

**Chronic pain** and  
**“Overuse Syndrome”**  
in the Neck and Upper Limbs

**HKPS Council 2016**

President:

Dr. Dr LI Ching Fan, Carina

Vice President:

Ms CHU Man Lai, Mary

Hon Secretary:

Dr. WONG Kam Hung

Hon Treasurer:

Ms LAM Chi Wing, Flori

**Council Members :**

Ms. CHAN Po Chun

Dr. KWOK Oi Ling, Annie

Dr. HUI Kit Man, Grace

Dr. LAW Sheung Wai

Dr. LEUNG Siu Man, Simon

Dr. LEUNG Wing Yan

Dr. POON Sau Kwan, Connie

Dr. SUN Tin Fung, David

Dr. WONG Ho Shan, Steven

**Newsletter Editorial  
Board Committee 2016**

Editor:

Dr. LEUNG Wing Yan, Doris

Treasurer:

Dr. CHAN Chi Wing, Timmy

Dr. CHEN Tracy

Dr. CHOW Eddie

Ms. FOK Yan Yan

Dr. KWOK TK

Mr. LAM Kino

Ms. LAM Flori

Mr. LEUNG Kenneth

Mr. PO Eric

Ms. TAM Katherine

Dr. WONG Chung Hin, Willy

Rehabilitation for **Chronic Pain**

A Randomized Controlled Trial to Investigate the Effect of

**Health Qigong Ba Duan Jin**

to Improve Pain Control and Functional Ability of  
Patient with Chronic Non-specific Low Back Pain

Report of 11<sup>st</sup> Annual **Scientific Meeting** of  
Neuromodulation Society of Australia and New Zealand





## President Message

Dear Friends and Colleagues,

We are delighted to announce that Hong Kong Pain Society (HKPS) has been come to our 10<sup>th</sup> Anniversary since founded by our founding president Dr CHEN Phoon Ping in October 2006, and later with successors of Dr CHUI Tak Yi and Dr. Steven Wong. It is my honour to be elected as the President of the Hong Kong Pain Society as the 4<sup>th</sup> President in the 10<sup>th</sup> anniversary (2016-2017). We would like to express our sincere gratitude to all the past and present council members, honorary advisers and office bearers for their precious time and contributions to the Society all along. Over past 10 years, Society has become one of the chapter of International Association of Study of Pain (IASP) [www.IASP-pain.org](http://www.IASP-pain.org) and successfully allied different pain disciplines to advance professional knowledge and expertise in managing pain through both medical and public education, training and funding to assist pain research.

In the past year, apart from routine scientific meetings, we have successfully conducted a certificate course on the General Chronic Pain Conditions co-organised by the Hong Kong Pain Society and the Federation in January 2016 and has both Public seminar and Scientific Seminar with collaboration with the Hong Kong Pain Society and Department of Rehabilitation Sciences, University of Polytechnics.

HKPS has helped to found Hong Kong Pain Foundation last year and we may wish in the coming future we can collaborate in having better public recognition of pain as disease itself and has its own right. This year IASP's 2016 Global Year Against Pain in the Joints and please kindly visit the website for free clinical updates and fact sheets to update the most cutting edge evidence based facts about joints pain (<http://www.iasp-pain.org/globalyear>).

In the coming months, we are going to organise the Public Joints Pain Day in December 2016 so as to increase awareness of different causes of Musculoskeletal and Joints pain, and prevent Occupational and Ergometric related Pain among Hong Kong citizens. We are going to have our coming Annual Scientific Meeting 2016 on 19 – 20 November 2016 in Hyatt Regency Hong Kong, co-organised with Department of Orthopaedics and Traumatology, The Chinese University of Hong Kong, with the Theme: Against Pain in the Musculoskeletal System.

We are looking forward to meet you there for more sharing of clinical pearls and foster friendships among different disciplines.

with Season Blessings,

Dr. C.F. Carina Li 李靜芬醫生  
Specialist Anaesthesiologist  
President

The Hong Kong Pain Society

## Announcement:

### 1. HKPS Annual Scientific Meeting 2016

Lecture: 19<sup>th</sup> November 2016 at Hyatt Regency Hong Kong, Shatin  
Workshop: 20<sup>th</sup> November 2016, Prince of Wales Hospital



### 2. The 10th AGM

Date: 19<sup>th</sup> November 2016  
Time: 12:20 p.m.  
Venue: Salon 1, Hyatt Regency Hong Kong Shatin

## Welcome to new members:

Ms. TAM Wai Yee  
Ms. HO Mei Chi Jacqueline  
Mr. WONG Man Hong  
Mr. CHAN Chi Hung  
Mr. PO Tak Fai  
Ms. KWOK Wan Yi

## HKPS membership:

There are different membership plans for our society. Lifetime membership offers single payment (\$3000) and saves the trouble of annual renewal (\$300).

### Benefits of members:

- Discounted price on HKPS conference and meeting
- Conference Grant for overseas meeting
- Quarterly newsletter

Please see details at : [www.hkpainsociety.org](http://www.hkpainsociety.org)



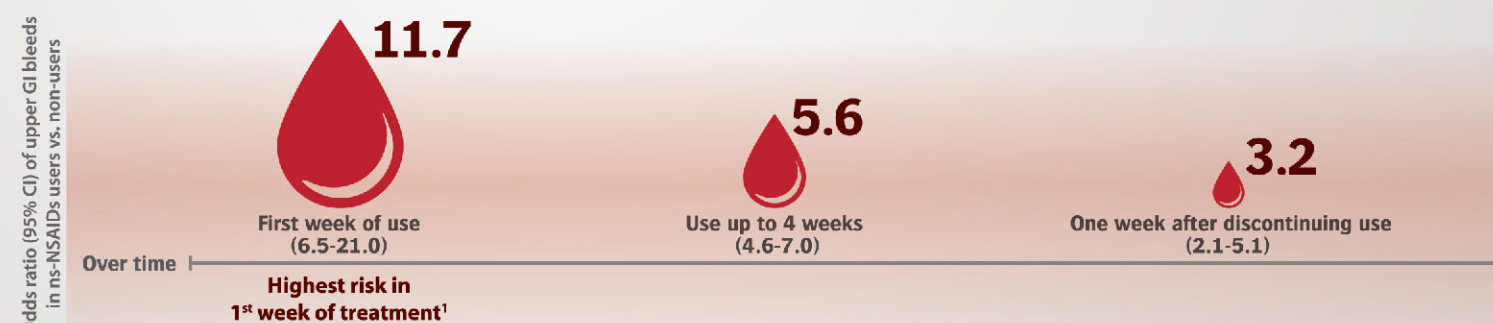
# NOT ALL NSAIDs ARE THE SAME STAY AHEAD OF GI COMPLICATIONS BY CHOOSING CELEBREX<sup>®</sup> (CELECOXIB CAPSULES)

