

2015 APSS DEPUY SYNTHES SPINE CLINICAL FELLOWSHIP REPORT 18th May 2015 – 3th June 2015

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Department of Orthopedics

Host: Prof Kenneth Cheung Man Chee

Hong Kong - The University of Hong Kong

Department of Orthopaedics and Traumatology

Queen Mary Hospital (QMH) & The Duchess of Kent Children's Hospital (DKCH)

Chief, Division of Spine Surgery: Prof Keith DK Luk

Deputy Chief, Division of Spine Surgery: Dr YW Wong

Head of Department of O&T: Prof Kenneth MC Cheung

Associate Consultant: Dr WY Cheung

Associate Consultant: Dr PY Cheung

Associate Consultant: Dr Kwan

2015 APSS DePuy Synthes Clinical Fellowship Report



ASIA PACIFIC ORTHOPAEDIC
ASSOCIATION (APOA)



DePuySynthes

COMPANIES OF Johnson & Johnson





1. Introduction

As the good saying from Francis Bacon, “knowledge is power”. This fellowship is the extension of this saying. The Asia Pacific Orthopaedic Association (APOA) – Depuy Synthes Spine Clinical Fellowship 2015 took place from 18th May to 7th June 2015. I was so happy and excited when I was informed of my acceptance for this fellowship this late March.

Actually, this is my fifth time at Hong Kong but it is a totally different experience. I was a tourist in my previous stays and this time, I have a chance to blend into local culture and daily life. Mostly important, of course, I met many role models of mine, Professor Kenneth Cheung, Professor Keith Luk, Dr. Wong, Dr. WY Cheng, Dr. Jason PY Cheung, Dr. Kenny Kwan, Dr. Darren Liu, Dr. Amy Chen, and their medical team in the Hong Kong University (HKU), Department of Orthopaedics and Traumatology.

Regarding to my practice, I am really grateful that APSS had arranged me to be attached to the Department of Orthopaedics and Traumatology of the University of Hong Kong. As a matter of fact, Taiwan has very tight historical relationship with the University of Hong Kong because our national father, Dr. Sun Yet Sen is graduated from here in 1892. 1961, Dr. Hodgson established this department, developed anterior surgery for tuberculosis spine, also known as Hong Kong Operation, and become the leader of spine surgery in the world. Prof. Luk and Prof. Cheung remain this great tradition and keep this department as an international spine center. The photo at the bottom of left is the newspaper reporting their tremendous success in changing patient’s life with their excellence in spine care. And at the bottom of right is the award they just get as the best spine team in Hong Kong. They have so many innovations such as fulcrum bending, MAGEC rod, prone traction, and disc regeneration. It’s really an innovative place filled with smart people. During this 3 weeks fellowship, I had visited 2 hospital, which were the Queen Mary Hospital (QMH) and Duchess of Kent Children’s hospital (DKCH).

My fellowship schedule was very well organized including operation, outpatient clinic, ward round, teaching activities, and in the last week, they had live demonstration for MAGEC rod and the following combined meeting with the Chinese University of Hong Kong, and the combined congress of HKIOF, APSS, APPOS, and SRS.



The best spine team in HK



2. Fellowship Program

I landed on 17th May via a direct flight from Taipei and checked in Best Western Hotel Harbour View. It is a place just beside the campus of Hong Kong University and 3 minute walk to bus station. Many buses could take me to Queen Mary Hospital. I really appreciate APOA's kind arrangement. My fellowship course had started from 18th May.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
AM	9:00 am Scoliosis Clinic at DKCH OR 8:30 am OT at QMH	8:30 am OT at DKCH	8:30 am Ward Round at DKCH 10:30 am Clinical Conference at DKCH	8:30 am OT at DKCH	8:30 am Ward Round at QMH 10:30 am Research Activity	8:30 am Academic Activity
PM	Research Activity OR OT at QMH	OT at DKCH	2:00 pm Adult Spine Clinic at DKCH	OT at DKCH	1:00 pm Pre-op Meeting at QMH 2:00 pm General Spine Clinic at QMH	FREE

Notes:

QMH = Queen Mary Hospital, 102 Pokfulam Road, Hong Kong

DKCH = The Duchess of Kent Children's Hospital, 12 Sandy Bay Road, Pokfulam, Hong Kong

Week 1 (18th May – 23rd May)

◆ Academic schedule

18th May (Mon) DKCH & QMH

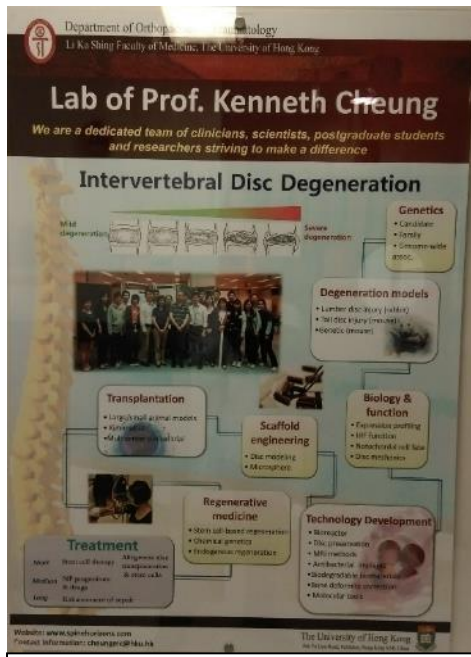
On the first day, I went to DKCH, a special refer center for scoliosis patients composing half of the scoliosis patients in Hong Kong. Dr. Yat Wa Wong received my arrival and then showed me the scoliosis clinic in DKCH. My first case in Hong Kong was a 64-year-old female, a victim of degenerative disk disease with L5/S1 left side disk herniation with bilateral L5 radiculopathy for several years. No instability was noticed on dynamic x-ray. Because of radiculopathy and disk herniation, Dr. Cheung did L4/L5 and L5/S1 laminotomy, medial partial facetectomy, and left side L5/S1 discectomy. He used funnel decompression to preserve posterior midline structure. The approach and traction method had some different way that inspired me some new idea about my own practice. After the surgery, I also visited Hong Kong University research team. The team leader is Dr. Victor Leung whom is a basic researcher. He organized Prof. Kenneth's spine research and he is now focus on the intervertebral disk regeneration and hypoxia signal pathway.



