## Department of Orthopaedics & Traumatology



# Queen Mary Hospital



# The University of Hong Kong Medical Centre

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#### Message from the Editorial Board

So much has happened in the past 4 months in our Department, our staff continues to excel in many local and international meetings and we hope to highlight some of the big events in this year-end issue. Apart from that, our Division of Orthopaedic Trauma has prepared an overview of the management of hip fractures. The Division is also very proud to tell you more about their award-winning Hip Fracture Clinical Pathway in the Cutting Edge Development.

#### "Doc! My Grandma broke her hip"

Hip Fracture
Dr. CH Yan / Dr. TW Lau

Fracture of the hip, or fracture of the proximal femur, is one of the most common osteoporotic fractures we encounter in our daily practice. The ageing population represents a challenge not only because of increased incidence of medical comorbidities, but the difficulty in achieving stable fixation and promoting bone healing.

Hip fracture can be classified according to the anatomical location of the fracture line: fracture neck of the femur, intertrochanteric fracture (between the greater trochanter and lesser trochanter), and subtrochanteric fracture (down to a point 5cm distal to the lesser trochanter). Apart from basal neck fractures, most of the fracture neck of femur is intracapsular, i.e. the fracture line is inside the hip joint capsule; while the rest of the fractures are extracapsular. The unique blood supply of the femoral head renders intracapsular fractures prone to avascular necrosis.

The association between hip fracture and osteoporosis is clear. Eighty four percent of patients with femoral neck fracture have mild to severe osteoporosis. Most hip fractures are caused by low energy trauma, such as simple slip-and-fall injury. Intertrochanteric and subtrochanteric fractures usually occur in older patients

because the thicker cortical bone needs longer time to become porotic and fragile.

Many classification systems were advocated for fracture neck of femur. One of the popular and simple methods is Garden classification. Undisplaced fracture (type I & II) has much lower risk of AVN compared to displaced fractures (type III & IV).

The goals of treatment are to protect from additional damage, to minimize discomfort, to restore hip function, and to allow rapid mobilization by obtaining early anatomical reduction and stable internal fixation or by prosthetic replacement. Non-operative treatment nowadays is only indicated for patients who are at extreme medical risk for surgery.

Multiple screw fixation is the most accepted method for undisplaced fracture neck of femur. Three parallel screws are the optimal number. Threads should cross the fracture site to allow for compression. Patients will be encouraged to have full weight bearing after the operation.

Prosthetic replacement is indicated if the patient is physiologically old and the fracture is displaced. Hemiarthroplasty is usually the choice. If the hip joint already showed evidence of osteoarthritis, then total hip arthroplasty is performed. The advantage of hemiarthroplasty over total joint arthroplasty is the lower risk of dislocation.

Intertrochanteric fractures are extracapsular that occurs in cancellous bone with an abundant blood supply. As a result, nonunion and AVN are not major problems. Stability of the fracture pattern mainly depends on the integrity of the posteromedial cortex. The sliding hip screw e.g. dynamic hip screw, is the most commonly used device for stable fractures. Cephalomedullary nail is usually indicated if the fracture is grossly unstable or involves the subtrochanteric region.

The subtrochanteric segment of the femur is the site of very high biomechanical stresses. It is mainly composed of cortical bone. Therefore, less vascularity is found in this region, and potential for healing is diminished when compared to intertrochanteric fractures. Cephalomedullar nails become the more popular fixation device, not only because of the biomechanical advantage, but closed insertion manner with limited fracture exposure, decreased blood loss and less tissue damage. Conventional devices like fixed angle blade plate and dynamic compression screws are sometimes indicated in selected cases.

People always say that prevention is better than cure. Drug treatment for osteoporosis can decrease the incidence and complications of hip fracture. As orthopaedic surgeons, we should not wait until we see the fracture on the X-ray. So next time when you encounter such patients in your clinic, do not hesitate to prescribe calcium supplement, vitamin D and anti-resorptive agents.



Displaced fracture neck of femur (left) treated by hemiarthroplasty (right)

#### **Cutting Edge Development**

Hip Fracture Clinical Pathway - Queen Mary Hospital Dr. KC Mak / Dr. TW Lau

Hip fracture represents a major morbidity, and is potentially fatal if managed poorly. It taxes both the medical and the financial systems. Historically in QMH, operations on hip fractures have been performed as emergency operations. Later, a trauma list, managed by the trauma division, was established to ensure a daily operating list for trauma patients. This allowed greater flexibility for the arrangement of operations.

