Department of Orthopaedics & Traumatology
Queen Mary Hospital
The University of Hong Kong Medical Centre
Newsletter

Vol. 6, Issue 1, October 2007

Painful Swollen Knees

Dr. Jimmy WK Wong

"Often the knee is painful and swells," the patient said.

A painful swollen knee without trauma is a common complaint and the diagnoses can be many. Nothing can substitute a good history and examination to arrive at a correct diagnosis. Although by far the commonest cause is degenerative arthritis, it helps to remember the congenital and acquired list to avoid missing other possible diagnosis. Reactive effusion may be brought on by a nearby osteogenic sarcoma!

Congenital/ Developmental		Discoid meniscus
Acquired	Degenerative	Loose body
	Metabolic	Gout
	Inflammatory	Rheumatoid arthritis
	Neoplastic	Benign - PVNS Malignant - osteosarcoma
	Infection	TB, Gonococcal
	Trauma	Chronic ACL insufficiency

It also helps to note that patients sometimes are not good at describing pain and swelling (although some say the doctors are not good listeners). The time spent on enquiring about the nature, characteristic, onset, frequency, duration, exact sites, provoking and relieving factors can be worthwhile. Pitting oedema of ankles and legs can be interpreted as swollen knees by the patients. It is important to clarify on what the patients really complain.

The past medical history and family history can give hints to arrive at a diagnosis. Associated symptoms such as giving way and locking can point to diagnosis such as chronic anterior cruciate ligament insufficiency or presence of loose bodies (Fig 1a,b). The presence of fever and overseas traveling should be enquired in suspected patients for unusual infection.

Fig 1a,b Photographs showing x-rays and retrieved loose bodies from a knee

Clinical examination should start with general inspection of the patient for stigmata of inflammatory joint disease such as skin rash, nail and fingers abnormalities. The presence of effusion should be confirmed. Obvious loose bodies can be palpable. The range of motion of knee should be documented. Specific tests of the knee for ligamentous laxity and meniscus tear may be useful. The popliteal fossa should also be examined.

Investigation with blood test for inflammatory markers is helpful. Aspiration of the knee may be useful to establish diagnosis. In the suspicion of infection of the knee, aspiration of the knee for culture must be performed. Repeated aspiration of blood may herald the suspicion of pigmented villonodular synovitis (Fig 2a,b) or a bleeding disorder. Aspiration may diagnose gouty arthritis if microscopy shows gout crystals.

C/o Department of Orthopaedics & Traumatology

5/F Professorial Block, Queen Mary Hospital, Pokfulam, Hong Kong.
Tel : (852) 2855 4654
Fax : (852) 2817 4392
Website : http://www.hku.hk/ortho/ortho
Email : ortho1@hkucc.hku.hk

Fig. 2a,b Photographs showing the repeated aspirate of old blood from a knee with PVNS and the arthroscopic view of it

Magnetic resonance scan can be very useful when indicated. The typical appearance of PVNS and the odd cases of intraarticular lipoma arborescence (Fig 3a,b) can be diagnostic.

Sorting out the causes of a painful swollen knee may require some detective work and it should not be difficult with a sound clinical approach.

Fig. 3a,b Photographs showing MRI and arthroscopic appearance of lipoma arborescence

Upcoming 5th Hong Kong International Orthopaedic Forum

THE NEW FRONTIERS
19-20 APRIL 2008

The Hong Kong International Orthopaedic Forum is an official annual event of our department. Topics are 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. The first forum, **The Aging Skeleton**, was held in 2004 with the aim to tackle the emerging problems of our aging population in Hong Kong, in particular those with osteoporosis and degenerative joint diseases. The second forum covered **Work-Related Injuries** which we face everyday in our practice. Apart from orthopaedic experts, legal professionals and clinical psychologists were invited to arrange interactive discussion sessions which our participants enjoyed most. The focus shifted to **Common Pitfalls in Orthopaedic Practice** in our 3rd forum to remind our healthcare providers of some potential blunders, so as to avoid further increasing liability premium in the daily practice. After spending much emphasis on the mature skeletons, **Musculoskeletal problems in the skeletally immatured** was chosen as the main theme last year. Topics ranged from congenital abnormalities and cerebral palsy to sports injury and trauma in children and adolescents.

The title of the forum this year is **The New Frontiers**. Many new procedures, implants and instruments were developed in the past decade. Our department has planned a compact two-day program, which includes instructional course lectures from international experts, symposia on the scientific background and interactive case discussions. Topics include hip arthroscopy, hip preservation procedures, minimally invasive treatment in trauma and spine.

Please visit our website for further information: http://www.hku.hk/ortho/ortho and for early bird registration!