The outer appearance of QMH



My mentor: Prof. Kenneth Cheung



The lab of Prof. Kenneth Cheung



Research group of HKU, Department of Orthopaedics and Traumatology

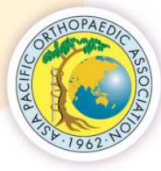


The floor plan of Queen Mary Hospital

Prof. Victor had introduced me their lab faculty and facility. I was very impressed by their solid research and their team. Dr. Kevin Yeung is also an excellent researcher in medical devices and biomaterial. He had received many awards and had many publications and inventions that solved many spine problems. I found myself very interested in their research topics and also appreciated their hospitality. Today was really a good beginning for my fellowship. My excitement was beyond words.

19th May (Tue) DKCH.

Today was the day for me to make observation of a scoliosis surgery, Dr. Wong, Dr. Kwan, and a clinical fellow Dr. Darren Liu who came from Ireland. Today was my first operation day in DKCH. They had very good equipment in the operation theatre although DKCH is a very historical hospital. This hospital was one of the oldest hospitals in HK which had been used for over 50 years. However, the atmosphere in DKCH is very relaxed and modern. I was glad that today began with a scoliosis surgery. The patient was a 17 y/o boy with right thoracic curve and Cobb angle 60 degree. The preoperative evaluation had use a different planning method called fulcrum bending view. This method provided the information more than active bending view to know the correction degree after instrumentation and the fusion level needed. Before the operation, they routinely inserted intradural SSEP for monitoring. The operation was done smoothly with free-hand pedicle insertion method. The reduction method was mainly by rod derotation. The fusion method was facet fusion using autogenous bone. Postoperative Cobb angle was 19 degree.



Preoperative intradural neuromonitor setting by Dr. Kwan



Surgical plan using fulcrum bending method

Intraoperative rod reduction

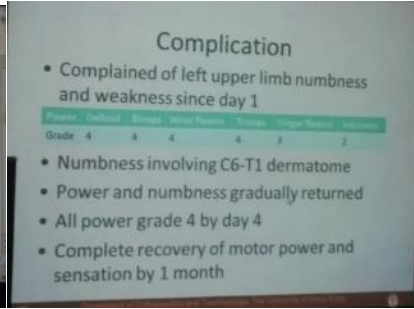
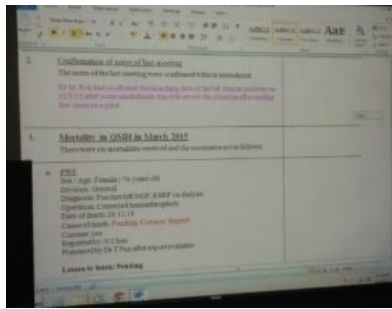


Postoperative correction of scoliosis

After scoliosis surgery, they had 3 epidural injection which were aiming to have pain management. Because the long working hours and relative less payment compared to private clinics, I found doctors in HKU very diligent and always focus on better patient care. This is a great spirit that I always strive for. It's wonderful to know colleagues with like minds.

20th May (Wed) DKCH

Today started with ward round at DKCH. This is my first time to visit their ward in DKCH. This hospital was previously designed as TB treatment hospital, therefore the building was not tall but wide spread. We had visited total around 15 patients. The most interesting thing that I had never thought about was that the ward round was held as multidiscipline team meeting with doctors, nurses, OTs, and social workers. This really provides these patients a comprehensive care. After the ward round, I attended their meeting for mortality and morbidity case discussion. During this meeting, they had discussed about the incidence and prevention of epidural hematoma in spinal surgery. I was then yet again impressed by their high quality meeting. In the afternoon, Dr. Wong, Dr. Kwan, Dr. Cheung, Dr. Darren, and Dr. Amy had brought me to their famous Dim Sum course. That was quite a festive a lunch that almost twice the amount for our stomach. After the lunch, I followed Dr. Wong's adult spine clinic in DKCH. The clinic had many particular cases including osteochondroma at T6 removed by costotransversectomy approach. Today's schedule was ended with the clinic. I really love the academic atmosphere here.



Mortality and morbidity meeting



Din-Sum Lunch, full of delicious food

21st May (Thur) DKCH

Today we had 2 operations at DKCH. The first one was a 45 y/o male with previous history of cervical spinal stenosis status post laminoplasty 3 years ago complicated with postlaminectomy kyphosis and adjacent disk degeneration. C4-5 kyphosis and disk herniation caused C5 radiculopathy bilaterally that the patient felt bilateral shoulder pain for months. We had seen this patient yesterday who was quite intimidated by his symptoms. This operation was done by Dr. Wong that he had explained how his approach and his rationale for cervical fusion. He always opened PLL for decompression which is an important thing for complete decompression. The patient had intraoperative transcranial MEP for neuromonitoring. The 2nd surgery was a L4-5 left side funnel laminotomy and discectomy. After two major operations, they have 3 epidural injections for pain management. In HKU, pain management is a common procedure because they regarded it as a diagnostic approach for patient before surgical intervention. I agree with this point a lot that many patients really can manage with pain management first before their major surgery. Some of them could even avoid the surgery.