## CO-THERAPY OF A NS-NSAID WITH A PPI MAY NOT PREVENT LOWER GI DAMAGE<sup>2, 3</sup>

- PPIs may not confer protection to the lower GI tract<sup>2,3</sup>
- In a study of 55 healthy volunteers on ns-NSAID + PPI, lower GI damage was reported in 60% of volunteers by Day 14<sup>4</sup>

## CELEBREX<sup>®</sup> has a significant advantage over ns-NSAIDs and ns-NSAIDs + PPI therapy in reducing the risk of GI events throughout the upper and lower GI tract in patients with OA/RA<sup>5,6</sup>

### Increased Risk of Upper GI Bleeding with ns-NSAIDs Starts as Early as Week 1<sup>1</sup>



1. TRADE NAME: Celebrex; 2. PRESENTATION: Capsules contain either 100mg, 200mg or 400mg of celecoxib; 3. INDICATIONS: Adult: For relief of the signs and symptoms of osteoarthritis (OA), rheumatoid arthritis (RA), ankylosing spondylitis (AS); management of acute pain (AP) in adults; treatment of primary dysmenorrhea (PD); treatment of the signs and symptoms of low back pain (LBP); 4. DOSAGE: OA: 200mg OD or 100mg BID; RA: 100 or 200mg BID; AS: 200mg OD or 100mg BID; 400mg OD if no response after 6 weeks; AP & PD: 400mg OD initially, an additional 200 mg if needed on the first day, subsequent days 200mg BID as needed; LBP: 100mg BID; 5. CONTRAINDICATIONS: Hypersensitivity to celecoxib, aspirin, or other NSAIDs or demonstrated allergic-type reaction to sulfonamide or experienced asthma, urticaria, or allergy-type reaction after taking aspirin or other NSAIDs. Use as treatment for peri-operative pain in the setting of CABG surgery; 6. WARNINGS & PRECAUTIONS: Increased risk of serious adverse cardiovascular thrombotic events, myocardial infarction, and stroke, which can be fatal; Patients with known CV disease or risk factors for CV disease may be at greater risk; Caution in patients with hypertension, fluid retention or heart failure; Can cause serious gastrointestinal events including bleeding, ulceration, and perforation of the stomach, small intestine or large intestine, which can be fatal. Extreme caution in patients with prior history of ulcer disease or gastrointestinal bleeding; special care should be taken as most spontaneous reports of fatal GI events are in elderly and debilitated patients; A patient with symptoms and/or signs suggesting liver dysfunction, or in whom an abnormal liver test has occurred, should be monitored carefully for evidence of the development of a more severe hepatic reaction. If clinical signs and symptoms consistent with liver disease develop, or if systemic manifestations occur, Celebrex should be discontinued; Long-term administration of NSAIDs has resulted in renal papillary necrosis and other renal injury. Renal toxicity has also been seen in patients in whom renal prostaglandins have a compensatory role in the maintenance of renal perfusion; Not recommended in these patients with advanced renal disease; Anaphylactoid reactions have occurred in patients without known prior exposure to Celebrex; Should not be given to patients with the aspirin triad. This symptom complex typically occurs in asthmatic patients who experience rhinitis with or without nasal polyps, or who exhibit severe, potentially fatal bronchospasm after taking aspirin or other NSAIDs; Can cause serious skin adverse events such as exfoliative dermatitis, Stevens-Johnson syndrome (SJS), and toxic epidermal necrolysis (TEN), which can be fatal. These serious events can occur without warning and in patients without prior known sulfa allergy. Patients should be informed about the signs and symptoms of serious skin manifestations and use of drug should be discontinued at the first appearance of skin rash or any other sign of hypersensitivity; Cannot be expected to substitute for corticosteroids or to treat corticosteroid insufficiency; Should not be administered to patients with aspirin-sensitive asthma and should be used with caution in patients with preexisting asthma; The pharmacological activity in reducing inflammation, and possibly fever, may diminish the utility of these diagnostic signs in detecting infectious complications of presumed noninfectious, painful conditions; The concomitant use with any dose of a non-aspirin NSAID should be avoided due to the potential for increased risk of adverse reactions; 7. INTERACTIONS: ACE inhibitors and angiotensin II antagonists, antacid, aspirin, dexamethorphan, fluconazole, fluoxetine, furosemide, lithium, NSAIDs, paroxetine, warfarin and drugs that inhibit cytochrome P450 2C9; Potential interaction with drugs that metabolized by P450 2D6; 8. PREGNANCY AND LACTATION: Pregnancy category D from 30 weeks of gestation onward; Should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus; No studies have been conducted to evaluate the effect of celecoxib on the closure of the ductus arteriosus in humans, therefore should be avoided during the third trimester of pregnancy; 9. SIDE EFFECTS: Abdominal pain; Diarrhea, Dyspepsia; Flatulence; Nausea; Back pain; Peripheral edema; Accidental injury; Dizziness; Headache; Insomnia; Pharyngitis; Rhinitis; Sinusitis; Upper respiratory infection; Rash; Reference: HKPI (May 2012): Date of preparation: Jan 2014; Identifier number: CELE0114; FULL PRESCRIBING INFORMATION IS AVAILABLE UPON REQUEST; Reference: 1. Lewis SC, et al. Dose-response relationships between individual nonaspirin nonsteroidal anti-inflammatory drugs (NSAIDs) and serious upper gastrointestinal bleeding: a meta-analysis based on individual patient data. Br J Clin Pharmacol. 2002;54:320-326. 2. Goldstein JL, et al. Video capsule endoscopy to prospectively assess small bowel injury with celecoxib, naproxen plus omeprazole, and placebo. Clin Gastroenterol Hepatol. 2005;3(2):133-141. 3. Goldstein JL, et al. Small bowel mucosal injury is reduced in healthy subjects treated with celecoxib compared with ibuprofen plus omeprazole, as assessed by video capsule endoscopy. Aliment Pharmacol Ther. 2007;25(10):1211-1222. 4. Fujimori S, et al. Distribution of small intestinal mucosal injuries as a result of NSAID administration. Eur J Clin Invest. 2010;40(6):504-10. 5. Cryer B, et al. GI REASONS: a novel 6-month, prospective, randomized, open-label, blinded-endpoint (PROBE) trial. Am J Gastroenterol. 2013;108:392-400. 6. Chan FK, et al. Celecoxib versus omeprazole and didofenac in patients with osteoarthritis and rheumatoid arthritis (CONDOR): a randomised trial. Lancet. 2010;376(9736):173-179. doi:10.1016/S0140-6736(10)60673-3.