Cutting Edge Development

Intervertebral disc transplantation in the treatment of degenerative spine disease: a preliminary study

Dike Ruan, Qin He, Yu Ding, Lisheng Hou, Jingyun Li, Keith DK Luk
The Lancet; 2007; 369, 993-999

"THIS NEW APPROACH COULD BE OF PARTICULAR INTEREST FOR YOUNGER PATIENTS FOR WHOM PREVENTION OF ADJACENT-LEVEL DEGENERATION IS IMPORTANT."

– Wafa Skalli, Jean Dubousset.

The current treatment for symptomatic degenerative disc disease includes either fusion or motion preservation strategy. Spinal fusion remains the gold standard over the years in relieving pain and restoring alignment in lumbar and cervical spine. However, suppression of a motion segment of a spine may lead to acceleration of degeneration of the adjacent segment. Artificial disc replacement in preserving motion in the diseased segment is an attractive alternative. However, medium and long term results are not totally satisfactory. Biological regeneration of the disc by the use of growth factors or pluripotent cells offers the possibility of re-populating the nucleus pulposus with cells. However, the gene expression, viability and function of these cells remain uncertain. Even if there is successful repopulation of cells in the nucleus pulposus, the advanced degradation of the annulus fibrosis may not be able to provide adequate support for the regenerated disc to function normally.

The concept and technique of intervertebral disc transplantation have finally unveiled a new treatment option for degenerative disc disease. Between March 2000 and January 2001, five patients with an average age of 47 received fresh-frozen endplate-disc-endplate allograft transplantation at the cervical spine after disc excision. These patients had cervical disc herniation resulting in cervical myelopathy or incomplete paraplegia. The allografts were harvested from three previously healthy young female donors, ages 20-30 years, who had died from trauma. The grafts with the most compatible size were used in the transplantation. Following the surgery, serial MRI and static and dynamic radiographs were used to monitor the status of the grafts and the sagittal stability and mobility of the segment. The neurological and functional recovery was regularly monitored in the follow-up. The minimum follow-up period was five years in this series.

Fig. 1 MRI sagittal view, T2 weighted, showing transplanted disc with nucleus signal comparable with adjacent discs 14 months after surgery

Fig. 2 Flexion-extension radiographs for the pateint showing disc motion shifting towards extension after surgery. (The Lancet 2007; 369, P.996 & 997)

All patients had good union of the graft endplates by the end of three months after surgery and they all had improved neurological symptoms and functional scores. No immunoreaction was detected in any of the subjects. At a 5-year follow-up, preservation of 7.0-11.3 degrees of sagittal disc motion has been observed in four patients. One patient however has developed spontaneous fusion. There was no adjacent level degeneration in any of the patients within the follow-up period. The cervical lordosis was well preserved in all patients. Mild degenerative changes of the transplanted discs were observed with decrease in disc height but MRI at 5 years showed preservation of hydration in at least two discs.

There are three goals to be fulfilled in the design of any motion preservation strategy for the spine: stability, mobility, and anatomy. With proper size matching and positioning of the allograft, both stability

and mobility were achieved in this small clinical series. However, compared with the artificial disc, allograft disc transplantation has not been able to achieve a full restoration of disc height – ie, the anatomy. Whole disc transplantation has several theoretical and potential advantages compared with the artificial disc. Remodeling was observed in one of the patients treated with disc transplantation during the follow-up. Hence, a less than ideally positioned allograft is less likely to fail, whereas the margin for error in the placement of an artificial disc is much smaller. The biological disc may have the advantage of finding its new instant axis of rotation than an artificial disc in which the axis of rotation is predetermined by its design. Finally, the biological disc may also provide a young and non-degenerated scaffold for the endogenous or exogenous nucleus pulposus cells to survive or regenerate.

With further improvement in transplantation techniques, indications of disc transplantation can be extended to benign tumourous lesions, traumatic disc herniations without substantial bony and ligamentous injuries, and inflammatory disease. Disc transplantation could open a new dimension in the treatment of degenerative disc disease.

A Chat with Prof. Keith Luk

Evelyn Kuong

ON HIS LATEST RESEARCH ON INTERVERTEBRAL DISC TRANSPLANTATION...

How did you come up with the idea of intervertebral disc transplantation?

Spinal fusion has been the standard treatment for degenerative disc disease for a long time. However, in my opinion, spinal fusion is an admission of defeat. We should be doing our utmost to preserve motion in the spine for all of our patients. Having said that, we should also understand that we, as surgeons, cannot do better than what nature has already provided for us in the design of the intervertebral disc. It was then that the idea of intervertebral disc transplantation occurred to me. Instead of trying to replace the disc with foreign materials, we should consider transplanting the disc as an organ. We've been doing transplantations of various other organs for years now... why not the intervertebral disc? Moreover, human intervertebral discs are also readily available and several discs can be harvested from a single donor.

