Society (Hourly Rate HK\$)			Non-Member Society (Hourly Rate HK\$)		
	Peak Hour	Non-Peak Hour	All day Sats, Suns & Public Holidays	Peak Hour	Non-Peak Hour	All day Sats, Suns & Public Holidays
Multifunction Room I (Max 15 persons)	150.00	105.00	225.00	250.00	175.00	375.00
Council Chamber (Max 20 persons)	240.00	168.00	360.00	400.00	280.00	600.00
Lecture Hall (Max 100 persons)	300.00	210.00	450.00	500.00	350.00	750.00
Non-Peak Hour: 9:30am - 5:30pm Peak Hour: 5:30pm - 10:30pm						
LCD Projector	500.00 per session					
Microphone System	50.00 per hour, minimum 2 hours					



Dermatological Quiz

Dr. Ka-ho LAU

MBBS(HK), FRCP(Glasg, Edin), FHKCP, FHKAM(Med)
Private dermatologist



Dr. Ka-ho LAU



Fig. 1a: Both knees and lower thighs



Fig.1b: Close up of individual lesions

This 70-year-old woman has a history of diabetic nephropathy with chronic renal failure on conservative treatment. She developed these very itchy papules at her knees and lower thighs for a few months and the lesions were aggravated by repeated scratching. A skin biopsy was performed to confirm the diagnosis.

Questions:

1. What is your clinical diagnosis or possible differential diagnoses?
2. What are the histological changes that characterise the disease?
3. How will you manage her skin disease?

(See P.34 for answers)

DCH (Diploma in Child Health Examination) Written Examination (MRCPCH Foundation of Practice) 2013

The Hong Kong College of Paediatricians (HKCPaed) and the Royal College of Paediatrics and Child Health (RCPCH) will hold a Joint Diploma in Child Health Examination in Hong Kong in 2013 awarding DCH (HK) and DCH (International) to successful candidates.

The DCH Examination is divided into two parts, written (MRCPCH Foundation of Practice (formerly known as Part IA) and clinical. The written examination is the same as the MRCPCH Foundation of Practice Examination, which is held three times a year in Hong Kong. The next DCH written examination will be held on **Tuesday, 8 October 2013**. The examination fee is **HKS\$4,250** for Foundation of Practice. Candidates who wish to enter the examination must hold a recognized medical qualification in Hong Kong.

Application: Candidates who wish to sit the examination in Hong Kong **MUST** apply through the Hong Kong College of Paediatricians (HKCPaed). For application details, please visit the HKCPaed website at http://www.paediatrician.org.hk/index.php?option=com_content&view=article&id=45&Itemid=46 or call the College Secretariat at 28718871.

Deadline for Application: Friday, 26 July 2013

Important Notice

New Clinical Examination for DCH from April 2011

A new format of the DCH clinical examination has been adopted since April 2011.

Details of the new format and other relevant information can be viewed on the RCPCH website at:

<http://www.rcpch.ac.uk/training-examinations-professional-development/assessment-and-examinations/examinations/clinical-e-3>

Announcement

The Federation of Medical Societies of Hong Kong is calling for interested health care providers to offer discounted health and body check programmes to members of our member societies and their family members. For those who are interested, please contact our secretariat with information of proposed packages and quotations. Thank you for your kind attention!

The Federation's Collaboration Health Programme with RTHK

Starting from 7 June 2013, the second series of the health programme (精靈一點) of RTHK Radio One has kicked off with the collaboration of the Federation. It's a regular medical and healthcare information session which runs from 2pm to 3pm every Friday. In this newly launched series, a phone-in section is added to provide an interactive channel for the audience to voice up-to-date healthcare related issues.

In June, the participating guest speakers representing the Federation, on behalf of their societies, include Dr. Shu-kin LI from the Hong Kong College of Cardiology, Dr. Raymond CHOW from the Hong Kong Association of Oral and Maxillofacial Surgeons, Dr. Sigmund LEUNG from the Hong Kong Dental Association, and Dr. Jemmina WONG from the Hong Kong Psychogeriatric Association.