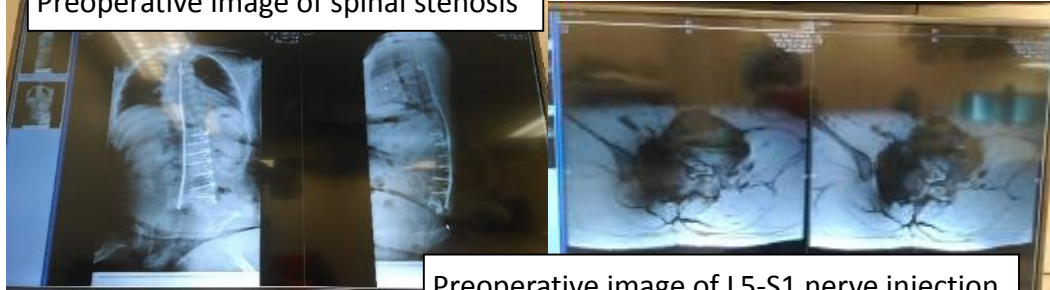
Transcranial neuromonitor



Intraoperative image of ACDF



Preoperative image of spinal stenosis



Preoperative image of L5-S1 nerve injection



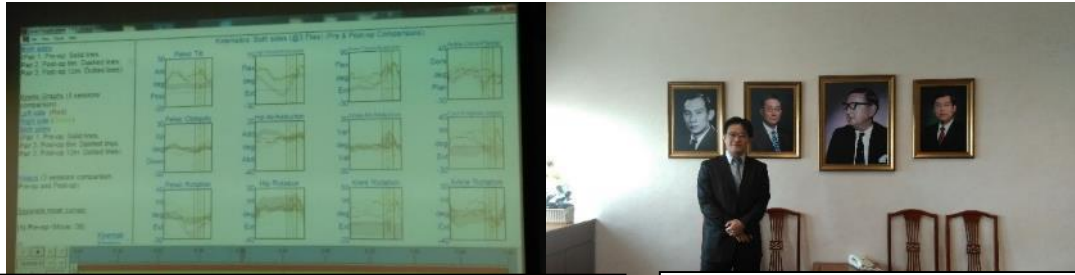
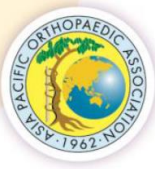
Nerve injection of L5-S1

22nd May (Fri) DKCH

Today I have participated an academic activity in QMH for they had invited Prof. Barry Rawicki, a medical director of MonashHealth, to share their experience about intrathecal baclofen (ITB) pump infusion for children who have spasticity due to any reason. ITB pump was a treatment involving spine surgeon, pediatrician, physical therapist, and neurologist. The device was new to me and I was so amazed about the effect on the patients who suffered from spasticity for years. After this conference, I learned more about how to treat these patients and the effect of intrathecal baclofen pump which spine surgeon could be involved. The use on cerebral palsy, traumatic brain injury, spinal cord injury, and stroke can be dramatically effective if ITBP can be used delicately. After this meeting, I visited their library of the department where have so many good books involving spine. All books were frequently read and I think that's one of the reason that here is a strong team because they always update their knowledge. Here I meet a young medical student, Dr. Henry who was doing project for this department. He explained a lot about the health system in HK and we had a very pleasant talk about our culture differences. I was also very impressed about his vision and he had already devoted into spine research before he became a doctor. He said he would like to be an orthopaedic surgeon in the future and I believe he will be one of the best doctors in the world.



Intrathecal baclofen pump



The gait improvement after intrathecal baclofen pump

Selfie with previous department chiefs

23rd, 24th, 25th May (Sat, Sun, Mon)

The next 3 days was their public holiday. Monday was a Buddha bathing day that every Buddhist went to worship the Buddha. Because of this, I visited the most famous tourist sightseeing site, the great Buddha and the Dai-o village where many movies were shot. Although Hong Kong seems to be a crowd place but it still has many outdoor attractions like mountain trails and beaches. The peak on Mt. Tai-Pin is also a famous place where everybody love to see the night view here and take the cable car. But I chose to walk a trail to the peak where the entry was near to QMH. The scene was very beautiful along the trail and I really enjoy the fresh air. This really changed my impression about Hong Kong. Before taking this fellowship, all I knew about Hong Kong was about how it was a great place for shopping spree. But now, the beauty of nature and outdoor activities here are more attractive to me. Moreover, the food in Hong Kong is also very good and quite versatile. Here I can find delicious treats almost anywhere. With such wonderful sights and good food, I think Hong Kong is definitely an excellent choice for fellowship training.



Local tastes: roasted duck and fish meatball noodle



Big Buddha and Dai-O village

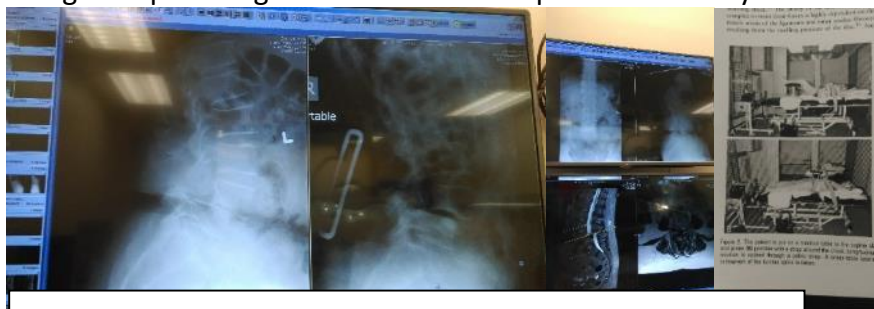


Cable car to the Peak

Week 2 (26th May~29th May)

26th May (Tue) DKCH

After the public holidays, I was fully charged and ready for the learning. Today we had 2 operations including L4-5 posterolateral fusion and L2-L5 posterior decompression. The operation was done by Dr. WY Cheung and Dr. Darren. I was so happy that I could also join their operation and closely observe how they perform partial medial facetectomy. This was a great method to decompress the central spinal canal with less surgical time. After the decompression, they performed posterior fusion which was very different from my practice using posterolateral fusion. Today I also met Prof. Luk who is quite accomplished in spine society. He told me about his rationale for interbody fusion using axial traction view. The axial instability assessment can help to determine the need for interbody fusion. He also gave me his paper with his signature that I loved this gift very much. I heard that he's going to retire in July and I felt much honored to meet him in his last official working month. He is really a great teacher and great spine surgeon that lead this department to stay as one of the best team in the world.