"We should be doing our utmost to preserve motion in the spine for all of our patients"

Were there any low points during the research process?

Back in the early days of my career, resources were very scarce. Not only was there a lack of materials and funding, the technology at the time was also more crude. While we had the grand idea of where our research was heading, simple technical difficulties slowed us down every step of the way. A good example of this was the animals on which we experimented. We wanted to perform our experiments on upright primates, namely monkeys. However, we encountered many difficulties finding monkeys in Hong Kong and we eventually had to turn to the mainland for our source. Then as we progressed towards the actual surgeries on the monkeys, we found that the smallest of details were weighing us down. How could we find two teams of surgeons and anesthetists who could simultaneously perform surgeries on two monkeys? If anything was to go wrong during one of the surgeries, how would we get blood transfusions for the monkeys, given that there is no blood bank in Hong Kong for monkeys? What if the intervertebral disc of the donor monkey was slightly bigger or smaller than that of the recipient? How could we ensure that the fresh allografts were being safely handled and transported to the recipient?

While it may seem that these are all difficulties that would discourage one from pursuing their research interest, I saw them as challenges. In doing research, it is all a matter of how you face these challenges. You may let them put a halt to your work, or you can work your way around the issue and try to overcome the obstacle. So to answer your question… No, I would not say that there were any "low points" during the research process. Rather, there were a few hurdles that we had to clear before we reached our final destination. The research path can be rather bumpy, but it is up to you to resolve the problems!

Did it ever occur to you that it would take sixteen years to finally establish and introduce this groundbreaking idea to the world?

Time is not an issue to me when it comes to establishing the safety and workability of a new idea. While sixteen years may seem like a long time, it was more of a concern to us that this new method could be proven that it can be safely applied to the general public. That is why we took so much pain in being so thorough with our research. For example, once we started performing this procedure in our patients, we ensured that we had a five-year follow-up before we presented our results to the Lancet. It was the only way to ensure that what we had come up with was genuinely safe for our patients.

Are there any obstacles in its application in Hong Kong?

There are certainly many more steps that need to be taken before intervertebral disc transplantation can be considered a standard treatment for degenerative disc disease. First of all, we still need a large multi-center trial before applying this technique to the general public. Secondly, there are still a few technical issues to be ironed out. For example, we are still trying to work out the best way to preserve the harvested grafts after removing them from a donor. Then, we have to deal with the cynics who argue that degenerative disc disease is not a life-threatening disease and therefore resources for our research should be limited. While this fact may be true, we still have to deal with the reality of our aging population and a real need for this technique to be developed to benefit our patients' quality of life. Intervertebral disc transplantation does not burn any in terms of allowing room for future salvage surgeries. This strategy should not be more costly to the health care system than artificial implants which have become very popular recently.

Is there anybody that you would like to thank in particular?

Among the innumerable people who have spent their precious time and energy on this project, I must especially acknowledge our collaborators in mainland China in particular Prof DK Ruan at the Beijing Navy Hospital. Without their aid, we most certainly could not have completed this immense task!

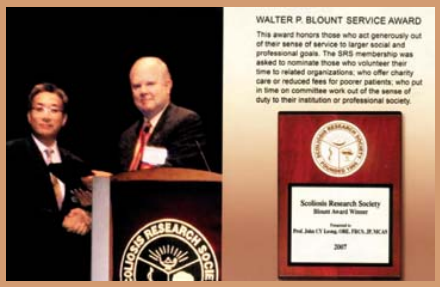
ON HIS ENDOWED PROFESSORSHIP

What makes you being entitled to this award?

I feel it is somewhat unfair to say that this title has been bestowed upon me alone. Patrons have donated large sums of money in support of the work of the University of Hong Kong. In this case, it has been given namely in support of the research in spine surgery done at the Department of Orthopaedics and Traumatology. I am deeply honored to be receiving this award on behalf of the Department and the University... Please visit our website for the full coverage of the interview.

Congratulations to Prof. J. Leong

Prof. John Leong was awarded the Walter P. Blount Service Award by the Scoliosis Research Society (SRS) for his contribution to spinal surgery in China. This award honors those who act generously out of their sense of service to larger social and professional goals. Prof. Leong started giving lectures and doing surgical demonstrations in China since the early 1980's. He introduced the use of Harrington rods and Dwyer instrumentation for scoliosis correction. "This introduction led the Chinese surgeons to enter a new era of surgical treatment of scoliosis" according to SRS. Professor Jiakai Zhu, former Vice-President, Sun Yat Sun University of Medical Sciences, and presently Special Professor, First Affiliated Hospital of Sun Yat Sun University, summarizes the thoughts from many Chinese spine surgeons: "I feel that without his pioneering spirit and introduction of modern scoliosis techniques to China in the early 1980's, spine surgeons would not be so interested in scoliosis treatment and scoliosis surgery in China would not be where it is today."