# Chronic pain and "Overuse Syndrome" in the Neck and Upper Limbs

Dr HUNG Leung Kim, *Specialist in Orthopaedic Surgery  
Honorary Consultant, Prince of Wales Hospital*

## Neck and shoulder pain are very common, and nobody seems to be immune from them.

When computer first came into common use in the office, many "Keyboard Operators" were afflicted with neck and shoulder pain or Carpal Tunnel Syndrome. A proper arrangement of the workstation, sitting height and arm rests – ergonomic considerations, are considered essential for prevention of such disorders. We are now witnessing another wave of neck, shoulder and arm pain with the widespread use of mobile phone. Termed "Text Neck" [1], it can afflict different people irrespective of age, after prolonged use of mobile devices. There is now evidence that sustained posture selectively strain certain muscle groups [2], and causes microscopic damage, and chronic pain and a vicious cycle of pain-spasm-pain can result, if the body lacks the time or capacity to fully recover itself [3]. Tendons also suffer from such sustained stresses (tendinosis). The term "Overuse Injury" or "Overuse Syndrome" is used to describe such conditions [4].



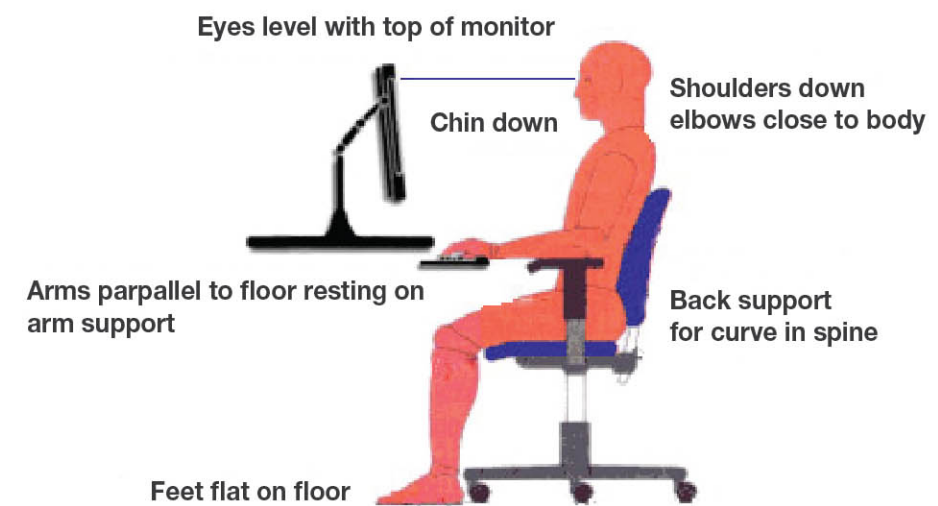
## Overuse Injury and Overuse Syndrome

Repetitive motion was recognized as a causative factor for such chronic musculoskeletal pain disorders, and the term Repetitive Strain Injuries (RSI) has been used. Repeated strenuous exertion was also felt to be responsible, therefore they have also been described as Cumulative Trauma Disorder. As discussed above, nowadays it has been recognized that sustained postures can also cause problems. It is common sense that if the back is bent for any duration of time like reaching out or working on a low bench it is also likely to cause back pain, even without lifting. Many people afflicted with Trigger Finger are not using the hand strenuously. They might have just used the finger in some light but sustained movements, such as clicking the computer mouse or texting the mobile or the pad. Individual variation certainly plays a role in the manifestation of tissue involvement and pain, as is described by the widely accepted Armstrong pathogenesis model [5].

## Cervicobrachial Syndrome

There are many different presentations of overuse neck and shoulder pain, and they may be described as Cervicobrachial Syndrome, and Text Neck is one form of it. It should be distinguished from Cervical Spondylosis, although the two can overlap or coexist with each other. Age, occupation, and personal habits are useful information for one to make a differential diagnosis. A detailed work and activity history is the key for reaching a diagnosis. Subtle change in eyesight, especially the onset of far sight for middle age people, is important as that affects the way they view the computer or the mobile phone and may put extra-strain on their neck. A careful physical examination of the neck identifies the presence of tight muscles and tender spots, and the absence of specific radiculopathy helps to differentiate it from cervical spondylosis. There usually is some shoulder rotator cuff muscle problem since this could be secondary and the two are also causally related (as specifically happens among the keyboard operators). X-rays and further investigations are supplementary means for excluding more structural disorders. Besides adequate control of pain and muscle spasm, as the concept of Overuse Syndrome discussed above showed, the key to management is to help the patient to return to a more normal and physiological posture and use of the neck and upper limbs, and to reorganize his work and activities to allow time for a natural recovery, which tends to be slow, and to avoid recurrences. The engagement of a physiotherapist experienced in ergonomics is therefore vital in the management.