Traction view to determine the axial stability



My first operation in DKCH and the surgical team

27th May (Wed) DKCH

Today we began with the ward round and I again was very impressed by their multidisciplinary team care for every patient. Prof. Luk led the ward round and shared many interesting cases and knowledge for decision making in spine treatment. He also told me that he always tells his members to read the most updated journals to keep up with the newest technology. A teacher must sustain himself as a role model to his students for them to follow. During the ward round, we had a very good discussion about burst fracture using anterior surgery alone and the use of anterior strut bone graft, the experience of dura tear in anterior surgery, the use of fulcrum bending in scoliosis surgery. The proximal instrumented vertebra usually stop at T5 or need to include T1-T4 if shoulder imbalance noticed. The distal fusion level should not stop at T12 to prevent kyphotic deformity. The pelvis obliquity should look at the etiology is from spine or hip. We should treat the primary pathology. After the ward round, I joined a lab meeting in the laboratory in the HKU where they discuss the protection effect of EP-1 inhibition can protect traumatic arthritis and chondrocyte damage. I met many students in the lab meeting and also Dr. Tu who was organizing the basic research schedule of APSS combined



congress this time. They really had a well-suited environment for research and study. I think that's why HKU is the top 2 school in Asia.



Ward round in DKCH with Prof. Luk and Dr. Kwan

28th May (Thur) DKCH

Today there were 2 operations in DKCH. The first was idiopathic scoliosis performed by Dr. Wong and the second was a vertebroplasty after biopsy. The scoliosis surgery was performed very smooth and quick. Dr. Wong was named as "Big Brother of Spine" by their staff and now I know that's because his godlike skill for spine surgery. In the second surgery, they used two vertebral stents for vertebral height restoration. The procedure was quite similar to kyphoplasty but the stent remained within the vertebra after cement injection. This device was also new to me and I really enjoyed the surgical procedure a lot.



Vertebroplasty and vertebral stent

29th May (Fri) DKCH

This morning was my first ward round in QMH. The ward round had several cases had some complicated situation such as Duchene muscular dystrophy, spine infective spondylitis, and burst fractures. During ward round, they showed their ability in critical care. After the ward round, I joined their meeting for surgical indication discussion. They showed the case about to present next week. I think it was a good way to train their residents and fellows to make decision before operation. Every surgical patients were discussed by all surgeons to decide their treatment. Meanwhile, the follow up protocol for their patients were also very delicate to allow other to challenge their methodology. After the meeting, I visited the animal unit in HKU where I am very interested in. The animal unit is very well established and they had certification for aaalac, the highest standard for animal unit. Dr. Karen had shown me their unit and also her protocol for hard bone section. I had a very happy discussion with her about our common research interests including osteoporosis and biodegradable metal. This was so great to meet her that I could inquire many things that I need to solve in my research.



Ward round in QMH with Dr. Wong, Dr. Mak, Dr. Amy

Books in the meeting room



Indication conference at QMH, JIS prepare for posterior MAGEC rod implantation



The curve had rapid progression and need growing rod implantation



The evaluation of growth potential with hand X-ray



The evaluation of fusion level with fulcrum bending view



The animal unit in HKU with aalac certification

Dr. Karen showed embedded bone sample to me

30th, 31st May (Sat, Sun)

Today I visited the famous Temple Street and had a good look about the night life in HK. The colorful night made this place full of fun. I think that's why people from all over the world would love to come to HK because they can enjoy different type of lifestyle here. This reminded me that people should go to more places to see the difference and think about our own lives. That will make us think more about our future. In the end, health and family are both very important to us. On Sunday, I had a mission from APSS secretary Ms. Jenny that I needed to meet up with our other travelling fellows. I was so delighted to do so because that's what I can help them as a clinical fellow here 2wks earlier than them. After picking them up, they were also amazed by the convenience here in HK compared to the other countries they visited. We had a great lunch time together.



The famous Temple street night market

Week 3 (1st June~3rd June)

1st June (Mon) DKCH

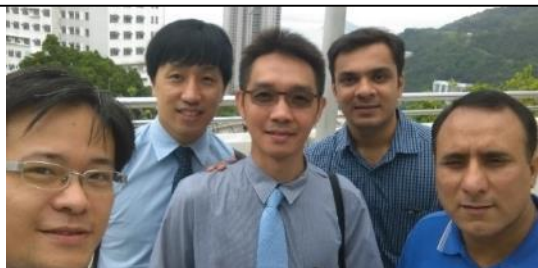
Today was the first day to get together with 4 other travelling fellows: Dr. Alam from Pakistan, Dr. Min from Myanmar, Dr. Choi from Korea, Dr. Patel from India. This week the department had changed our schedule to have a live surgery for MAGEC growing rod surgery and discussion on Monday, a combined meeting with the Hong Kong Chinese University on Tuesday, a MAGEC growing rod user conference on Wednesday, and attend the combined congress of HKIOF, APSS, APPOS from Friday to Sunday. I was really excited about all the upcoming event and new friends I was going to meet. This morning, we started at the conference room in QMH with visiting Professor Stuart Weinstein, SRS travelling fellows, Prof. Akbarnia, Dr. Cahill, Dr. Yaszay, Dr. parent, AOspine travelling fellow, Dr. Qiang Yang, and APSS travelling fellows. Dr. Amy and Dr. Jason had introduced 2 patients whom would receive operation today for MAGEC growing rod and idiopathic scoliosis surgery today. Before the operation, they demonstrated their principle to decide the fusion level and the fixation methods. The first patient receiving MAGEC growing rod surgery was a 6 y/o girl with Juvenile idiopathic scoliosis, the Cobb angle was 58.6 degree from T4 to T10, 51.4 degree from T10 to L3. The surgical plan was to insert T3, T4, L4, L5 bilateral pedicle screws and subfascia MAGEC rod bilaterally. This was my first time to see MAGEC rod and it was really an amazing device that could help so many people to avoid many subsequent operations. This device is a magnetic controlled rod that can lengthening or shortening by magnetic control within