Prof. Leong received his Walter P. Blount Service Award in 42nd Annual Meeting of SRS

Tips from our Allied Health

Physiotherapists of Queen Mary Hospital

FALL PREVENTION IN ELDERLY AFTER HIP FRACTURE AND SURGERY

Elderly patients with hip fracture and surgery will need to continue further training and have precautions for subsequent falls after they have returned home from institutional rehabilitation. A pamphlet containing information of home exercises and strategies for fall prevention will be given to these patients by our physiotherapists upon discharge.

HOME SAFETY WITH THE FOLLOWING PRECAUTIONS

1. Use of appropriate glasses, proper shoe-wear/slippers and walking aid
2. Adequate lighting
3. Keeping walkway clear and non-slippery

HOME EXERCISES

1. Balance exercises to improve neuromuscular coordination and balance reaction - Weight shifting and/or stepping exercises
2. Strengthening exercises (± light weight) to hips and knees. These include: (a) straight leg raise exercises in supine, side-lying, and standing (Fig.1); (b) hip abductor exercise (Fig.2); (c) knee extension exercise in sitting (Fig.3)


Fig. 1


Fig. 2


Fig. 3

AO Course for Surgeons

UPPER EXTREMITY FRACTURE MANAGEMENT WITH CADAVERIC DISSECTION

8-10 FEBRUARY 2007

This three-day course covered topics from clavicular and glenoid fractures down to distal radial fractures. It was structured with lectures on surgical anatomy and fracture fixation, cadaveric dissection on fresh specimens and then practical exercises with plastic bone fracture model. By introducing the basic principles and theories, learning actual anatomy and practicing on plastic bones, the participants were exposed to a comprehensive program of AO course. The course chairman was Dr. Frankie Leung. Our overseas faculty included Prof. N Suedkamp from Germany, Prof. J Jupiter from USA, Dr. S Lambert from UK, Prof. Wang Qiugen from China, and Dr. Wong Merng Koon from Singapore. Dr. Lau Tak Wing, Dr. Wilson Li, and Dr. Chow Yuk Yin joined as the local faculty members. One of the highlights was Prof. Jupiter demonstrating his expertise on approaches to surgical release of stiff elbows on fresh cadavers.

AO symposium on Updates in Management of Pelvic Ring Injuries

3 MARCH 2007

This one-day symposium focused on the latest development in the treatment of pelvic ring injuries, from acute management to fracture fixation. Overseas experts included Dr. Keith Mayo from USA, Dr. Michel Oransky from Italy, Prof. Tim Pohlemann from Germany and Dr. Carlos Sancineto from Argentina. The new pelvic trainer model provided a spectacular addition to this symposium when participants were required to save a "multiple trauma patient" by applying an external fixator on time!

The participants practising with the new pelvic trainer model

AO Spine Seminar Theme: Severe Childhood Spinal Deformity

20-23 APRIL 2007

Professor Robert Campbell from San Antonio, USA shared his vast experience and knowledge about severe spinal deformity and the use of Vertical Expandable Prosthetic Titanium Rib (VEPTR). Professor Dimeglio from France also gave keynote lectures about spinal growth and risk of progression in idiopathic scoliosis.

AO Spine Complications in Spine Surgery

17-19 SEPTEMBER 2007

Our department organized another spine course about complications in spine surgery. Short talks were given by renowned vascular surgeon, cardiothoracic surgeon, urologist, anaesthetist and spine surgeons about avoidance and management of complications in spine surgeries. More interestingly, each participant had chances to create and deal with "their complications", for instance dural tear, major vascular injury, lung injury etc during the practical session on pig dissection.

Vascular repair by Dr. CW Ting

Introduction to Methods in Clinical Research of Musculoskeletal Disorders 22-26 January 2007 / Bern, Switzerland

Margaret Fok

I attended this 5-day course on 'Introduction to Methods in Clinical Research of Musculoskeletal Disorders' with an aim to improve my skills in carrying out research. The schedule of the course was tightly packed. Lectures were given by experienced professors in orthopedic research and the topics included 1) Research design, 2) Procedures employed in research, 3) Analysis of data, and 4) Results appraisal. Participants were required to design research projects and their work were presented and evaluated at the end of the course.

I find this course very beneficial, as it has enabled me to have a deeper understanding of the papers I read and appreciate the rationale of using a particular design. I am now more confident in designing a study on my own and know which statistical tests to use in order to prove or reject my hypothesis. I would like to recommend it to colleagues who are interested in this area.