Question remains whether early, i.e. within 24-48 hours, operation on a hip fracture reduces mortality. However, there is little doubt that hip operations should be performed at the earliest and safest possible time to alleviate patient suffering. Furthermore, a concerted rehabilitation process would help patients to re-integrate early into their own social environment. Other benefits of a coordinated hip-fracture treatment-and-rehabilitation plan would be cost containment (number of days in hospital) and bed status control. These were the cornerstones for establishing the geriatric hip fracture pathway in QMH in 2007.

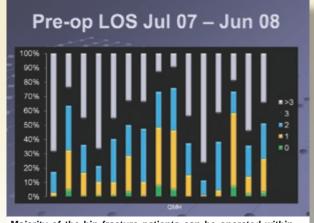
The program entailed gathering past data and practice patterns, thus formulating guidelines. Further data gathering allowed regular reviews to identify areas for improvement. The team was multidisciplinary and comprised of orthopaedic surgeons, therapists, nurses and other paramedical staff like medical social workers. The initial pilot study period was important in gathering the relevant information to identify the major hurdles. Finalized plans then led to drafting of structured treatment protocols and booklets. Methodical guidelines facilitated patient management by a varied group of frontline staff and allowed reviewing of records in the audit process., A dedicated leader, the "clinical champion" and a "case manager" are required to ensure smooth running and success of a clinical pathway.

Since the inception of the program, numerous measures and improvements have been undertaken. The results are most encouraging. The pre-operative length of stay has decreased from 4.2 days to 1.7 days. The average length of stay in the acute hospital has decreased from 12 to 7 days. The average length of stay in our rehabilitation hospitals have also decreased significantly from 40 to 26 days. This was achieved without increasing morbidity or mortality.



There is a significant decrease in the length of stay for hip fracture patients in QMH since the implementation of the pathway

Thanks to the hard work of Dr TW Lau under the tutelage of Dr Frankie Leung, the geriatric hip fracture pathway has been a great success. We will continue to improve upon it. We hope to further improve our patient care through facilitation of preoperative workup and operation list scheduling via heightened cooperation with a group of dedicated anesthetists and physicians. A future focus may be on factors related to patient recovery rate, optimization of post-discharge rehabilitation and outcome measures, e.g. post- vs. pre-operative ambulatory status.



Majority of the hip fracture patients can be operated within 1-2 days after admission

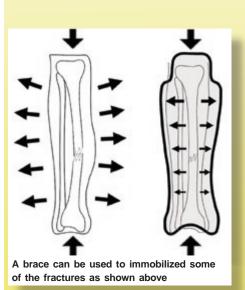
# Tips from our Allied Health Orthotic Management of Fractures

Prosthetists-Orthotists of Queen Mary Hospital

Orthotic management is sometimes an option in managing fractures. Some stable and less displaced fractures can be treated conservatively by functional bracing. Functional bracing is also used as a complement to other fracture stabilization methods such as open reduction and internal fixation. The principles of orthotic management of fractures are:

- 1. to immobilize and protect the fracture site so as to promote healing
- 2. to stabilize the rotatory & certain angular deformities through compression of soft tissue
- to preserve motion of all adjacent joints to prevent joint stiffness or muscle weakness.

Orthotist has long been using low temperature thermoplastic to make functional bracing. It can be applied directly to the patient after being softened in water at 60°C. It hardens after cooling down. Functional bracing using low temperature thermoplastic can be applied to fractures on spine and extremities. When aged, it becomes brittle and therefore is not used for long term.







Orthosis of various designs can be used in the upper and lower limbs. A hinge can be added to allow motion

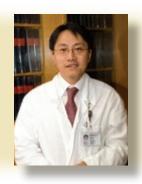


#### A Chat with Dr. Frankie Leung

**Division Chief of Orthopaedic Trauma** 

Kenny Kwan / Evelyn Kuong

"Every fracture is different...this makes fracture fixation interesting"



## What made you interested in subspecialising in orthopaedic trauma?

Trauma is a very huge area, particularly with the effects of osteoporosis leading to a different spectrum of fractures in our population. The fascinating thing is that every fracture is different. Although there are certain principles in guiding general fracture management, treating a difficult fracture is still very challenging. This makes fracture fixation interesting all the time.

## As Head of the Trauma Division, what vision do you have for the team?

I think we are going in two directions.