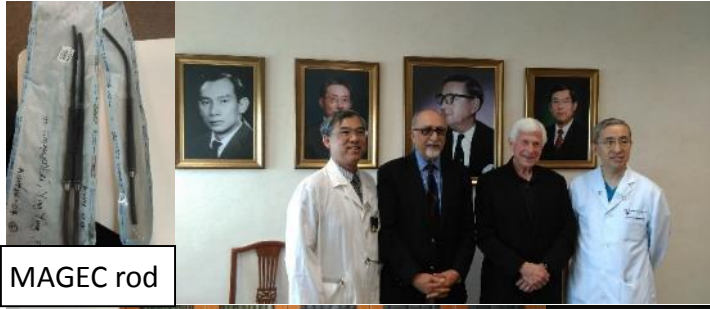
1 centimeter. Therefore, doctors can lengthen the rod without operation to preserve the growth potential of a children. In this operation, I was very happy to be an assistant on the table to help with the device insertion. The tips and pitfalls were also well explained by Prof. Kenneth Cheung during the operation. Prof. Kenneth was a great modulator that he could always raise many great questions and discussions. The 2nd operation was a 13 y/o girl with Cobb angle 65 degree from T5 to T11, 44.6 degree from T11 to L4, Risser stage 0. With fulcrum bending, her Cobb angle from T4 to L1 returned to 12.6 degree with 1.2cm shift from central distal vertebral horizontal line. This method preserved 1-2 fusion level distally and Prof. Kenneth Cheung had explained very well to all the participants about the rational to use fulcrum bending view to evaluate the correction potential of the curve. During the lunch, we had a very nice talk with all other fellows and professors. One of the most exciting thing was to meet Prof. Stuart Weinstein who just received OREF clinical research award for his excellent research about brace treatment in AIS. In the evening, we also had a great dinner with all the faculty in the spine division of HKU and all the travelling fellows. We had chatting, laughing and joking like old friends. How wonderful! Tonight I really felt that we were not so different even though we are from all around the world. Meanwhile, the kindness and humbleness of Prof. Stuart Weinstein also impressed me so much because he was really like a superstar in the scoliosis society. He was so willing to teach everything he know to us like a teacher. Prof. Kenneth Cheung is also another superstar in the world and I clearly see his role in this society is so important. That's why APSS, SRS, AOspine, SICOT and many organizations all over the world love to invite Prof. Kenneth Cheung to help them with their academic activities.

31 May 15. (Sun)	1 Jun 15. (Mon)	2 Jun 15. (Tue)	3 Jun 15. (Wed)	4 Jun 15. (Thu)	5 Jun 15. (Fri)	6 Jun 15. (Sat)	7 Jun 15. (Sun)
AM. Arrival " "	8am. [pick up by limousine company]. 9am. 5 th Professorial Block to observe surgery.	7:15 am (SRS), 7:30 am (APSS) [pick up by limousine company]. 8:30 am. Attend SRS meeting at CUHK.	7:45 am. [pick up by limousine company]. 8:30 am. Attend MAGEC surgeon user meeting at Seminar Room 3, Laboratory Block, Faculty of Medicine Building, 21 Sassoon Road, Pokfulam, Hong Kong. 2:00 pm. Attend MAGEC surgeon user meeting at QMH (cont'd)	8:30 am Observe surgery at DKCH operating theatre 1/F main building. " " 1:45 pm. WWC/SRS course at IIK Convention Centre.	8:00 am. Attend combined congress of HKIOF, APSS and APPOS at IIK Convention Centre.	8:00 am. Attend combined congress of HKIOF, APSS and APPOS at IIK Convention Centre.	8:00 am. Attend combined congress of HKIOF, APSS and APPOS at IIK convention centre. " "
PM. FREE. " "	5 th Professorial Block to observe surgery.	2:00 pm. Return to QMH.			PM Attend combined congress of HKIOF, APSS and APPOS at HK Convention Centre (cont'd).	PM Attend combined congress of HKIOF, APSS and APPOS at HK Convention Centre (cont'd).	PM. " " "
Evening " FREE. " " "	Evening " Dinner with Division of Spine Surgery, HKU. "	Evening. " FREE. "	Evening. " FREE. "	Evening. " SRS faculty dinner. "	Evening. " Congress Reception. "	Evening " Congress Banquet. "	Evening. " " "