2nd AOAA Asian Chapter Symposium 3-6 October 2007 / Jeju Island, Korea

Christian Fang

This 4-day symposium was held in one of the most beautiful islands of South Korea, Jeju Island. The lectures covered a very wide variety of topics from revision lectures in fracture healing and complication management to some new developments in minimally invasive osteosynthesis, pelvic fracture and osteoporotic fractures. A number of new instruments were demonstrated and participants were allowed to play around. My favourite stations include the MIPO and computer assisted surgery (CAS) stations. The debate sessions were also very interesting and many of the controversies in fracture management were discussed. I also went hiking in Mount Halla with other participants. The trail was very beautiful. We unfortunately could not go up to the peak because of the shower but we did enjoy Bek Se Ju (Korean wine) in the rain.

Fang in action. Inserting the SI screw using the netvigation system.

Hiking in Mount Halla.

Upcoming

AO GERIATRIC FRACTURE MANAGEMENT COURSE FOR SURGEONS

25-27 JANUARY 2008

This geriatric fracture course is dedicated to osteoporotic fracture management. The course addresses the dramatically increasing importance of geriatric fracture in our aging population. We would like to bring in the latest updates and developments in the management of geriatric fractures to our experienced orthopedic and trauma surgeons. Treatment of osteoporotic fractures is more than just fracture fixation! The highlights of the course include osteoporosis updates, augmentation techniques and the use of locked implants in osteoporotic bone as well as the management of common complications.

Please contact Ms. Annie Lam at 28554258 for course information.

Announcement

SICOT/SIROT 2008 XXIV

Triennial World Congress

24-28 AUGUST 2008 HONG KONG

This is the third time in the history of SICOT that the Triennial World Congress is being held in Asia. An exciting program is arranged with topics covering basic science in bone healing and stem cell research to the latest development in computer assisted surgery and minimally invasive surgery. There is an extremely enthusiastic demand from friendly subspecialty societies for co-sponsoring programmes with SICOT this year. Instead of a conventional specialty day when participants may have difficulty choosing between concurrent sessions that they are interested in, there will be activities of most of the subspecialties everyday with minimal clashing.

Online abstracts submission till 15 January 2008

TOPICS:

SICOT:	**SIROT:**
Spine	Fracture Healing
Joint	Tissue Engineering
Sports	Biomechanics
Paediatrics	Osteoporosis
Foot & Ankle	Joint Replacement
Trauma	Infection
Tumours	Tumours
Hand & Wrist	
Shoulder & Elbow	
Basic Science	

Grants

CERG	HK$882,789	In support of the research entitled "Roles and properties of notochordal descendent cells in the intervertebral disc" conducted by Professor KMC Cheung, Dr D Chan, Professor K Cheah and Dr V Leung
AOSpine	HK$5 millon	In support of the research entitled "Genome-wide identification and functional studies of genetic risk factors for low back pain and intervertebral disc degeneration" conducted by Dr D Chan, Professor KMC Cheung, Professor K Cheah, Dr P Sham and Dr YQ Song
CERG	HK$739,200	In support of a research entitled "Development of Novel Biodegradable Metallic Materials for Orthopedics" conducted by Dr K Yeung, Professor KMC Cheung, Dr P Chu, Dr J Chung and Professor KDK Luk
City	HK$2.8M	In support of a research entitled "Plasma Immersion Ion Implantation and Deposition (PIII&D) Equipment" conducted by Dr P Chu, Dr P Chan, Professor K Cheah, Professor KMC Cheung, Dr A Ho and Professor KDK Luk
ITF-HK Guangdong	HK$5.569M	In support of a research entitled "Optimization and commercialization of strontium containing bioactive bone cement for various orthopaedic applications" conducted by Dr WW Lu, Dr B Xu, Professor PKY Chiu, Professor KDK Luk, Dr A Ngan, Professor KMC Cheung, Professor JCY Leong and Dr WK Chan
ITF-HK Guangdong	HK$2.9M	In support of a research entitled "Collagen biomaterial and bone marrow derived mesenchymal stem cell (MSCs) based therapy – Second generation tissue engineering solutions for cartilage repair" conducted by Dr B Chan, Dr D Chan, Dr G Chan, Professor KMC Cheung and Dr KY Sze
Seed Funding Program	HK$100000	In support of a research entitled "7T fMRI study on a new rat model with chronic and progressive spinal cord compression" conducted by Professor KDK Luk

Promotions

Dr KMC Cheung and Dr. PKY Chiu have been promoted to Professors

Donations

Thanks to our generous donors, our department has received $11 million in 2007. The donation will support the researches conducted by Prof. KDK Luk, Prof KY Chiu and Dr. YW Wong

Hello

Dr GQ Zhou has been appointed as Research Assistant Professor in our department

Goodbye

Dr YH Li and Dr DKH Yip have left the department for private practice

Dr Y Yeung has left the department for further specialized training in Queen Elizabeth Hospital

Dr KWK Yeung has left the department and joined the City University as Assistant Professor