First, we have to improve the service in terms of managing osteoporotic fractures. I think besides treating the fracture itself, we need to look after the patient as a person, and we must build up a multi-disciplinary approach in managing these elderly patients with hip and other fragility fractures. This is so important because as orthopaedic surgeons we are often the first doctors these patients will see, and we know that apart from fixing the fracture, there are so many other aspects of osteoporosis that need to be looked after. Thus we are the gatekeeper between these patients and the medical community. Second, we are constantly striving to improve the scientific value of what we are doing. We need to plan more clinical trials and research to demonstrate the effectiveness of our intervention. There are so many new fixation devices, such as locking plates, new nails, new external fixators, which cost a lot more, but some of them may have unproven benefits. We want to practise more evidence-based medicine in our fracture management, in particular, that by improving our fixation method, we are providing more benefits to our patients.

#### What are the academic interests of this Division?

On the clinical aspect, we are involved in looking into the usefulness of new implants, and developing guidelines for their use in clinical practice. There have been lots of rules in the past, for example the number of screws needed for stable fixation or the placement of the lag screw in the femoral head. These guidelines may no longer apply with newly available implants, and new guidelines are called for. We are also updating ourselves with new techniques of minimal invasive surgery, and looking for new applications for it.

On the basic research aspect, we are looking to collaborate more with other investigators to look into the effect of osteoporosis on fracture fixation and bone healing.

## You play a big role in the work of the AO foundation. How did you first get involved with that?

I think the initial work was started by Professor SP Chow who did a great deal of work in the Foundation as a Senior Trustee.

After he finished his term, he suggested me to take up the membership as a trustee. So since 1996 we have been organizing annual AO activities in Hong Kong. Through this, we have met a lot of visitors and international experts in the field of trauma and fracture fixation. This is how my AO experience started.

## What aspects of AO work have you found most interesting?

I think it is the interaction with different surgeons around the world – that is definitely the most fascinating part. Normally in your own practice, you are not exposed to what other people are doing. But by exchanging ideas you realize how well or badly you are doing. You then start to wonder how other experts are able to achieve those excellent results compared with your own surgical results. It helps you to think through what you do and apply to your own surgical techniques. It has definitely helped me to develop my own thought processes in my surgical approach, and this kind of exposure constantly reminds me that there is always room for improvement in my practice.



# How do you think the organization of Trauma care in Queen Mary Hospital and in Hong Kong compared with the rest of the world?

I think the standard of our care here in Hong Kong is really of international standard. We have the most sophisticated instruments available to deal with all kinds of fractures, and we have a dedicated team of surgeons to treat trauma patients. When we compare the outcome of our surgery with the rest of the world, we should be really proud of our achievements in Hong Kong.

Having said that, I think Hong Kong is a very safe city, and we do not have the same volume of polytrauma patients compared with some other countries. Naturally they have more experience in managing these patients and the standard of care in some of the international trauma centres are better developed than ours. We can look into some of their protocols and pathways and improve our management of the severely traumatized patients accordingly.

## What aspects of the delivery of trauma care in Hong Kong can be improved?

On a general basis, the Hospital Authority can divert more resources to look after the geriatric hip fracture patients. Recently, we have been looking at their pre-operative waiting time, which is a very good initiative. Within our own cluster, we have been looking at the pre-operative guidelines so we can improve the optimisation of these patients for surgery.

## What is the best experience you have had working in this hospital?

I think the best experience is still treating patients and to know that they have a good recovery. It is very gratifying and most rewarding. I also enjoy working with lots of different colleagues; I have spent almost 20 years working in this hospital and there are lots of people who have come and left the department and the hospital. Every now and then I meet some young and dedicated colleagues whom I enjoy working with particularly.

### On a personal note, how do you balance your busy work schedule with a healthy family life?

It is difficult to strike a balance between work and family. What I am trying to do is becoming "the best employee", that is to say the border between work and family life is really blurred now. I do my emails concerning the AO activities and some of the academic meetings in the evenings when the kids are studying at home. For a lot of the meetings, I bring along my family in order

to spend more time with them before and after the academic activities. That is the only way to get a balance now. I certainly hope to spend more time with my kids as they are really growing up now.

#### What kind of things do you enjoy doing with the family?

We go hiking around the Peak and the beaches, and we do some indoor sports too as well as swimming every now and then. We also enjoy watching movies at home.

I have never been to Africa and South America, and hopefully, I will be able to plan a really long leave and spend some time there.

#### Do you have any word of advice for the trainees?

You can never predict what will happen in the future, so my advice to the new trainees is to set your own targets and goals. Then you work very hard to achieve them. At times they may not seem very realistic but if you work hard enough, you know you can still achieve a lot. Thus, never underestimate yourselves. Even sometimes you think you are a small potato in the hospital, the work you do is very important, so never give up.