The academic program this week



Meet other APSS travelling fellows

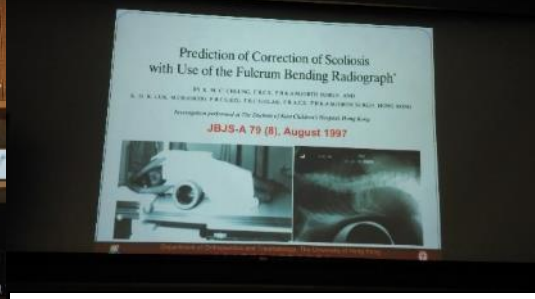


MAGEC rod

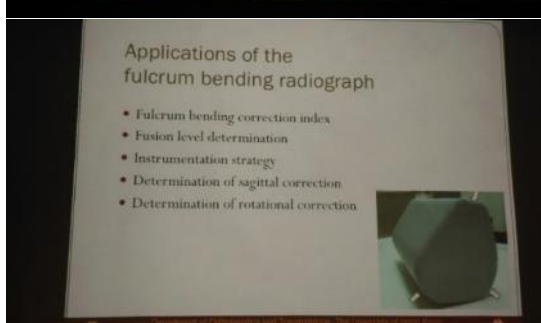
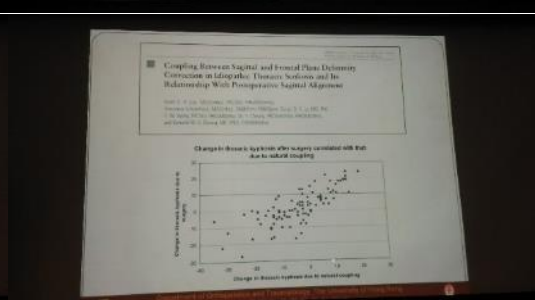
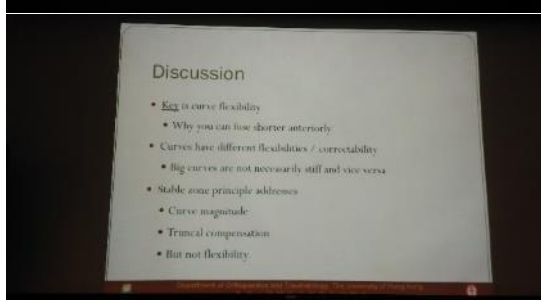
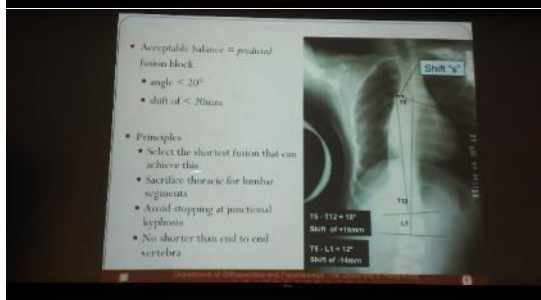
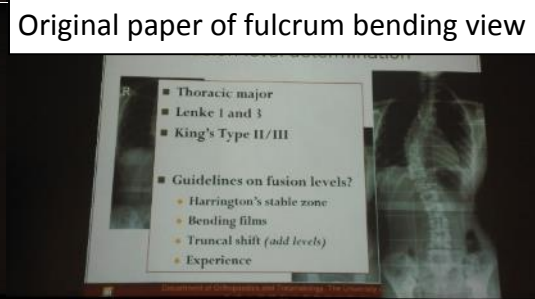
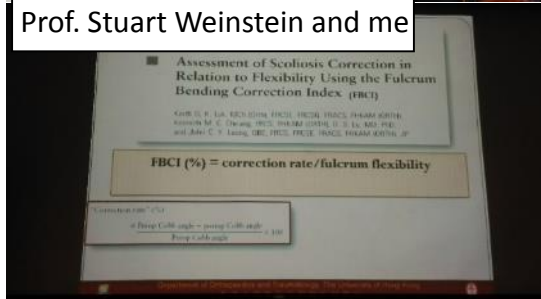
Orthopaedic hall of fame



Prof. Stuart Weinstein and me



Original paper of fulcrum bending view





Great dinner with all faculty and experts

2nd June (Tue) DKCH

Today we had combined conference with the Chinese University of Hong Kong. The meeting gathered experts from 2 universities and all the travelling fellows. The presentations focused on the strategy and evaluation of scoliosis treatment, the use of navigation in scoliosis surgery, and some case discussions. All the presentation were very good and some new technology including EOS spine imaging system and navigation system were very useful in scoliosis treatment. I believed in the future these new technology will change our standard of treatment. In Prof. Ng's talk, he also mentioned about treating complex spine deformity with rapid prototyping for surgical simulation. It was an amazing application and I knew many countries are utilizing this technology to help difficult surgeries. After the meeting, I brought APSS fellows to DKCH for an anterior scoliosis surgery. In the surgery, Dr. Wong had demonstrate very good technique and I really learned a lot from this surgery. Many surgeons now are trying to avoid anterior surgery that make them not familiar with this approach. However, a competent spine surgeon should be familiar with this approach to treat the most challenging cases. With standards retroperitoneal approach, Dr. Wong precisely performed diaphragm take down and T11-L3 anterior interbody fusion with rib bone graft. I really admired Dr. Wong for his technique and humble attitude. He was not only kind but one of the spine masters that I respect. After this surgery, Dr. Darren invited me to his house and meet his family. He is a great person that always have very good sense of humor and hospitality to everybody. Therefore, he can easily make friends from all over the world. I believe he will be a famous doctor because he had very good plans to learn his technique. He was also about to finish his fellowship this June and leave for London to his new fellowship.

Combined Scientific meeting

June 2nd 2015 8:30-12:30

Venue: Orthopaedic Learning Centre, The Chinese University of Hong Kong

Participants from HKU, CUHK and SRS

08:30-08:35	Welcome	Professor K Cheung and J Cheng
08:35-08:45	Surgical correction of Lenke 1A curves: what are the changes occurring in 3D?	Dr. Parent
08:45-08:50	Discussion	All
08:50-09:00	DRU Classification	Professor K Luk
09:00-09:05	Discussion	
09:05-09:15	Pelvic incidence/lumbar lordosis mismatch in AIS	Dr. Cahill
09:15-09:20	Discussion	All
09:20-09:30	Navigation in scoliosis surgery	Dr. Bobby Ng
09:30-09:35	Discussion	All
09:35-09:45	The pro-active vs reactive treatment of CP scoliosis; the 90 degree threshold	Dr. Yazay
09:45-09:50	Discussion	All
09:50-10:00	AIS Consensus Study	Professor K Cheung
10:00-10:05	Discussion	All
10:05-10:15	Less invasive surgery for adult spinal deformity: Does it work?	Dr. Akbarnia
10:15-10:20	Discussion	All
10:20-10:30	Use of Tranexamic Acid (TXA) on Reducing Blood Loss During Scoliosis Surgery in Adolescents	Dr. Bobby Ng
10:30-10:35	Discussion	All
10:35-10:50	Coffee break	
10:50-11:35	Case presentations 1. AIS (HKU) 2. Congenital scoliosis (CUHK)	All
11:35-12:20	Case presentations 1. Neuromuscular scoliosis (HKU) 2. A Case of EOS (CUHK)	All
12:20-12:30	Wrap-up	
12:30 -	Lunch	