Dr. KH Leung (Left) and Dr. Evelyn Kuong (Right) received their MRCS and Dr. Michael To (Middle) received his Orthopaedic Fellowship in 14th Congregation of the Hong Kong College of Orthopaedic Surgeons on 16 October 2007

Awards

Professor KDK Luk
Tam Sai-kit Endowed Professorship in Spine Surgery

Mr. RWM Lam, Prof. KMC Cheung, Dr. WW Lu, Prof. KDK Luk and Dr. CT Wong
Young Investigator Award
Bone Composition and Crystal Structure after Strontium Treatment for Osteoporosis Goat Model
8th Regional Osteoporosis Conference 2007, The Osteoporosis Society of Hong Kong

Mr. Daniel WH Ho and Prof. KMC Cheung
The Best Poster Award
34th Annual Meeting of International Society for the Study of the Lumbar Spine 2007

Dr. Y Hu
ISSLS Macnab/Larocca Research Fellowship Award of 2007
International Society for the Study of the Lumbar Spine

Dr. GQ Zhou
2007 Asian Investigator Travel Award
Preclinical and Clinical Trials of a Tissue Engineering Bone Composited with Allogenous Bone Marrow Mesenchymal Stem Cells
International Society for Cell Therapy Annual Meeting 2007

2007 ISSCR Travel Award
A Novel Role of SOX9 in Accelerating Osteogenic Differentiation through Synergetic Interaction with the PKA Pathway
International Society for Stem Cell Research 2007

Program Announcement November 2007 – 2008

Date	Event	Venue
14 Nov 2007	SC Fong Lecture – Biological Reconstruction of Bone Defects after Tumour Resection by Professor Hiroyuki Tsuchiya	5/F Lecture Theatre, Professorial Block, Queen Mary Hospital
17-18 Nov 2007	27th Annual Congress of the Hong Kong Orthopaedic Association http://hkoa.org/coming/Congress/main.htm	The Hong Kong Convention and Exhibition Centre
23-25 Nov 2007	4th Asia Pacific Conference on Diabetic Limb Problems 2007 http://www.diabeticlimb.hk	LKS Faculty of Medicine Building HKU
25-27 Jan 2008	AO Geriatric Fracture Management Course for Surgeons	HK Academy of Medicine Building
25-27 Jan 2008	AO Principles Course for Operating Room Personnel	HK Academy of Medicine Building
17-20 Feb 2008	AO Hand Course	HK Academy of Medicine Building
8-11 July 2008	The 15th International meeting on Advanced Spine Techniques http://www.imastonline.com	The Hong Kong Convention and Exhibition Centre
24-28 Aug 2008	SICOT meeting http://www.sicot.org	The Hong Kong Convention and Exhibition Centre

Summary of Publications in 2007

Chan YL, Yeung KWK, Lu WW, Ngan AHW, Luk KDK, Chan D, Wu SL, Liu XM, Chu PK, Cheung KMC. Oxygen and Sodium Plasma-Implanted Nickel-Titanium Shape Memory Alloy: A novel Method to Promote Hydroxyapatite Formation and Suppress Nickel Leaching. Nuclear Instruments and Methods in Physics Research 2007; B 257:687-691 (Published online 17 Jan 2007)

Chan YL, Wu SL, Liu XM, Chu PK, Yeung KWK, Lu WW, Ngan AHW, Luk KDK, Chan D, Cheung KMC. Mechanical Properties, Bioactivity and Corrosion Resistance of Oxygen and Sodium Plasma Treated Nickel Titanium Shape Memory Alloy. Surface and Coatings Technology (Available online 17 August 2007)

Cheung KMC. Comparative analysis of pedicle screw versus hybrid instrumentation in adolescent idiopathic scoliosis surgery - Point of View Statement. Accepted by International Orthopaedics

Cheung KMC, Senkoylu A, Alanay A, Genc Y, Lau SSN, Luk KDK. Reliability and Concurrent Validity of the Adapted Chinese Version of Scoliosis Research Society-22 (SRS-22) Questionnaire. Spine 2007; 32(10):1141-1145

Cheung KMC, Wang T, Qiu GX, Luk KDK. Recent advances in the aetiology of adolescent idiopathic scoliosis. International Orthopaedics (Published online 16th June 2007)

Cheung WY, Arvinte D, Wong YW, Luk KDK, Cheung KMC. Neurological recovery after surgical decompression in patients with cervical spondylotic myelopathy - a prospective study. International Orthopaedics (Published online 19th Jan 2007)

Darwesh AK, Cheung KMC, Chan D, Yee A, Lu WW, Luk KDK. Expression of the Trp2 Allele of COL9A2 is associated with alterations in the mechanical properties of human intervertebral discs. Spine (Accepted for publication March 2007)