#### **Medecins Sans Frontieres Surgical Week** 1-7 September 2008

The Medecins Sans Frontieres held a week long surgical training course for their field operatives in September 2008, and our department was honored to have been involved upon Prof SP Chow's recommendation. Six days of the 8-day course was held at the HKU Faculty of Medicine Building, and one whole day was devoted to the orthopaedic aspects of surgical care. Drs Frankie Leung, KC Mak and K Kwan from our department delivered lectures and moderated workshops, spanning topics from wound care and fracture management in the field. Dr W Li from QEH was also involved. We look forward to being involved in future MSF activity.

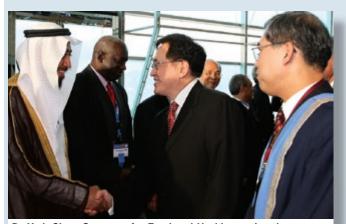


Dr. Frankie Leung, KC Mak and Wilson Lee helped organizing the Medecins Sans Frontieres surgical training course

#### SICOT/SIROT 2008 XXIV Triennial World Congress 24 – 28 August 2008, Hong Kong Congress President: Prof. Keith Luk

SICOT, Société Internationale de Chirurgie Orthopédique et de Traumatologie, is an international non-profit association with the aim to promote the advancement of the science and art of orthopaedics and traumatology at international level in particular for the improvement of patient care, and to foster and develop teaching, research and education. This is the third time in the history of SICOT that the Triennial World Congress was being held in Asia. Our Department is very proud to be the host of the event. A very comprehensive scientific program including Plenary Lectures, Current Trend Lectures, Symposia and Free Paper Sessions were put up by our Local Organizing Committees and SICOT Education Committee. The meeting also received great support from various subspecialty societies e.g. AO Foundation, Scoliosis Research Society, International Hip Society, World Health Organization, Hong Kong College of Orthopaedic Surgeons, Hong Kong Orthopaedic Association, International Federation of Paediatric Orthopaedic Societies, and World Federation of Hemophilia. The meeting was a hugh success.

The Congress also provided a great opportunity for members to meet up in the Presidents' Dinner, National Delegates Banquet and SICOT Fun Night.



Dr. York Chow Secretary for Food and Health greeting the National Delegates



National Delegates Banquet





Cody Bünger (SICOT President), Keith Luk (SICOT Congress President), Chadwick Smith (SICOT Immediate Past President), Pei Fuxing (COA Vice-President), John Leong (SICOT Past President), Thami Benzakour (SICOT 1st Vice-President), PC Leung (SIROT Immediate Past President)





Our Department also hosted a social gathering in the Hong Kong Club

# Residents' Corner Hong Kong Orthopaedic Association Interhospital Soccer Competition

"Goal!.." The Interhospital Soccer Competition organized by the HKOA was held on 6 September 2008. Our team came third in the tournament. Everybody had a very good time . The kids also had a chance to participate in the penalty shoot out.



Our top scorers of the team, Dr. Brian She (left) and Dr. Mohamed Eid (right)





Jason Cheung, KH Leung, Mohamed Eid, KC Mak, Michael To and his son, HB Leung and Brian She (left to right)

# 28th The Duchess of Kent Children's Hospital Annual Fair Day 1st November 2008

The Fair Day is an annual charity event organized by The Society for the Relief of Disabled Children at The Duchess of Kent Children's Hospital. Both the Society and the staff of DKCH work very hard to help raise funding for the children in need.



Opening ceremony officiated by Dr. Lawrence Lai (Cluster Chief Executive, Hong Kong West Cluster), Mr. Vivian Lee (Chairman of The Society for the Relief of Disabled Children) and members of the Society







# 6th Hong Kong International Orthopaedic Forum The Musculoskeletal Degeneration

25-26 April 2009 Li Ka Shing Faculty of Medicine The University of Hong Kong

The Hong Kong International Orthopaedic Forum is an official departmental annual event. The title this year is The Musculoskeletal Degeneration.

Topics were chosen each year to help arouse the interest and awareness of health care professionals of all disciplines and to update the latest development in the field of orthopaedics. This compact two-day program will highlight the

recent advances in the management of degenerative musculoskeletal diseases including hand arthritis, osteoarthritis of the knees, lumbar spine degeneration and rotator cuff arthropathy. Apart from our renowned local experts, we have also invited international experts, including Prof. Eiji Itoi and Prof. Dieter Grob to share their experience in managing our ageing population.