The programme will run from Jun to Aug with many more hot topics to be discussed. The programme can be reviewed on the following link – <http://www.fmshk.org/fmshk.php?id=295>

Scientific Symposium on Hypertension

On 6 Jun 2013, a scientific symposium on hypertension was held at the St. Betty, IFC Mall Central. The symposium was attended by nearly 90 guests from our member societies and partners from medical & healthcare communities.

Aligning with the WHO theme, Hypertension, the Foundation is privileged to organise a symposium on this global health issue with two distinguished cardiologists, Prof. Hung-fat TSE and Prof. Alan H GRADMAN, as our speakers, and the Executive Committee member of FMShK, Dr. Ben FONG, as our chairman. The talks were interesting and informative, which gave the audience valuable update on the latest development in prevention and treatment of hypertension. Meanwhile, we wish to thank Takeda for sponsoring the symposium.





The Hong Kong Society of Gastroenterology

The Hong Kong Society of Gastroenterology was incorporated in 1981 to promote the advancement of gastroenterology through organizing scientific meetings, funding research projects, providing public education, offering scholarship awards.

Currently, the Society has 16 honorary fellows, 145 fellows and 42 members.

The Society celebrated its 30th anniversary in 2011. Throughout these years, our Council worked hard to achieve the objectives and will continue such efforts in the years to come.

The year of 2012 has been busy for the Society and eight scientific meetings were organized throughout the year.

Every year, two to three newsletters are published which contain scientific updates, highlights of events and major meetings. There will be two issues this year in June and December.

Our recent Annual General Meeting cum Scientific Meeting was held recently on 14 March 2013 during which the honorary fellowship of our Society was bestowed upon distinguished guests, Professor Barry J. Marshall AC, Nobel Laureate, Clinical Professor of Medicine and Microbiology of University of Western Australia and Professor Ching-Lung Lai, Simon KY Lee Professorship in Gastroenterology and Chair of Medicine & Hepatology of The University of Hong Kong.

The evening was highlighted by the captivating state-of-art lectures "Helicobacter pylori as an example of curiosity driven research" delivered by Professor Marshall and "The Hepatitis B Virus and I" by Professor Lai.

Another research project will be funded this year to aid gastroenterological research and investigation into the causes and treatment of gastroenterological and liver diseases.

We invite you to visit our website <http://www.hksge.org> for more information and news.



The Hong Kong Society for Nursing Education (HKSNE)

The Hong Kong Society for Nursing Education (HKSNE), in the past half a year, has actively participated in various events and made representation on issues that concerned about the interests of nursing profession and nursing education.

In response to the recent public concern on incidents involving safety of medical and related procedures and medical professionalism in late October 2012, the Society has joined the Hong Kong Federation of Medical Societies of Hong Kong and 38 other health care professional societies to make position statements via press release on the monitoring of cosmetic business in relation to medical related procedures; the monitoring of use of experimental procedures, and blood and pharmaceutical products; the doctors' professional conduct.

In the meetings and symposium on strategic review on Healthcare Manpower Planning and Professional Development that were held in the past few months, the Society discussed and shared views on healthcare manpower planning and projection and regulatory framework for healthcare. The opinions that have been expressed include: the importance of retaining nurses; the provision of support to nurses in work settings; the urge government and profession's efforts to review and monitor the nursing manpower; the development of specialization in the nursing profession; the need of comprehensive manpower planning; the implementation of compulsory continuous professional education; the building of a more effective system to detect, deal and report with poor performance and improve quality of care should be developed; the need to re-define the role of nurses and other supportive health care workers and the feasibility of establishing a 'competency-based professional development model' with reference from international experience.

The Society has also hold the first collaboration course with the Hong Kong College of Education and Research in Nursing (HKCERN) on Multiple Choice Question Writing Workshop in late October with encouraging responses from fellow nurses.

In Hong Kong, Prosthetics and Orthotics (P&O) services have been provided to the community since the 60's. To better promote and enhance the quality of P&O services,





HKAPI
香港科學製藥聯會

The Hong Kong Association of the Pharmaceutical Industry

HKAPI Code of Practice (16 Edition) is effective on 1st April, 2013

As an on-going commitment to provide accurate
and scientific-based information on pharmaceutical products
and to build professional partnerships with our
healthcare professionals for the best interest of society,
the Code of Practice has been revised.