Fok MWM, Leung HB, Lee WM. Evaluation of a Hong Kong Chinese version of a self-administered questionnaire for assessing symptom severity and functional status of carpal tunnel syndrome: cross-cultural adaptation and reliability. Hong Kong Medical Journal 2007; 13(5):342-347

Fung BKK, Chan KY, Lam LY, Cheung SY, Choy NK, Chu KW, Chung LY, Liu WW, Tai KC, Yung SY, Yip SL. Study of wrist posture, loading and repetitive motion as risk factors for developing carpal tunnel syndrome. Hand Surgery 2007; 12(1):13-18

Garg R, Fung BKK, Chow SP, Ip WY. A free thenar flap – A case report. J of Orthopaedic Surgery and Research 2007; 2:4

Garg R, Ip WY, Chow SP, Fung BKK. Dynamic treatment for proximal phalangeal fracture of the hand. Journal of Orthopaedic Surgery 2007; 15(2):211-215

Ho JPY, Wu SL, Poon RWY, Chung CY, Tjong SC, Chu PK, Yeung KWK, Lu WW, Cheung KMC, Luk KDK. Oxygen plasma treatment to restrain nickel out-diffusion from porous nickel titanium orthopedic materials. Surface & Coatings Technology 2007; 201:4893-4896

Hsu YC, Cheng HC, Ng TP, Chiu KY. Antibiotic-loaded cement articulating spacer for 2-stage reimplantation in infected total knee arthroplasty. J of Arthroplasty 2007; 22(7):1060-1066

Kung AWC, Lee KK, Ho AYY, Tang G, Luk KDK. Ten-year risk of osteoporotic fractures in postmenopausal Chinese women according to clinical risk factors and BMD T Scores: a prospective study. Journal of Bone and Mineral Research (accepted for publication March 2007)

Lam WM, Wong CT, Li ZY, Luk KDK, Chan WK, Yang C, Chiu KY, Xu B, Lu WW. Solvothermal synthesis of strontium phosphate chloride nanowire. Journal of Crystal Growth 2007; 306:129-134

Lau TW, Leung F, Chan CF, Chow SP. Wound complication of minimally invasive plate osteosynthesis in distal tibial fractures. International Orthopaedics 2007 (Accepted for publication 13 April 2007)

Leung HB, Ho YC, Wong WC. Seasonal variations in non-traumatic major lower limb amputation in Hong Kong Chinese diabetic patient. Hong Kong Medical Journal 2007; 13(5):379-381

Liu KG, Chiu KY, Zhang SD, Tang WM, Ng TP, Yau WP. Total hip arthroplasties with tapered titanium-alloy cementless femoral components. Chinese Journal of Bone and Joint Injury 2007; 22:274-274

Liu XM, Wu SL, Chan YL, Chu PK, Chung CY, Chu CL, Yeung KWK, Lu WW, Cheung KMC, Luk KDK. Surface characteristics, biocompatibility and mechanical properties of nickel-titanium plasma-implanted with nitrogen at different implantation voltages. Journal of Biomedical Materials Research 2007; 82A:469-478

Liu XM, Wu SL, Chu PK, Chung CY, Chu CL, Yeung KWK, Lu WW, Cheung KMC, Luk KDK. Effects of water plasma immersion ion implantation on surface electrochemical behavior of NiTi shape memory alloys in simulated body fluids. Applied Surface Science 2007; 253:3154-3159

Li ZY, Lam WM, Yang C, Xu B, Ni GX, Abbah SA, Cheung KMC, Luk KDK, Lu WW. Chemical composition, crystal size and lattice structural changes after incorporation of strontium into biomimetic apatite. Biomaterials 2007; 28:1452-1460

Lu WW, Wen CY, Qiu GX, Luk KDK. Cervical instability. Interventional Spine – An algorithmic approach 2007; Section 3; Cervical Spine – Part 3: Specific Disorders, 573-582

Ng FY, Zhu Y, Chiu KY. Cementless acetabular component inserted without screws – the effect of immediate weight-bearing. International Orthopaedics 2007; 31:293-296

Poon RWY, Chu PK, Yeung KWK, Chung JCY, Tjong SC, Chu CL, Lu WW, Cheung KMC, Luk KDK. Effects of pulsing frequency on shape recovery and investigation of nickel out-diffusion after mechanical bending of nitrogen plasma implanted NiTi shape memory alloys. Surface & Coatings Technology 2007; 201:8286-8290

Tang WM, Chiu KY, Kwan MFY, Ng TP. Sagittal pelvic mal-rotation and positioning of the acetabular component in total hip arthroplasty: Three-dimensional computer model analysis. Journal of Orthopaedic Research 2007; 25:766-771

Virtanen IM, Song YQ, Cheung KMC (Joint First Authors), Ala-Kokko L, Karppinen J, Ho DWH, Luk KDK, Yip SP, Leong JCY, Cheah KSE, Sham P, Chan D. Phenotypic and Population Differences in the Association between CILP and Lumbar Disc Disease. J Med Genet 2007; 44:285-288