Early Bird Registration: **Before 28 Mar 2009** 

For further information, please visit our website: <a href="https://www.hku.hk/ortho/ortho/6hkiof">www.hku.hk/ortho/ortho/6hkiof</a>





#### **Research Awards in International Conferences**

Our basic science research continues to receive recognitions in many local and international meetings. Congratulations to our research students, Stephen Lam, Hunter Liu, Raven Lui and WM Lam

**Dr. Li Zhaoyang** has also been awarded the Web Jee Travel Award in the 2008 International Conference on Osteoporosis and Bone Research, October 22-25, Beijing, China.

Investigators	Title	Awards	Meeting
Stephen Lam, Xiao Jun, William Lu and Keith Luk	Large Animal Model for the Intervertebral Disc Allograft Transplantation	Certificate of Merit in the Best Young Engineers Competition	The BME2008 Biomedical Enginnering Conference
<b>Hunter Liu</b> , Yong Hu, CQ Chang and Keith Luk	Comparison of Blind Source Separation Methods in Fast Somatosensory Evoked Potential Detection	Certificate of Merit in the Best Young Engineers Competition	The BME2008 Biomedical Enginnering Conference
Raven Lui, Kelvin Yeung, Paul Chu, Keith Luk, Kenneth Cheung	Bioactivity Enhancement of Polyetheretherketone (PEEK) by Plasma Immersion Ion Implantation	Certificate of Merit in the Best Young Engineers Competition	The BME2008 Biomedical Enginnering Conference
Li ZY, Lu WW, Chiu PKY, Lam WM, Cheung KMC, Fang D, Leong JCY, Luk KDK	Micro-architectural and nano-mechanical properties of trabecular bone with strontium treatment in osteoporotic goats	Best Poster Award	2008 International Conference on Osteoporosis and Bone Research, October 22-25, Beijing, China
WM Lam, WW Lu, WK Chan, W Tang, CT Wong, ZY Li, C Yang, MK Fong, KDK Luk	Fatty acid functionalization strontium hydroxyapatite nanorod and application	Second Oral Presentation Prize	The International Society of Orthopaedic Surgery and Traumatology, SICOT

#### **Prof. SP Chow's Dinner Reception on 28 June 2008** In celebrating Prof. Chow's appointment as the Pro-Vice-Chancellor, a dinner reception was held on 28 June 2008.

In celebration of Prof. SP Chow's appointment as the Pro-Vice-Chancellor of HKU, our Department has hosted a dinner reception on 28 June 2008. We were very honored to have Prof. Lap-Chee Tsui to be our Guest of Honor of the evening. Old friends who have once worked with Prof. Chow, colleagues from the University and different hospitals, and even patients all came to the celebration party.

The evening was filled with laughters when our guests shared many untold stories of Prof. Chow. Dr. WK Ngai spoke of his junior years working for Prof. Chow; Dr. D Chang recalled how Prof. Chow became a hand surgeon and his secret experimentations on microvascular surgery; Dr. WB Wong described in details how Prof. Chow scrubbed up for surgery and Dr. YK Chan talked about his brutal stories when he was being trained by Prof. Chow.

To thank Prof. Chow for his wonderful 38 years of service in the Department and his great contribution in hand surgery, "The Surgical Hands" was presented to Prof. Chow.



Prof. Lap-Chee Tsui presented a souvenir to Prof. Chow



Prof. Keith Luk presented "The Surgical Hands" to Prof. Chow for his great contribution in hand surgery







Members of 毅希會 talked about the contribution of Prof. Chow in helping them to establish their society



The evening was concluded with group photo session

# The Fifteenth International Meeting on Advanced Spine Techniques (IMAST) 8-11 July 2008

#### Chairman of International Committee: Prof. Kenneth Cheung

This is the first IMAST held in Asia. Near 1000 attendees participated in the meeting and in fact a record-breaking number of attendees for an IMAST ever. Over 100 leading spine surgeons from around the world gathered in Hong Kong to discuss about the latest technology in spine surgery. Participants were given an excellent opportunity to access the most recent advances in treating scoliosis, trauma, tumour and degeneration in the spine. Besides oral and poster presentations, a new "Fundamentals" track was offered this year. Sessions on lumbar degenerative conditions, cervical conditions and deformities were taught by expert lecturers including Drs TR Kuklo, AA Mehbod and LG Lenke from the United States.

Five instructional course lectures were organized so that audience could acquire the technical knowledge in dealing with complex spinal conditions. Majority of attendees rated the meeting as good to excellent.

A group of surgeons (right) attending IMAST also visited our "historic" The Duchess of Kent Children's Hospital – Home of Spinal Tuberculosis and Halo-Pelvic Traction for treatment of spinal deformities. The surgeons were excited to see the place that they have heard so much about in the history of the treatment of spinal deformities. The visits included representatives from the Board of Directors of the Scoliosis Research Society.