## Correct Sitting Posture for Computer



## Thoracic Outlet Syndrome

This should be distinguished from Cervicobrachial Syndrome by the presence of definite nerve root irritation. The association with a cervical rib is rarely seen locally. There is also commonly the presence of autonomic nervous or vascular disturbance in the hand. The typical case presents with paraesthesia in the ulnar border of the hand, and may be with a cold sweaty and pale hand. The cause can be due to overuse of the shoulder girdle, but usually there is an episode of traction to the arm, or depression of the shoulder, like prolonged backpacking or weight carrying. Palpation of the Erb's point at the base of the neck may aggravate the paraesthesia experienced. The Roos' test is performed with the patient raising the hands in a "surrender" attitude, with shoulder close to 90 degrees of abduction, and opening and closing both hands in rapid succession, while paraesthesia is reproduced or aggravated.

In cases with vascular compression the involved hand may turn white. Other tests described include the Adson test, the Costoclavicular manoeuvre and the Hyper-abduction test, which help to distinguish the specific level of involvement behind, above or below the clavicle. Those cases which have experienced an acute traction injury or prolonged shoulder loading will benefit from an arm sling, and will require early, acute physiotherapy intervention for muscles around the girdle. Injection of corticosteroid to the brachial plexus at the Erb's point may also be helpful. In more long standing cases, a programme for reversing any chronic overuse injury of the shoulder girdle must be implemented for sustained improvement and prevention of recurrences. Surgical decompression may be required in protracted cases but the outcome is guarded.

## References:

1. Cleveland Clinic. Health essentials. Text Neck: Is smartphone use causing your neck pain? <https://health.clevelandclinic.org/2015/03/text-neck-is-smartphone-use-causing-your-neck-pain/>
2. Szeto GP, Straker LK, O'Sullivan PB (2009) Neck-shoulder muscle activity in general and task-specific resting postures of symptomatic computer users with chronic neck pain. *Man Ther* 14:338-45.
3. Barr AE, Barbe MF (2002) Pathophysiological tissue changes associated with repetitive movement: a review of the evidence. *Phys Ther* 82:173-187.
4. Laker SR (2015) Overuse Injury. *Medscape*. <http://emedicine.medscape.com/article/313121-overview>
5. Armstrong TJ, Buckle P, Fine LJ, Hagberg M, Jonsson B, Kilbom A, Kuorinka IAA, Silverstein BA, Sjøgaard G, Viikari-Juntura ERA (1993) A conceptual model for work-related neck and upper-limb musculoskeletal disorders. *Scand J Work Environ Health* 19:73-84.





### Chronic pain

It is a disease process in which pain becomes a persistent symptom of an autonomous disorder with neurologic, psychological, and physiologic components. It is defined as pain which lasts for longer than anticipated within the context of the usual course of a disease or injury.

It might associate with continued pathology or may persist after recovery. It affects more than 100million people in the States and accounts for 20% of outpatient visits.

# Rehabilitation for Chronic Pain

Dr Savio LEE, *Rehabilitation Specialist*

### Common Causes of Chronic Pain:

It can be considered to be in one of four categories:

a) neuropathic b) musculoskeletal c) inflammatory d) mechanical / compressive

### Evaluation

A comprehensive pain evaluation is essential to developing an effective plan of management. An appropriate history and physical examination are vital to a proper evaluation.

Functional evaluation measures the appropriateness of the patient's functional capabilities for the level of impairment.

Objective, quantitative measurements give a baseline with which to evaluate progress and long-term outcome.

Specific tools are available to describe and classify function, such as the International Classification of Functioning, Disability and Health (ICF).

### Management

Management of chronic pain requires an understanding of its complexity and knowledge of the non-neurologic factors that determine its individual expression.

Treatment options generally fall into six major categories:

- Pharmacologic
- Physical Medicine
- Behavioural Medicine
- Neuromodulation
- Interventional
- Surgical

Optimal patient outcomes often result from multiple approaches utilized in concert, coordinated via a multidisciplinary team.

Medications should not be the sole focus of treatment, but should be used when needed, in conjunction with other treatment modalities, to meet treatment goal.

### Multidisciplinary Management Team

The primary goal is to restore functioning and improve quality of life. The team should include a rehabilitation specialist, a pain medicine physician, a neurologist, physiotherapist, occupational therapist and a clinical psychologist.

Other treatment goal includes:

- Return to regular daily activities
- Increase physical strength, stamina and flexibility
- Reduce use of pain medications
- Minimize pain behaviors
- Learn stress management techniques
- Return to gainful employment
- Resume leisure and recreational activities
- Improve interpersonal relationships
- Reduce reliance on health-care professionals, with improved ability to self-manage chronic pain

The comprehensive clinical evaluation includes functional capabilities to determine impairment level. The psychosocial evaluation focuses on the behavioral response to pain, adjustments to the physical impairment, and degree of motivation.

The multidisciplinary team functions at several levels within the treatment process. It attempts to identify and resolve organic problems and to improve the patient's ability to cope with the pain through medication, psychological intervention, and patient education.

In addition, considerable effort is made to improve patient's functional outcome as measured by increased activity time, improved activities of daily living, increased distance walked, and increased tolerance for specific vocational activities.

### Treatment modalities:

Chronic pain is a summation of physical and psychological derangements. There is evidence that combination therapies are more effective than any single approach for maintaining long-term gains.

Multimodal interventions other than systemic pharmacologic treatments for chronic pain may include:

- Behavioural medicine approaches (include CBT, Biofeedback, Relaxation, Psychotherapy and individual or group counselling)
- Aerobic exercise
- Acupuncture
- Physical and Occupational Therapy
- Chiropractics and osteopathic manipulation
- Ultrasound stimulation
- Electrical neuromodulation
- Thermal applications
- Other Interventions such as Botulinum Toxin injections, steroid injections and nerve blocks
- Surgical interventions

### Behavioural medicine Approaches

Cognitive-behavioural therapy (CBT) focuses simultaneously on environment, behaviour, and cognition. CBT is structured, goal directed, problem focused, and time limited. Patients learn how their thoughts contribute to symptoms of their disorder, and how to modify these thoughts. Increased cognitive awareness is combined with specific behavioural techniques.