Wong JYP, Fung BKK, Chu MML, Chan RKY. The use of disabilities of the arm, shoulder, and hand questionnaire in rehabilitation after acute traumatic hand injuries. J of hand Therapy 2007; 20(1): 49-56

Wong YW, Leong JCY, Luk KDK. Direct internal kyphectomy for severe angular tuberculous kyphosis. Clinical Orthopaedics and Related Research 2007; 460:124-129

Wu SL, Chung CY, Liu XM, Chu PK, Ho JPY, Chu CL, Chan YL, Yeung KWK, Lu WW, Cheung KMC, Luk KDK. Pore formation mechanism and characterization of porous NiTi shape memory alloys synthesized by capsule-free hot isostatic pressing. Acta Materialia 2007; 55:3437-3451

Wu SL, Liu XM, Chan YL, Ho JPY, Chung CY, Chu PK, Chu CL, Yeung KWK, Lu WW, Cheung KMC, Luk KDK. Nickel release behavior, cytocompatibility, and superelasticity of oxidized porous single-phase NiTi. Journal of Biomedical Materials Research 2007; Part A:948-955

Yau WP, Chiu KY, Tang WM, Ng TP. Coronal bowing of the femur and tibia in Chinese: its incidence and effects on total knee arthroplasty planning. J of Orthopaedic Surgery 2007; 15(1):31-36

Yeung KWK, Chan RYL, Lama KO, Wu SL, Liu XM, Chung CY, Chu PK, Lu WW, Chan D, Luk KDK, Cheung KMC. In vitro and In vivo Characterization of Novel Plasma Treated Nickel Titanium Shape Memory Alloy for Orthopedic Implantation. Surface and Coatings Technology (Available online 17 August 2007)

Yeung KWK, Chan YL, Lam KO, Liu XM, Wu SL, Liu XY, Chung CY, Lu WW, Chan D, Luk KDK, Chu PK, Cheung KMC. New plasma surface treated memory alloys: Towards a new generation of "Smart" orthopaedic materials. Materials Science & Engineering 2007 (Epub ahead of print)

Yeung KWK, Poon RWY, Chu PK, Chung CY, Liu XY, Lu WW, Chan D, Chan SCW, Luk KDK, Cheung KMC. Surface mechanical properties, corrosion resistance and cytocompatibility of Nitrogen Plasma-Implanted Nickel Titanium Alloys: A comparative study with commonly used medical grade materials. Journal of Biomedical Materials Research 2007; 82A:403-414

Yeung KWK, Poon RWY, Liu XY, Chu PK, Chung CY, Liu XY, Chan S, Lu WW, Chan D, Luk KDK, Cheung KMC. Nitrogen plasma implanted nickel titanium alloys for orthopedic use. Surface & Coatings Technology 2007, 201:5607-5612

Yeung MY, Smith DK, Chan MSY, Cheuk ML, Wong BC, Cheung KMC, Luk KDK, Cheah KES, Sham P, Chan D, Song YQ. iCartiGD, the integrated cartilage gene database. BioMed Central (BMC) Genetics 2007; 8:4

Zhang BS, He L, Wang MY, Chiu KY. An experimental study on biomechanical effect of cemented intramedullary stem tip on bone torsional property at the level of femoral cortical screw holes. Chinese Journal of Orthopaedic Trauma; 9:162-164

Book Chapters:
Leung F (2007): Implants (Chapter 4)AO Manual of Fracture Management: Minimally invasive plate osteosynthesis(MIPO), Stuttgart, Thieme Verlag :33-46

Leung F, Chow SP (2007): Reduction techniques (Chapter 7)AO Manual of Fracture Management: Minimally invasive plate osteosynthesis(MIPO), Stuttgart, Thieme Verlag :67-78

Leung F (2007): Humerus, Proximal 11.2AO Manual of Fracture Management: Minimally invasive plate osteosynthesis(MIPO), Stuttgart, Thieme Verlag : 137-142

Leung F (2007): Femur, Distal 15.3AO Manual of Fracture Management: Minimally invasive plate osteosynthesis(MIPO), Stuttgart, Thieme Verlag : 251-253

Leung F (2007): Tibia and Fibula, Proximal 16.3AO Manual of Fracture Management: Minimally invasive plate osteosynthesis(MIPO), Stuttgart, Thieme Verlag : 275-279

Correspondence: Editorial Board, **News**letter,
Department of Orthopaedics & Traumatology, 5/F Professorial Block, Queen Mary Hospital, Pokfulam, Hong Kong.
Tel: (852) 2855 4654 Fax: (852) 2817 4392 Email: ortho1@hkucc.hku.hk