Electronic version is available at
<http://www.hkapi.hk/practice.asp>

CERTIFICATE COURSE FOR allied health personnels who work in the fields of clinical oncology, radiation oncology, diagnostic radiology and pathology or nursing workers who need to take care of cancer patients during treatment and want to know more about these oncology aspects

- CME/CNE Course
- Course No. C224

Certificate Course on

Advancements In Cancer Science & Cancer Therapy

Jointly organised by



The Federation of Medical
Societies of Hong Kong



Hong Kong Society for Molecular
Diagnostic Sciences Limited

Date	Topics	Descriptions	Speakers
3 Aug	Molecular cancer diagnostic tests	PCR, in situ hybridization, gene chip, DNA sequencing tests, etc.	Dr. Chris L.P. WONG
10 Aug	Molecular pathways in cancer development	Oncogenes, tumor suppressor genes, cancer cell cycle, DNA methylation, programmed cell death etc.	Dr. Timothy T.C. YIP
17 Aug	Classification & mechanism of action of targeted drugs	AKT, MAPK & EGFR pathways in drug development, monoclonal antibody & chemical inhibitor types of targeted drugs, siRNA, nano-particles	Dr. Timothy T.C. YIP
24 Aug	Clinical advances in cancer targeted therapy	Clinical use of targeted drugs in cancer management, their efficacy and side-effects from landmark clinical trials	Dr. Joseph S.K. AU
31 Aug	Conventional & modern cancer radiotherapy equipment	Physical advances in linear accelerator, after-loading brachytherapy, stereotactic radiosurgery, intensity modulated radiation therapy (IMRT), tomography	Dr. Ben S.K. YU
7 Sep	Radiobiology principles in cancer treatment	Biological mechanism in daily fractionated radiotherapy (4Rs in radiobiology etc.) affecting treatment efficacy	Dr. Timothy T.C. YIP
21 Sep	Clinical advances in cancer radiotherapy	Clinical use of external beam irradiation & brachytherapy in treating different cancers, when to use RT, toxicity, new advancement in RT	Dr. Roger K.C. NGAN

Date : 3 August 2013 - 21 September 2013 (Every Saturday, skip 14 September)

Time : 2:30 pm – 4:30 pm

Venue : Lecture Hall, 4/F., Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong

Language Media : English (Supplemented with Cantonese)

Course Fee : HK\$750 (7 sessions)