#### **Research Grants**

Our research projects have received great support from the Research Grants Council and Hong Kong Innovation and Technology Fund

Project Title	Principle Investigators	Funding Scheme
Dynamic Surface Electromyography Topography for Objective Assessment of Low Back Pain.	Dr Y Hu	Research Grants Council - General Research Fund
Hardware Oriented Processor for Evoked Potential Fast Extraction and Auto-detection	Dr Y Hu	Hong Kong Innovation and Technology Fund (ITF)
Nano Mechanics of Individual Collagen Fibrils of the Human Intervertebral Discs Using Optical Trap Technique	Dr WW Lu	Research Grants Council - General Research Fund
Uncovering new compounds and mechanisms for treatment of intervertebral disc degeneration by Chemical Genetics	Prof. KMC Cheung	Research Grants Council - General Research Fund
A functional MRI study of the chronically compressed spinal cord in humans	Prof. KDK Luk	Research Grants Council - General Research Fund

#### **Upcoming Events**

#### 2008 & 2009

Date	Event	<b>V</b> enue
13-16 Nov 2008	The Third International Congress of Chinese Orthopaedic Association <a href="http://www.coachina.org/en/index.shtml">http://www.coachina.org/en/index.shtml</a>	Suzhou International Expo Center, Suzhou, Jiangsu province, China
26 Nov 2008	Guest Lecture on Computer Navigation Assisted Orthopaedic Surgery by Professor Christian Krettek, 10th Yang Hsueh Chi Visiting Professor	5/F Lecture Theatre, Department of Orthopaedics & Traumatology, QMH
29-30 Nov 2008	The 28th Annual Congress of the Hong Kong Orthopaedic Association <a href="http://hkoa.org/coming/Congress/main.htm">http://hkoa.org/coming/Congress/main.htm</a>	The Hong Kong Convention and Exhibition Centre
2 Dec 2008	Guest Lecture on Adult Stem Cells and Nanomaterials for Skeletal Tissue Engineering and Regeneration by Professor Rocky S Tuan	Cheung Kung Hai LT1, MW Mong Block, LKS Faculty of Medicine Building, The University of Hong Kong
3 Dec 2008	Guest Lecture on Signaling Mechanisms Regulating Mesenchymal Stem Cells & Mechanisms and Disease Modulation of Articular Cartilage Degeneration by Professor Rocky S Tuan	Cheung Kung Hai LT1, MW Mong Block, LKS Faculty of Medicine Building, The University of Hong Kong
25-26 Apr 2009	6th Hong Kong International Orthopaedic Forum - Musculoskeletal Degeneration	MW Mong Block, LKS Faculty of Medicine Building, The University of Hong Kong

#### **Announcement**

Many of our staff continue to excel their talent and are highly recognized locally and internationally.

#### **Congratulations**

**Prof. Keith Luk** was awarded the Outstanding Research Output Prize by the Faculty for his publication of Intervertebral Disc Transplantation in Lancet earlier. **Prof. Keith Luk** has been invited to give the Harry Crock Lecture at the Imperial College, London on 1st Oct 2008. Harry Crock is listed in the Spine Hall of Fame and is also the founding member of The International Society for Study of the Lumbar Spine (ISSLS).

**Prof. Kenneth Cheung** has won the North America Spine Society (NASS) Henry Farfan Award for his outstanding contributions in spine related basic science research. He is also one of the few non-US residents and non-NASS members ever received the Award. Prof. Cheung has also been invited to join the Board of Directors of the Scoliosis Research Society.

Ms Teresa Li (DOM, Orthopaedics and Traumatology) has obtained her doctoral degree in Health Science in October 2008.



Prof. Luk was invited to give the Harry Crock Lecture at the Imperial College London



Prof. Cheung is awarded the NASS Henry Farfan Award



Ms T. Li is the first DOM in QMH to obtain a Doctoral Degree in Health Science. Congratulations to Dr. Li

#### **New Appointments**

**Dr. Michael To** and **Dr. CH Yan** have been appointed Clinical Assistant Professors

**Dr. Hu Yong** has been appointed Non-Clinical Assistant Professor

#### Goodbye

**Dr. WM Tang** and **Dr. Jimmy Wong** have left for private practice.

#### **EDITORIAL BOARD**

Dr. Michael To

Dr. KC Mak

Dr. Margaret Fok

Dr. Christian Fang

Dr. Kenny Kwan

Dr. Evelyn Kuong

Dr. KH Leung

Dr. Jason Cheung

Department of O&T Queen Mary Hospital

102 Pokfulam Rd

Hong Kong

Tel (852) 28554654

Fax (852) 28174392

#### **Recent Publications**

SK Ahmed, BKK Fung, WY Ip, M Fok, SP Chow. The versatile reverse flow sural artery neurocutaneous flap: A case series and review of literature. Journal of Orthopaedic Surgery and Research 2008; 3: 15