### Physical Medicine (Therapeutic Exercise)

An exercise regime specifically tailored to the patient is at the core of a physical or occupational therapy program. Stretching is a key component to restoring normal range of motion (ROM). ROM exercises vary from passive to active assisted.

After ROM is normalized, muscle conditioning is addressed to improve stability, function, and pain. Muscle conditioning focuses on three areas: endurance, strength and re-education.

In the chronic phase of pain, the optimal treatment methodology combines graded stretching movements, strengthening exercises, heat or cold, and massage. The patient is also educated regarding proper body mechanics and the need to continue the prescribed therapeutic exercise regime outside of formal therapy sessions.

Therapeutic exercise, prescribed to correct a specific abnormal condition, is often used to treat chronic painful conditions. The primary goal (achieving pain control) may be accomplished through the restoration of normal muscle tone, length, strength, and optimal joint ROM.

### Neuromodulation

The most common surface external peripheral and neuromodulation system is transcutaneous nerve stimulation (TENS).

It involves the application of electrical currents to the skin primarily for the purposes of pain relief. Combinations of different stimulation parameters are used to produce 4 main modes of TENS: Conventional, acupuncture-like, burst TENS, and brief-intense TENS.

### Heat Therapy

Heat Application is a common form of pain treatment. It is generally accepted that therapeutic heat is best tolerated in the subacute and chronic phases of a disease process. Decreased joint stiffness, muscle spasm, and pain also beneficial effects of heat. Subacute and chronic bursitis, tenosynovitis, and epicondylitis also may respond to heat with decreased pain and symptom resolution.

### Occupational Therapy

Occupational therapy is a part of rehabilitation process improving the performance of the disabled people. The aim of occupational therapy is to help patients to adapt to their impairments, and achieve optimal function.

There are two categories of activities in occupational therapy:

- Activities of daily living
- Work and productive activities.

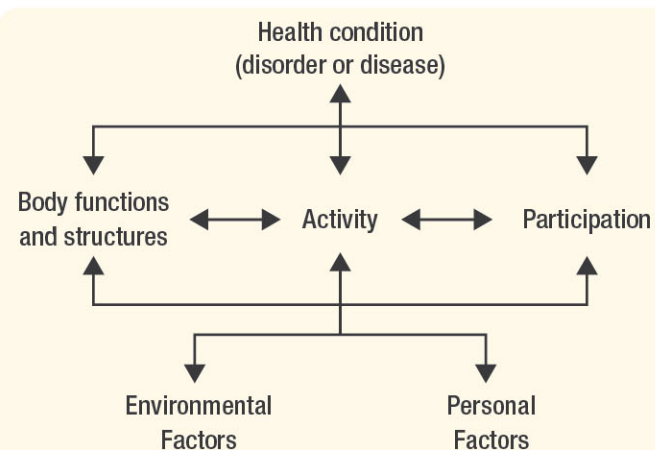


Figure 1.1: Interactions between components of the ICF  
Source: WHO 2001, International Classification of Functioning, Disability and Health

The ICF characterizes the interaction between a health condition (pain), personal attributes, and environmental influences.

### Psychological Evaluation

The assessment of psychological issues in the overall evaluation and treatment of patients with chronic pain is an important component of pain management.

It often involves the use of questionnaires, inventories, and the clinical interview.

### Conclusion

The management of chronic pain requires multidisciplinary approach and rehabilitation is an important element of this treatment.

In chronic pain, pharmacological therapies decrease the pain, but do not eliminate it at all. Also medical and surgical interventions are not sufficient alone. Pain rehabilitation process should also be integrated into all kinds of therapies.

Physicians and therapists need to employ strong communication and rapport building skills in order to foster a healthy therapeutic relationship and patient self-reliance.

Periodic reexamination, review of treatment efficacy, and reevaluation of each individual's care plan are essential to minimize the pain and optimize the function.



# A Randomized Controlled Trial to Investigate the Effect of

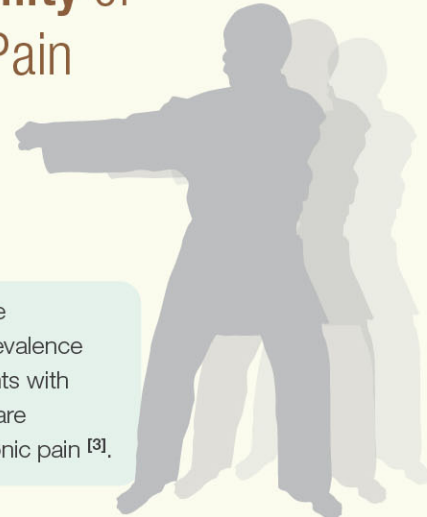
## • Health Qigong Ba Duan Jin •

### to Improve Pain Control and Functional Ability of Patient with Chronic Non-specific Low Back Pain

Dr. Andy S.K. Cheng,  
Associate Professor, Department of Rehabilitation Sciences,  
The Hong Kong Polytechnic University

Mr. Eric T.F. Po, Occupational Therapist I, United Christian Hospital

**Low back pain (LBP)** is the most common reason for visiting a physician [1]. The lifetime prevalence of LBP in industrialized countries was approximately 60% to 85%, annual prevalence ranged from 15% to 45%, and point prevalence averaged 30% [2]. Although most patients with acute low back pain recover within 1 month, up to 40% of patients consulting primary care practices have not completely recovered after 3 months, and 5% - 10% will develop chronic pain [3].