Combined meeting with CUHK



Anterior surgery for TL curve



Dr. Darren and his lovely daughter, Ruby

3rd June (Wed) DKCH

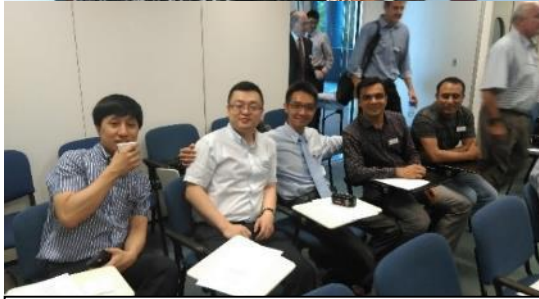
Today was the last day of my fellowship, we had a MAGEC growing rod user meeting in HKU with many surgeons from America, India, Australia and New Zealand. They shared a lot about their MAGEC rod experiences and cases. Many fascinating topics were brought to discussion including the mechanism of the rod, the function and limitation, the use of link and the fusion of screw, one rod or two rods, and the cost-effectiveness of using MAGEC rod. Along with all other fellows, we had a very wonderful day knowing what these top surgeons think to treat their challenging cases. In the afternoon, we visited the lab of HKU again and I had another good discussion with Karen about hard bone section protocol. The equipment in HKU lab is so advanced that I really envied a lot. I really wish to collaborate with them for my future research. After lab tour, we returned to QMH for more cases sharing and discussions. Ms. Cora Bow who is a PhD student and clinical spine research coordinator, had demonstrated us their ultrasound protocol to monitor growth rod lengthening without radiation. This method is really a useful way to monitor without any radiation. And the accuracy is very high and the method is very easy. I must say they are really brilliant and smart to develop this method. After this meeting, I know there's still many novel ideas upcoming and I really felt excited about our future. After today, the big combined conference will be held from Thursday to Sunday. I really respected all the



faculty in HKU Orthopaedics and Traumatology to have such energy to hold so many meetings within this week. Super!

MAGEC® Surgeon User Meeting June 3rd 2015, Hong Kong.

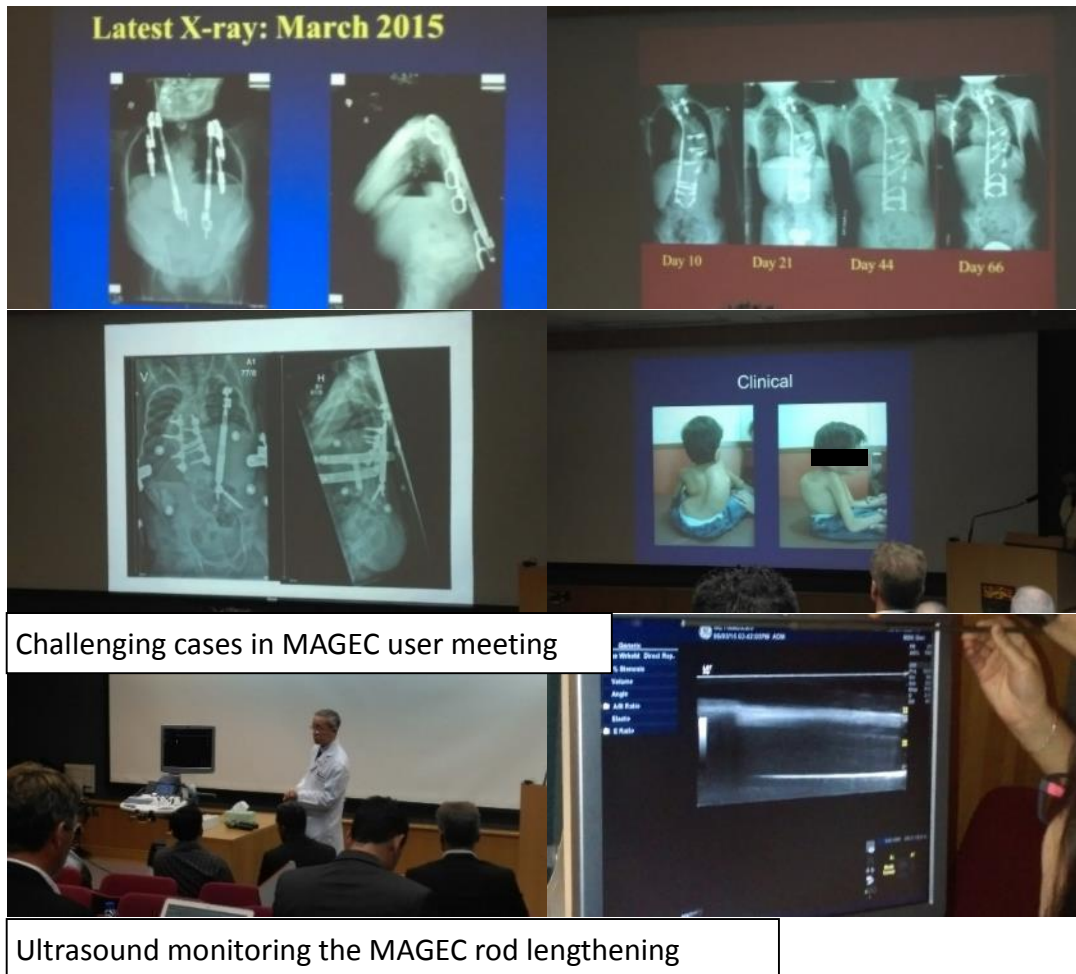
8:00-8:30	Breakfast.	
8:30-9:00	Welcome & Introduction.	Prof Kenneth Cheung.
Moderators: Kenneth Cheung, Behrooz Akbarzadeh.		
9:00-10:30	Case Presentations* - Early experience and distraction techniques. Gabriel Liu - early experience. Benny Dahl - number of cross-links. Robert Rowan - 105 deg curve with hip dislocation. Brian Hsu - Neuromuscular curves.	Group Discussion.
10:30-10:45	Coffee break.	9/F Laboratory Block.
10:45-12:15	Case Presentations* - Complex cases. Alp Senkoylu - 100 deg curve in 7kg child. Robert Rowan - 6yo BMI 29. Arvind Jayaswal - Severe double curves. David Polly - 100 deg curve with ptosis. Jason Cheung - 105 deg curve with syrinx. KL Liu - potential cases.	Group Discussion.
12:15-13:45	Lunch, visit to HKU laboratory and travel to hospital.	7/F Alumni Chamber.
13:45-15:15	Case Presentations* - Special Indications. Jason Cheung - VEPTR/MAGEC hybrid. Benny Dahl - Revision MAGEC after VEPTR. Arvind Jayaswal - revision from conventional growth rods. Ashok Johari - potential cases.	Group Discussion.
15:15-15:30	Visit to Department and coffee break.	5/F Professorial Block.
15:30-17:00	Case Presentations* - Lessons Learned and Tips. Behrooz Akbarzadeh - neurologic deficit. Kenny Kwan - FJK. Jason Cheung - deep wound infection. Alp Senkoylu - single vs dual rod. Jason Cheung - failure to distract and add-on.	Group Discussion.
17:00-17:15	Magnetically controlled growing rods for EOS: a budget impact model from the U.S. Perspective.	David Polly.
17:15-17:30	General discussion and the way forward.	
17:30	Adjourn Meeting.	Thanks from Ellipse!