SK Ahmed, BKK Fung, et. Sensate flap for bed sores: between dream and reality: A cadaver dissection study. Journal of Orthopaedics 2008: 5(2)

JPY Cheung, BKK Fung, WY Ip, SP Chow. Occupational repetitive strain injuries in Hong Kong. Hong Kong Medical Journal 2008; 14(4)

KMC Cheung, ACS Cheng, WY Cheung, YS Chooi, YW Wong, KDK Luk. Right hip adduction deficit and adolescent idiopathic scoliosis. Journal of Orthopaedic Surgery 2008; 16(1): 24-6

KMC Cheung, AG Sameera. Current understanding of low back pain and intervertebral disc degeneration: epidemiological perspectives and phenotypes for genetic studies [Mini-symposium on Genetic Approaches to disc disease]. Current Orthopaedics 2008; 22(4): 237-244

KMC Cheung, JP Wu, QH Cheng, BSC Ma, J Gao, KDK Luk. Research article: Treatment of stiff thoracic scoliosis by thoracoscopic anterior release combined with posterior instrumentation and fusion. Journal of Orthopaedic Surgery and Research 2007, 2: 16

KY Chiu, WP Yau, TP Ng, WM Tang. The accuracy of extramedullary guides for tibial component placement in total knee arthroplasty. International Orthopaedics 2008, 32(4): 467-471

MWM Fok, HB Leung, WM Lee. Osteoporosis: public awareness, commitment, and perspectives. Hong Kong Med J 2008; 14: 203-8

MWM Fok, HB Leung. Unresolved lytic lesions following parathyroidectomy in a patient with chronic renal failure. Journal of Bone and Joint Surgery (British Volume) 2008; 90(B): 506-9

I Gibson, SP Chow, KW Lam, WW Lu, AHW Ngan, WY Ip, KY Chiu. The development of an artificial finger joint. Bio-Materials and Prototyping Applications in Medicine 2008; Chapter 9:157-190

DWH Ho, D Chan, KMC Cheung, P Sham, YQ Song. Family-linkage and case control association studies [Mini-symposium on Genetic Approaches to disc disease]. Current Orthopaedics 2008; 22(4): 251-258

SMY Ho, BKK Fung, ASM Fung, SP Chow, WY Ip, SFY Lee, EYP Leung, KWY Ha. Overprotection and the psychological states of cerebral palsy patients and their caretakers in Hong Kong: a preliminary report. Hong Kong Med J 2008; 14(4): 286-291

Y Hu, Y Ding, D Ruan, YW Wong, KMC Cheung, KDK Luk. Prognostic value of somatosensory-evoked potentials in the surgical management of cervical spondylotic myelopathy. Spine 2008; 33(10): E305–E310

Y Hu, HB Leung, WW Lu, KDK Luk. Histologic and electrophysiological changes of the paraspinal muscle after spinal fusion: An experimental study. Spine 2008; 33(13): 1418–1422

Y Hu, JNF Mak, YW Wong, JCY Leong, KDK Luk. Quality of life of traumatic spinal cord injured patients in Hong Kong. J Rehabil Med 2008; 40: 126–131

F Leung, YK Tu, WYC Chew, SP Chow. Comparison of External and Percutaneous Pin Fixation with Plate Fixation for Intra-articular Distal Radial Fractures: A Randomized Study. J Bone Joint Surg Am. 2008; 90: 16-22

VYL Leung, SC Hung, LC Li, EX Wu, KDK Luk, D Chan, KMC Cheung. Age-related degeneration of lumbar intervertebral discs in rabbits revealed by deuterium oxide-assisted MRI. Osteoarthritis Cartilage (2008), doi:10.1016/j.joca.2008.03.015

YZ Li, T Xu, LQ Wang, Y Hu. fMRI-constrained Source Analysis of Visual P300 in Landolt Ring task. Chinese Science Bulletin 2008; 53(1): 76-86

XM Liu, SL Wu, PK Chu, CY Chung, CL Chu, YL Chan, KWK Yeung, WW Lu, KMC Cheung, KDK Luk. In vitro corrosion behavior of TiN layer produced on orthopedic nickel-titanium shape memory alloy by nitrogen plasma immersion ion implantation using different frequencies. Surface & Coating Technology 2008; 202: 2463-2466