Certificate : Awarded to participants with a minimum attendance of 70%

Enquiry : The Secretariat of The Federation of Medical Societies of Hong Kong

Tel.: 2527 8898

Fax: 2865 0345

Email: info@fmskhk.org



Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		<ul style="list-style-type: none"> ★ HKMA Tai Po Community Network- Practical Tips for Primary Care Physicians in BPH Screening and Management ★ FMSHK Officers' Meeting ★ HKMA Council Meeting 	<ul style="list-style-type: none"> ★ HKMA Shatin Doctors Community Network- Ophthalmology Survival Guide for General Practitioner 	<ul style="list-style-type: none"> ★ HKMA Kowloon East Community Network- Role of Primary Care Physicians in BPH Screening and Management 		
<ul style="list-style-type: none"> ★ 2013 Paediatric Update No. 2- Paediatric Neurology 	<ul style="list-style-type: none"> ★ (1)Cutting edge: Exposure or encounter? (2)"Three cases of cutaneous continent diversion" 	<ul style="list-style-type: none"> ★ HKMA Tai Po Community Network- Osteoporosis: An Orthopaedic Surgeon's Perspective 	<ul style="list-style-type: none"> ★ 9th Asian Dermatological Congress 2013 ★ Hong Kong Neurosurgical Society Monthly Academic Meeting- Sacral nerve stimulation for neurogenic bladder 	<ul style="list-style-type: none"> ★ 9th Asian Dermatological Congress 2013 ★ HKMA Kowloon East Community Network - First Session of the Certificate Course on Alzheimer's Disease: Differential Diagnoses ★ HKMA Structured CME Programme with Hong Kong Hospital Year 2013 - Stroke Rehabilitation 	<ul style="list-style-type: none"> ★ 9th Asian Dermatological Congress 2013 	<ul style="list-style-type: none"> ★ 9th Asian Dermatological Congress 2013
<ul style="list-style-type: none"> ★ Tseung Kwan O Dragon Boat Race 		<ul style="list-style-type: none"> ★ HKMA Tai Po Community Network- Management of Dermatitis (Eczema) ★ HKMA Community Network - Pneumonia Management and Prevention ★ Annual General Meeting 2013 	<ul style="list-style-type: none"> ★ HKMA Shatin Doctors Network- Common Pitfalls in Management of Breast Disease 	<ul style="list-style-type: none"> ★ HKMA Kowloon East Community Network- Third Session of the Certificate Course for GPs 2013: Management of Primary Headache Disorders in Clinics: From Diagnosis to Treatment ★ FMSHK Executive Committee Meeting 		<ul style="list-style-type: none"> ★ HKMA YTM Community Network - Certificate Course on Bringing Better Health to Our Community 2013 (Session 3)
<ul style="list-style-type: none"> ★ Charity Concert for RainLily 				<ul style="list-style-type: none"> ★ HKMA Kowloon East Community Network- Second Session of the Certificate Course on Alzheimer's Disease: Cognitive Assessment in Practice ★ HKFMS Foundation Committee Meeting 		
		<ul style="list-style-type: none"> ★ HKMA Kowloon West Community Network- Update Treatment Option in Management of Moderate Chronic Pain 				