MAGEC user meeting in HKU



Hard bone section machine in HKU lab



Challenging cases in MAGEC user meeting

Ultrasound monitoring the MAGEC rod lengthening

3. Conclusion

This fellowship really opened up my eyes and it was certainly one of the best training I had in my life. During this 3 weeks, I learned everything about spine including clinical work, education, and research. Another great thing is to know so many smart and great friends from my beloved field, spine. The following APOA meeting was also wonderful that I must say it was the best arrangement for me to attend a grand meeting at the end of this fellowship. This combined congress of HKIOF, APSS, APPOS was a great success and I really enjoyed the conference. At the end of this fellowship, I would like to give thanks to Prof. Kenneth Cheung, Prof. Luk, Dr. Wong, Dr. Kenny, Dr. Jason, Dr. Darren, Dr. Amy, Dr. Victor, Dr. Mak, Karen, Cora, Henry, APSS Prof. Jayaswal, Prof. Kwan, Jenny, April, Cindy, Depuy Synthes, HKU, my teacher Prof. Tsung Jen Huang, Dr. Lee, and all my colleagues. With their great support during this fellowship, I had learned quite extensively. Within these three weeks, I could understand how HKU Department of Orthopaedics and Traumatology become one of the best spine team in the world and why Hong Kong can be much great place with high competitiveness. Their attitude toward their work is very positive and I will make them as my role model in the future. After this fellowship, these great memories will always remind me to keep participating in the international academic activities and stay connected to the world. If there's a score for this fellowship, I would most definitely give it an **"A+++"**!



Asia Pacific Spine Society

My mentor and my teachers during this fellowship





Asia Pacific Spine Society

Thank you again, APSS, Depuy Synthes, HKU Department of Orthopaedics and Traumatology, and CGMH at Chiayi. You fulfill my life and my training.



ASIA PACIFIC ORTHOPAEDIC ASSOCIATION (APOA)



DePuy Synthes

COMPANIES OF Johnson & Johnson



長庚醫療財團法人嘉義長庚紀念醫院
CHIAYI CHANG GUNG MEMORIAL HOSPITAL OF THE C.G.M.F.





Logbook: Operation assisted / observed during the fellowship

Date	Day	Age	Sex	Diagnosis	Procedure	Surgeon	My role	Hospita
18-May	Mon	64	F	Degenerative disk disease with L5/S1 HIVD, left	L4/L5,L5/S1 laminotomy and left L5/S1 discectomy	Dr WYCheung	Observer	QMH
19-May	Tue	17	M	AIS, Lenke type 1	T4-L2 PI and facet fusion	Dr Yat Wa Wong	Observer	DKCH
21-May	Thurs	49	M	Postlaminectomy kyphosis with C4/5 HIVD	C4/5 ACDF with plate	Dr Yat Wa Wong	Observer	DKCH
		60	M	L4/5 spinal stenosis and HIVD	Left side funnel laminotomy, discectomy	Dr Yat Wa Wong	Observer	DKCH
		41	M	L5/S1HIVD	L5 nerve root injection	Dr. Kwan	Observer	DKCH
		48	M	L5/S1 spinal stenosis	L5/S1 epidural injection	Dr. Darren	Observer	DKCH
		64	F	LBP	R't L3/4 epidural injection	Dr. Darren	Observer	DKCH
26-May	Tue	71	F	L4/5 spondylolisthesis, grade I	L4/5 posterior decompression and instrumented fusion	Dr. WY Cheung	Assistant	DKCH
		74	M	L2-5 spinal stenosis	L2-L5 posterior decompression	Dr. WY Cheung	Assistant	DKCH
28-May	Thur	19	F	Idiopathic scoliosis	Posterior instrumented fusion	Dr Yat Wa Wong	Observer	DKCH
		80	F	L2 compression fracture	Biopsy and vertebroplasty	Dr. Kwan and Darren	Observer	DKCH
23-May	Fri	6	F	Idiopathic scoliosis	Posterior MAGEC rod instrumentation	Dr. Kenneth Cheung	Assistant	QMH
1-June	Mon	11	F	Idiopathic scoliosis	Posterior instrumented fusion	Dr. Kenneth Cheung	Assistant	QMH
2-June	Tue	13	F	Idiopathic scoliosis	Anterior instrumented fusion	Dr Yat Wa Wong	Observer	DKCH