KDK Luk, AS Don, CS Chong, YW Wong, KMC Cheung. Selection of Fusion Levels in Adolescent Idiopathic Scoliosis Using Fulcrum Bending Prediction: A Prospective Study. Spine 2008; 33(20): 2192-2198

KFJ Ng, JC Lawmin, CCF Li, SF Tsang, WM Tang, KY Chiu. Comprehensive evaluation of platelet dysfunction in patients taking diclofenac before joint arthroplasties. Journal of Arthroplasty 2008; 23: 424.430

P Sham, SS Cherny, PYP Kao, YQ Song, D Chan, KMC Cheung. Wholegenome association studies of complex diseases [Mini-symposium on Genetic Approaches to disc disease]. Current Orthopaedics 2008; 22(4): 259,266

YQ Song, KMC Cheung, DWH Ho, SCS Poon, K Chiba, Y Kawaguchi, Y Hirose, M Alini, S Grad, AFY Yee, JCY Leong, KDK Luk, SP Yip, J Karppinen, KSE Cheah, P Sham, S Ikegawa, D Chan. Association of the Asporin D14 Allele with Lumbar-Disc Degeneration in Asians. The American Journal of Human Genetics 2008; 82: 1-4

YQ Song, DWH Ho, J Karppinen, PYP Kao, BJ Fan, KDK Luk, SP Yip, JCY Leong, KSE Cheah, P Sham, D Chan and KMC Cheung. Research article: Association between promoter -1607 polymorphism of MMP1 and Lumbar Disc Disease in Southern Chinese. BMC Medical Genetics 2008: 9:38

YQ Song, P Sham, KMC Cheung, D Chan. Genetics of disc degeneration. [Mini-symposium on Genetic Approaches to disc disease]. Current Orthopaedics 2008; 22(4): 259-266

M Takemitsu, KMC Cheung, YW Wong, WY Cheung, KDK Luk. C5 nerve Root palsy after cervical laminoplasty and posterior fusion with instrumentation. J Spinal Disord Tech 2008; 21(4): 267-272

WM Tang, KY Chiu. Letter to editor: Variances in sagittal femoral shaft bowing in patients undergoing TKA. Clinical Orthopaedics and Related Research 2008; 466(4): 1008-9

K Wong, TP Ng, KY Chiu. Hip pain after years of hip fusion: Report of two cases. Journal of Bone and Joint Surgery (British Volume) 2008; 90B: 510-511

YW Wong, KDK Luk. Spinal epidural hematoma in a scoliotic patient with long fusion: a case report. The Spine Journal 2008; 8: 538–543

SL Wu, XM Liu, YL Chan, CY Chung, PK Chu, CL Chu, KO Lam, KWK Yeung, WW Lu, KDK Luk, KMC Cheung. In vitro bioactivity and osteoblast response on chemically modified biomedical porous NiTi synthesized by capsule-free hot isostatic pressing. Surface & Coating Technology 2008; 202: 2458-2462

WP Yau, PKY Chiu. Cutting errors in total knee replacement: assessment by computer assisted surgery. Knee Surg Sports Traumatol Arthrosc DOI 10.1007/s00167-008-0550-x

WP Yau, KY Chiu, JL Zuo, WM Tang, TP Ng. Computer navigation did not improve alignment in a lower-volume total knee practice. Clin Orthop Relat Res 2008; 466: 935-945

WP Yau, A Leung, KG Liu, CH Yan, LS Wong, KY Chiu. Errors in the identification of the transepicondylar and anteroposterior axes of the distal femur in total knee replacement using minimally-invasive and conventional approaches: A Cadaver study. J Bone Joint Surg [Br] 2008; 90-B: 520-6

KWK Yeung, YL Chan, KO Lam, XM Liu, SL Wu, XY Liu, CY Chung, WW Lu, D Chan, KDK Luk, PK Chu, KMC Cheung. New plasma surface-treated memory alloys: Towards a new generation of "smart" orthopaedic materials. Materials Science and Engineering 2008; C28: 454–459

Zhang ZG, Zhang VW, Chan SC, McPherson B, Hu Y. Time-frequency analysis of click-evoked otoacoustic emissions by means of a minimum variance spectral estimation-based method. Hear Res. 2008; 243(1-2): 18-27

Zhou GQ, Yang F, Leung VVL, Cheung KMC. Molecular and cellular biology of the intervertebral disc and the use of animal models. [Mini-symposium on Genetic Approaches to disc disease]. Current Orthopaedics 2008; 22(4): 267-273