Besides, approximate 90% of reported low back pain is nonspecific LBP [4]. This term is not a diagnosis but rather a description of back pain for which a cause cannot be definitively identified and a precise pathoanatomical diagnosis cannot be given [5]. Nonspecific LBP is a significant problem in industrialized societies because of high health care utilization, perceived limitations of treatment effectiveness, and high compensation cost [6].

Notably, chronic LBP is associated with various physical, emotional, and psychosocial dysfunctions that eventually cause deterioration in the quality of life. Disuse and physical deconditioning are commonly evident in individuals with chronic LBP [7-9]. However, numerous prospective studies have shown that psychosocial factors such as, fear-avoidance, and anxiety-induced depression variables are the overriding factors causing persistent pain and disability [9-10]. The fear-avoidance model [11] suggests that catastrophic interpretations of pain may lead to avoidance, with physical deconditioning, disability, and depression as long-term consequences. Catastrophizing may also influence the effects of adaptive coping [12]. On the other hand, in chronic pain populations, self-efficacy beliefs have been found to explain a range of behaviors and aspects of pain experience [13]. Woby et al. [14] found that self-efficacy beliefs mediated the impact of pain-related fear and both pain and disability outcomes. The treatment of LBP will have a low success rate if its focus centered at physical rehabilitation [15-16] without taking into account of the importance of psychosocial impediment.

In Chinese philosophy of qi-gong exercise for pain relief and symptom reduction is promoting qi and energy within the body, breaking the qi blockage and balanced the energy system to maintain or restore balance and harmony of mind-body. The General Administration of Sport of China defines health qi-gong as a traditional ethnic sport which adopts the balance coordination of body movements, rhythms of breathing, and regulation of mentality as its essential principle to regulate the "body", "breath", and "mind". "Body" refers to the four-limb exercise, with the waist and spine as the axes, while observing relaxed, comfortable and correct postures. "Breath" refers to consciously regulate and control the frequency, rhythm, and depth of respiration in line with the movements of qi-gong. "Mind" refers to maintain a high concentration of mind and get rid of all stray thoughts. Ba Duan Jin (BDJ) is the most popular form of four standardized HQG in Hong Kong, supported by research evidence on its wide clinical applications including chronic pain, hypertension, cardiac disease, pulmonary disease, mood disorder, oncologic condition and metabolic disease. Until 2016, there are over 600 trained Occupational Therapists providing BDJ for different client groups either in HA or NGO settings. A tripartite collaboration was made from the Department of Rehabilitation Sciences, the Hong Kong Polytechnic University, the Department of Orthopaedic and Traumatology, United Christian Hospital, and the Department of Occupational therapy, United Christian Hospital to evaluate the effect of HQG BDJ to improve pain control and functional ability of patients with chronic non-specific LBP.

This was a mixed-model 2 (group) x 3 (time) randomized controlled trial. All participants were diagnosed as non-specific chronic LBP according to the International Classification of Diseases, Ninth Revision (ICD-9) in the absence of any major neurological deficit; and a minimum of 3 months of non-specific chronic LBP symptoms. All participants have been randomly assigned to either (a) HQG programme or (b) Functional Rehabilitation (FR) programme by using a computerized randomization table generated by a third party. The HQG programme was an 16-session BDJ, twice per week and lasted for two months. Each session consisted of 1.5 hour's BDJ practice. In addition, all participants assigned in this group had received a BDJ VCD and a logbook to record their daily practice of BDJ. On the other hand, the FR programme was a 16-session functional training, twice per week and lasted for two months. Each session consisted of 1.5 hour's standardized remedial activities and simulation activities training. The outcome measures included perceived pain intensity expressed by Visual Analogue Scale, Pain Catastrophizing Scale, Pain Self-efficacy Questionnaire, Oswestry Disability Index, and the Sit and Reach Test. Three occasions of formal assessment were conducted: at the baseline, at the end of the programme, and at 4-week after the end of the programme.



A total of 72 participants with chronic non-specific LBP were finally recruited. Of them, 38 were allocated into HQG programme. However, some participants were lost to follow up, resulting in 32 participants in HQG programme and 23 participants in FR programme have been successfully assessed at three different time points. The results of the study show that there was a statistically significant difference in both HQG and FR programmes in decreasing perceived pain intensity and pain catastrophizing feelings over time compared to the baseline assessment. However, those in HQG programme could have a better improvement in pain self-efficacy. Similar pattern was also noted in improving functional ability. Both HQG and FR programmes could improve flexibility of the lower back/hamstring muscles and decrease perceived functional disability measured by Sit and Reach test and Oswestry Disability Index respectively when compared to baseline assessment. A statistically significant group difference was also noted, revealing those in HQG programme showed higher improvement than those in FR programme. Based on these preliminary results, we conclude that practice of BDJ can help improve pain control and functional ability of patient with chronic pain. This mind-body intervention is effective for chronic LBP management and recommended to be incorporated as an adjunctive therapy to convention treatment.



Special thanks to Ms. Priscilla Y.Y. Siu, Special Interest Group (Health Qigong) cum National Sports Research Group, HKOTA, for providing us updated information on theoretical background & clinical practice of Health Qigong by local Occupational Therapists.