Date / Time	Function	Enquiry / Remarks
2 TUE	2:00 pm HKMA Tai Po Community Network- Practical Tips for Primary Care Physicians in BPH Screening and Management Organiser: HKMA Tai Po Community Network, Speaker: Dr. CHAN Lung Wai, Venue: Chiuchow Garden Restaurant, Tai Po	Ms. Sharon LAM Tel: 3189 8787
	8:00 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. Nancy CHAN Tel: 2527 8898
	8:00 pm HKMA Council Meeting Organiser: The Hong Kong Medical Association, Chairman: Dr. TSE Hung Hing, Venue: HKMA Head Office (5/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Hong Kong)	Ms. Christine WONG Tel: 2527 8285
3 WED	1:00 pm HKMA Shatin Doctors Network- Ophthalmology Survival Guide for General Practitioner Organiser: HKMA Shatin Doctors Network, Chairman: Dr. MAK Wing Kin, Speaker: Dr. HO Sze Yuen, Venue: Rm 1510A, Argyle Centre (Phase 1), 688 Nathan Rd, Mongkok	Ms. HO Tel: 2380 7773 1.5 CME points
4 THU	1:00 pm HKMA Kowloon East Community Network- Role of Primary Care Physicians in BPH Screening and Management Organiser: HKMA Kowloon East Community Network, Speaker: Dr. TO Kim Chung, Venue: Lei Garden Restaurant, Kwun Tong	Miss Hana YEUNG Tel: 2527 8285 1 CME point
7 SUN	2:00 pm 2013 Paediatric Update No. 2- Paediatric Neurology Organiser: Hong Kong College of Paediatricians, Chairmen: Prof. Lau Yu Lung & Dr. Wu Shun Ping, Venue: M Block, Ground Floor, Lecture Theatre, Queen Elizabeth Hospital	3 CME points (Category A)
8 MON	7:30 pm (1)Cutting edge: Exposure or encounter? (2)Three cases of cutaneous continent diversion Organiser: Hong Kong Urological Association, Chairmen: Dr. Stanley Kan & Dr. CH Yee, Speakers: Dr. Ma Wai Kit & Dr. Mandy HM Tam, Venue: Multi-disciplinary Simulation and Skills Centre, 4/F, Block F, QEH	Ms. Tammy HUNG Tel: 9609 6064 1 CME point
9 TUE	2:00 pm HKMA Tai Po Community Network- Osteoporosis: An Orthopaedic Surgeon's Perspective Organiser: HKMA Tai Po Community Network, Speaker: Dr. WONG Tsz Kau, Caleb, Venue: Chiuchow Garden Restaurant, Tai Po	Ms. Sharon LAM Tel: 3189 8787 1 CME point
10 WED	7:30 am Hong Kong Neurosurgical Society Monthly Academic Meeting- Sacral nerve stimulation for neurogenic bladder Organiser: Hong Kong Neurosurgical Society, Chairman: Dr. Benedict TAW, Speaker: Dr. LI Lai Fung, Venue: Seminar Room, Ground Floor, Block A, Queen Elizabeth Hospital	Dr. Gilberto LEUNG Tel: 2255 3368 1.5 CME points
	(11,12,13) 9th Asian Dermatological Congress 2013 Organisers: Asian Dermatological Association, Hong Kong College of Dermatologists & the Hong Kong Society of Dermatology and Venerology, Chairman: Prof. Henry HL CHAN, Venue: Hong Kong Convention & Exhibition Centre	ADC 2013 Secretariat Tel: 3151 8900
11 THU	1:00 pm HKMA Kowloon East Community Network - First Session of the "Certificate Course on Alzheimer's Disease": Introduction to Dementia and Differential Diagnoses Organiser: HKMA Kowloon East Community Network, Speaker: Dr. LEUNG Lam Ming, Jess, Venue: Lei Garden Restaurant, Kwun Tong	Miss Hana YEUNG Tel: 25278285 1 CME point
	2:00 pm HKMA Structured CME Programme with Hong Kong Sanatorium & Hospital Year 2013 - Stroke Rehabilitation Organisers: Hong Kong Medical Association & Hong Kong Sanatorium & Hospital, Speaker: Dr. Chow Chi Ping, Alex, Venue: Function Room A, HKMA Dr. Li Shu Pui Professional Education Centre, 2/F, Chinese Club Building, 21-22 Connaught Road Central	Ms. Viviane Lam Tel: 2527 8452 1 CME point
14 SUN	8:00 am Tseung Kwan O Dragon Boat Race Organiser: Hong Kong Medical Association, Venue: 將軍澳東水道	Ms. Dorothy KWOK Tel: 2527 8285
16 TUE	1:45 pm HKMA Tai Po Community Network- Management of Dermatitis (Eczema) Organiser: HKMA Tai Po Community Network, Speaker: Dr. TANG Yuk Ming, Venue: Chiuchow Garden Restaurant, Tai Po	Mr. Eddy TAI Tel: 6262 6725 1 CME point
	7:00 pm HKMA Community Network - Pneumonia Management and Prevention Organiser: HKMA Community Network, Chairman: Dr. Alvin YS CHAN, Speakers: Dr. LAM Bing & Dr. Alvin YS CHAN, Venue: Langham Place Ballroom, Level 7, Langham Place Hotel, 555 Shanghai Street, Mongkok, Kowloon	Ms. Candice TONG Tel: 25278285 1.5 CME points
	9:00 pm Annual General Meeting 2013 Organiser: The Hong Kong Medical Association, Chairman: Dr. TSE Hung Hing, Venue: Langham Place Hotel, MK	Ms. Christine WONG Tel: 2527 8285
17 WED	1:45 pm HKMA Shatin Doctors Network- Common Pitfalls in Management of Breast Disease Organiser: HKMA Shatin Doctors Network, Chairman: Dr. MAK Wing Kin, Speaker: Dr. HO Nga Sze, Candace, Venue: Jasmine Room, Level 2, Royal Park Hotel, 8 Pak Hok Ting Street, Shatin	Ms. Joyce TSUNG Tel: 2664 3808 1 CME point
18 THU	1:00 pm HKMA Kowloon East Community Network- Third Session of the Certificate Course for GPs 2013: Management of Primary Headache Disorders in Clinics: From Diagnosis to Treatment Organiser: HKMA Kowloon East Community Network, Chairman: Dr. Tsang Man Wo, Speaker: Dr. Chan Chun Kong, Venue: East Ocean Seafood Restaurant, Tseung Kwan O	Ms. Marina Pun Tel: 3513 4888 1 CME point
	8:00 pm FMSHK Executive Committee Meeting Organiser: The Federation of Medical Societies of Hong Kong, Venue: Council Chamber, 4/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong	Ms. Nancy CHAN Tel: 2527 8898
20 SAT	1:00 pm HKMA YTM Community Network - Certificate Course on Bringing Better Health to Our Community 2013 (Session 3) Organisers: HKMA Yau Tsim Mong Community Network and Department of Family Medicine & General Outpatient Clinic and Department of Medicine, Kowloon Central Cluster, Speakers: Dr. SZE Shun Fung & Dr. YIP Pui Pui, Venue: Block M, Lecture Theatre, Queen Elizabeth Hospital, 30 Gascoigne Road, Kowloon, Hong Kong	Ms. Candice TONG Tel: 2527 8285
21 SUN	8:00 pm Charity Concert for RainLily Organiser: The Hong Kong Medical Association Charitable Foundation, Venue: Academic Community Hall, Hong Kong Baptist University, Kowloon Tong	Ms. Candy YUEN Tel: 2527 8285
25 THU	1:00 pm HKMA Kowloon East Community Network- Second Session of the "Certificate Course on Alzheimer's Disease": Cognitive Assessment in Practice Organiser: HKMA Kowloon East Community Network, Speaker: Ms. Maggie LEE, Venue: Lei Garden Restaurant, Kwun Tong	Miss Hana YEUNG Tel: 25278285 1 CME point
	8:00 pm HKFMS Foundation Committee Meeting Organiser: The Federation of Medical Societies of Hong Kong, Venue: Council Chamber, 4/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong	Ms. Nancy CHAN Tel: 2527 8898
30 TUE	1:00 pm HKMA Kowloon West Community Network- Update Treatment Option in Management of Moderate Chronic Pain Organiser: HKMA Kowloon West Community Network, Chairman: Dr. LEUNG Kin Nin, Kenneth, Speaker: Dr. Barry Eliot COLE, Venue: Panda Hotel, Tsuen Wan	Miss Hana YEUNG Tel: 25278285 1 CME point