#### References:

- Lind BK, Lafferty WE, Tyree PT, et al. The role of alternative medical providers for the outpatient treatment of insured patients with back pain. *Spine*. 2005;30:1454-1459.
- Cassidy JD, Cote P, Carroll LJ, et al. Incidence and course of low back pain episodes in the general population. *Spine*. 2005; 30:2817-2823.
- Hasenbring MI, Hallner D, Klasen B, et al. Pain-related avoidance versus endurance in primary care patients with subacute back pain: Psychological characteristics and outcome at a 6-month follow-up. *Pain*. 2012;153:211-217.
- van Tulder M, Koes B, Bombardier C. Low back pain. *Best Pract Res Clin Rheumatol*. 2002;16:761-775.
- Slade SC, Molloy E, Keating JL. 'Listen to me, tell me': a qualitative study of partnership in care for people with non-specific chronic low back pain. *Clin Rehabil*. 2009;23:270-280.
- Dagenais S, Caro J, Haldeman S: A systematic review of low back pain costs of illness studies in the United States and internationally. *Spine J*. 2008, 8(1):8-20.
- Verbunt JA, Seelen HA, Vlaeyen JW, et al. Disuse and deconditioning in chronic low back pain: concepts and hypotheses on contributing mechanisms. *Eur J Pain*. 2003;7:9-21.
- Roche G, Ponthieux A, Parot-Shinkel E, et al. Comparison of a functional restoration program with active individual physical therapy for patients with chronic low back pain: a randomized controlled trial. *Arch Phys Med Rehabil*. 2007;88(10):1229-1235.
- Pincus T, Burton AK, Vogel S, et al. A systematic review of psychological factors as predictors of chronicity/disability in prospective cohorts of low back pain. *Spine (Phila Pa 1976)* 2002;27:E109-120.
- Scholich SL, Hallner D, Wittenberg RH, et al. Pilot study on pain response patterns in chronic low back pain. The influences of pain response patterns on quality of life, pain intensity and disability. *Schmerz* 2011;25:184-190.
- Vlaeyen JWS, Linton SJ. Fear avoidance and its consequences in chronic musculoskeletal pain: a state of the art. *Pain*. 2000;85:317-332.
- Keefe FJ, Shelby RA, Somers TJ. Catastrophizing and pain coping: moving forward. *Pain*. 2010;149:165-166.
- Turner JA, Ersek M, Kemp C. Self-efficacy for managing pain is associated with disability, depression, and pain coping among retirement community residents with chronic pain. *J Pain*. 2005;6:471-479.
- Woby SR, Urmston M, Watson PJ. Self-efficacy mediates the relation between pain-related fear and outcome in chronic low back pain patients. *Eur J Pain*. 2007;11:711-718.
- Gladwell V, Head S, Haggart M, et al. Does a program of Pilates improve chronic non-specific low back pain? *J Sport Rehabil*. 2006;15(4):338-350.
- Maher CG. Effective physical treatment for chronic low back pain. *Orthop Clin North Am*. 2004;35(1):57-64.



# Report of 11<sup>th</sup> Annual Scientific Meeting of Neuromodulation Society of Australia and New Zealand

Dr. Timmy Chan, Pain Specialist, Queen Mary Hospital



Neuromodulation is technology that acts directly upon nerves. It is the alteration, or modulation, of nerve activity by delivering electrical or pharmaceutical agents directly to a target area. Spinal cord stimulation is one form of neuromodulation and it is one of the rapidly developing areas in pain management. It is well evidenced to be useful in persistent pain after spinal operations, ischaemic pain conditions and complex regional pain syndrome.

I have attended the 11<sup>th</sup> Annual Scientific Meeting of Neuromodulation Society of Australia and New Zealand. It is held in Perth, March 2016. It is an internationally recognized meeting with many distinguished guests and speakers from different countries. They are -- Professor Sam Eldabe, Clinical Professor of Anaesthesia and Pain Medicine at Durham University and consultant Anaesthetist at the James Cook University Hospital, Middlesbrough, UK; Dr Lawrence Poree, Clinical Professor in the Department of Anesthesia at the University of California, San Francisco where he serves as the director of the Neuromodulation service; Dr Simon Thomson, Clinical lead of multidisciplinary pain service in UK and he is active in clinical research receiving grants from National Institute of Health Research and commercial grants.

It is a 2 full days academic meeting covering wide spectrum of topic related to neuromodulation e.g. neuromodulation in children, functional outcome of neuromodulation, comparing neuromodulation to other treatment options – physical therapies, pharmacotherapies, psychotherapies and surgical therapies. There is also topic of spinal cord stimulator registry, in which Dr Simon Thomson shared his experience in UK. There are also a few open discussions and forum about neuromodulation. This is really a good opportunity for knowledge exchange, experience sharing and case discussion with world experts and leaders, as well as a valuable chance for me to update my knowledge on neuromodulation. During the meeting, I also met lots of local pain physicians and experts in Australia and New Zealand, who have special interest in neuromodulation. This provides a good platform for future academic and clinical collaboration as well as knowledge exchange, especially when neuromodulation service in Hong Kong is not well established.



In summary, this meeting definitely not only updated my knowledge on neuromodulation through lectures, expert case discussion and forum, but also broadened my horizon on neuromodulation. Such experience is essential for the development of neuromodulation in Hong Kong, especially when we are still in the initial phase of development of neuromodulation service.

"During the meeting, we are very lucky to meet Professor Ted Shipton, President of the Faculty of Pain Medicine, The Australian College of Anaesthetists. We also met two old friends -- Professor Roger Goucke and Dr George Chalkiadi, promoting World Congress of Anaesthesiology (WCA) 2016 together. We all enjoyed the congress dinner and I am looking forward to meet them later in other pain related meeting."