Answers to Dermatological Quiz

Answers:

- The hyperkeratotic papules and nodules symmetrically affecting the shins and lower thighs of this diabetic woman with chronic renal failure is most compatible with acquired perforating dermatosis. This acquired form of perforating disease arises in adults and is usually associated with diabetes mellitus and/or pruritus of renal failure. It occurs most commonly on the legs as shown in our patient, but generalised or widespread papules or nodules can be seen. The central keratotic core, which is sometimes dislodged by the patients, is a useful clue to the diagnosis of this disease. Other differential diagnoses include prurigo nodularis, folliculitis, multiple keratoacanthomas, dermatofibroma, perforating granuloma annulare and prokeratosis.
- The histological findings for acquired perforating dermatosis show a central plug of crusting or hyperkeratosis, with variable parakeratosis, depending on the stage of the lesion. The process of transepidermal elimination of collagen and elastic fibre through the spinous layer of the epidermis and into the stratum corneum is a characteristic histological pattern which aids the clinical diagnosis of this disease.
- Treatment of acquired perforating dermatosis is often difficult and there have been no well-designed studies of therapeutic interventions. It is important to avoid scratching and trauma which can precipitate a Koebner phenomenon. Antihistamines are marginally helpful, as are most topical steroids. Phototherapy is a particularly good choice for patients of acquired perforating dermatosis with renal disease, since it often relieves the coexisting pruritus. Other therapies that are sometimes helpful include intralesional steroid and oral or topical retinoids. Occasional dialysis patients with acquired perforating dermatosis have been cured after renal transplantation.

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參考資料：1. Evista Prescribing Information, Hong Kong, April, 2013. 2. Cauley JA, et al. Breast Cancer Research and Treatment 65: 125-134, 2001. 3. Jaime KJ et al. Arq Bras Endocrinol Metabol. 2010 March; 54(2): 200-205.

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