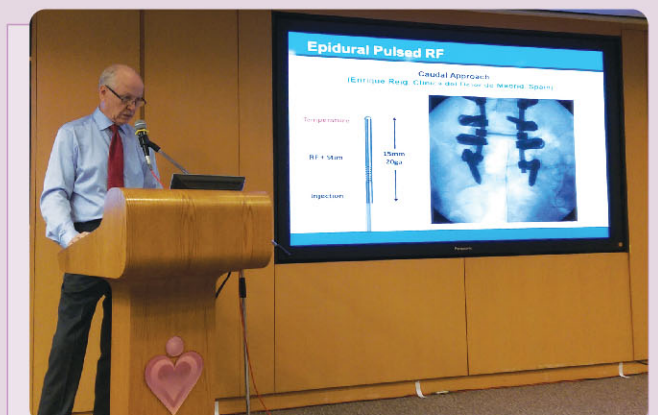
## Event Highlight

### Interventional Pain Workshop — Physics of Radiofrequency Seminar

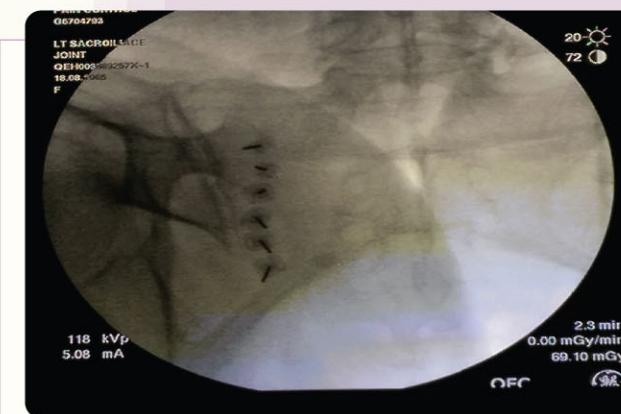
The workshop was held on 24<sup>th</sup> September 2016 in Queen Elizabeth Hospital. Dr. Michael Arnold, PhD in Nutritional Biochemistry & Metabolism, gave us an review of radiofrequency ablation in management of chronic pain and its recent advance. Followed by Dr. Edmond Chung presented a live demonstration of RFA technique in a patient with sacroiliac joint pain.



A welcome speech was given by Dr. Steven Wong, COS, Department of Anaes & OTS, QEH.



Dr. Michael Arnold presented the lecture and Q&A session.



Dr. Edmond Chung, AC, Department of Anaes & OTS, QEH, demonstrated the technique of RFA for SIJ.



Photo of speakers with participants.



寧絡貼™

Lignopad®

Lignocaine Medicated Plaster 5% w/w

The local pain expert.



Topical treatment indicated for postherpetic neuralgia (PHN)

## Lignopad® is NOW available

### LIGNOPAD® MEDICATED PLASTERS 5% W/W - ABRIDGED PRODUCT INFORMATION

**Composition** Each 10 cm x 14 cm plaster contains 700 mg (5% w/w) lignocaine. **Indications:** Lignopad® medicated plaster is indicated for the symptomatic relief of neuropathic pain associated with previous herpes zoster infection (post-herpetic neuralgia, PHN). **Dosage and Administration** Adults and elderly patients: The painful area should be covered with the plaster once daily for up to 12 hours within a 24 hours period. Only the number of plasters that are needed for an effective treatment should be used. When needed, the plasters may be cut into smaller sizes with scissors prior to removal of the release liner. In total, not more than three plasters should be used at the same time. The plaster must be applied to intact, dry, non-irritated skin (after healing of the shingles). Each plaster must be worn no longer than 12 hours. The subsequent plaster-free interval must be at least 12 hours. The plaster must be applied to the skin immediately after removal from the sachet and following removal of the release liner from the gel surface. Hairs in the affected area must be cut off with a pair of scissors (not shaved). Treatment outcome should be re-evaluated after 2-4 weeks. If there has been no response to Lignopad® medicated plaster after this period or if any relieving effect can solely be related to the skin protective properties of the plaster, treatment must be discontinued as potential risks may outweigh benefits in this context. **Contraindications** Hypersensitivity to the active substance or to any of the excipients, patients with known hypersensitivity to other local anaesthetics of the amide type e.g. bupivacaine, etidocaine, mepivacaine and prilocaine. The plaster must not be applied to inflamed or injured skin, such as active herpes zoster lesions, atopic dermatitis or wounds. Patients under the age of 18. **Precautions** The plaster should not be applied to mucous membranes. Eye contact with the plaster should be avoided. The plaster contains propylene glycol which may cause skin irritation. It also contains methyl parahydroxybenzoate and propyl parahydroxybenzoate which may cause allergic reactions (possibly delayed). Use with caution in patients with severe cardiac impairment, severe renal impairment or severe hepatic impairment. There are no adequate data from the use of lignocaine in pregnant women. Therefore, Lignopad® medicated plaster should not be used during pregnancy unless clearly necessary. Lignocaine is excreted in breast milk. However, there are no studies of the plaster in breast-feeding women. Since the metabolism of lignocaine occurs relatively fast and almost completely in the liver, only very low levels of lignocaine are expected to be excreted into human milk. After first opening the sachet, the plasters must be used within 14 days. **Adverse Reaction** Most common: administration site reactions (such as burning, dermatitis, erythema, pruritus, rash, skin irritation, and vesicles). Uncommon: skin lesion, skin injury. Very rare: open wound, anaphylactic reaction, hypersensitivity. **Interactions:** No interaction studies have been performed. No clinically relevant interactions have been observed in clinical studies with the plaster. The plaster must be used with caution in patients receiving Class I antiarrhythmic medicinal products (e.g. tocainide, mexiletine) and other local anaesthetics since the risk of additive systemic effects cannot be excluded. **Presentation** Box of 2 plasters per sachet. Full prescribing information is available upon request. HK-L-LIG-0002-V1-0816



Mundipharma (Hong Kong) Ltd  
Units 801B-802A, 8/F, Tower B, Manulife Financial Centre,  
223-231 Wai Yip Street, Kwun Tong, Kowloon  
Tel: 852 3929 4666 Fax: 852 3929 4668

References: 1. Lignopad mediated plaster 5% w/w Hong Kong Prescribing Information dated January 2013. 2. Baron R et al., 5% lidocaine medicated plaster versus pregabalin in post-herpetic neuralgia and diabetic polyneuropathy: an open-label, non-inferiority two-stage RCT study. *Curr Med Res Opin.* 2009; 25(7):1653-1676. 3. Baron R et al., Efficacy and safety of combination therapy with 5% lidocaine medicated plaster and pregabalin in post-herpetic neuralgia and diabetic polyneuropathy. *Curr Med Res Opin.* 2009; 25(7):1677-1687. 4. Rowbotham MC et al., Lidocaine patch: double-blind controlled study of new treatment method for post-herpetic neuralgia. *Pain.* 1996; 63:39-44. 5. Finneup NB et al., Pharmacotherapy for neuropathic pain in adults: a systematic review and meta-analysis. *Lancet Neurol.* 2015; 14:162-173.

© LIGNOPAD is a Registered Trademark. TM: 寧絡貼是已申請的商標  
HK-LIG-0272-V3-1016