Asia Pacific Spine Society (APSS)
(Spine Section of APOA)

APSS MEDTRONIC FELLOWSHIP REPORT

15 Nov 2018 to 26 Jan 2019

Fellow: Dr Anil Solanki

ASSI Spine Surgery Fellow, Department of Neurosciences,

Park Clinic, Kolkata, India

Host: Queen Mary Hospital, Hongkong

The Duchess of Kent Children's Hospital, Hongkong

Department of Orthopaedics and Traumatology, The University of Hong Kong
香港大學矯形及創傷外科學系

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Introduction

The Asia Pacific Orthopaedic Association (APOA)/Asia Pacific Spine Society (APSS) – Medtronic Clinical Fellowship 2018-19 I have been selected for was scheduled from 15 November 2018 to 26 January 2019 after the issuance of training visa. I was elated to get the invitation letter for this fellowship and grabbed the opportunity with both hands. Firstly, I would like to thank the APSS for this opportunity and the Spine Unit at the Queen Mary Hospital, Hong Kong for making my fellowship a rich and valuable experience.

Overseas Fellowship was new to me and visiting Hong Kong was really exciting. Hong Kong being a reputed spine centre was the best choice for further learning and testing my current understanding and knowledge gained from National Structured Spine Fellowship of 2 years. I first came to know about it when I happened to meet the President of APSS, Prof Dr Kuniyoshi Abumi in Ahmedabad when he taught us about cervical spine at an operative course. Some of my colleagues already had fellowships and good learning experience through APSS. Their guidance helped me a lot. Former fellows at same centre shared their experience with me too.

APSS secretary, Jenny and other staff were extremely helpful in submitting application and subsequent official work of getting the required permissions, visa process, travelling and accommodation. They worked exceptionally well to get all the things done on time. Their prompt and clear replies to all my queries and instructions were really commendable.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
AM	**9:00 am** Scoliosis Clinic at Outpatient Department, DKCH OR **8:30 am** OT at Block F4, QMH	**8:30 am** OT at 1/F, Main Building, DKCH	**8:30 am** Ward Round at Ward 1/2, DKCH **10:30 am** Clinical Conference at DKCH/QMH	**8:30 am** OT at 1/F, Main Building, DKCH	**8:30 am** Ward Round at Ward K13, QMH **10:30 am** Research Activity	**8:30 am** Academic Activity at other HA hospitals
PM	Research Activity OR OT at Block F4, QMH	OT at 1/F, Main Building, DKCH	**2:00 pm** Adult Spine Clinic at Outpatient Department, DKCH	OT at 1/F Main Building, DKCH	**12:45 pm** Pre-op Meeting at Lecture Theatre, Professorial Block, QMH **2:00 pm** General Spine Clinic at Block S7, 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

My Fellowship schedule started with orientation day on 15th Oct 2015 when department staff/ coordinator nurse briefed me on the infrastructure and the hospital. The details of the weekly schedule were sent to me beforehand and the secretary of division helped me and regularly gave necessary information and updates.

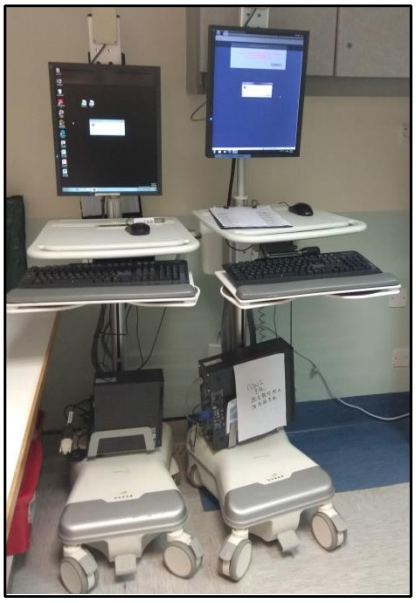
Accommodation provided to me was pleasant, spacious, conveniently located and within short distance from all efficient public transport system of Hong Kong including MTR, City bus and tram services. It was also very near to many public attractions, restaurants and stores. All these facilities helped me to focus more on department work and allowed me to be fully engaged in patient management.

Ward Rounds and Pre-op Meetings

The department had system of grand round on Wednesday and Friday with all faculties, residents, fellows, physiotherapists, occupational therapists, nursing staff and eminent teachers Prof Yat Wa Wong and Prof Kenneth MC Cheung. Each patient's clinical details, radiology, pre-op plans, post-op management (both medical and rehab part) was discussed in detail. Every one of us was actively involved in discussions for patient management. All faculties encouraged me to put my views and opinions for patient care. They always appreciated me for all important points added and also corrected me when I was wrong. They cleared all my doubts whenever raised and made my learning more comprehensive.

Both the hospitals had great number and variety of patients in wards including deformity, degenerative, trauma, syndromic affections, infections, spinal metastasis. I had great opportunity to enhance my understanding of management principles and options for this great variety of cases from paediatric to geriatric cases. Easy availability of patient details, investigations and radiology on Electric Medical record system was a great help combined with the helping nature of nurses and physiotherapists.

Every week the department had a pre-op meeting on Friday to discuss details and plan the OT schedule for the following week. Fellows and residents presented PowerPoint presentation for every case to be admitted with all relevant information, radiology and management plans. This was the best opportunity to study decision making process. It was also the perfect opportunity to discuss the post op cases of the past week to further add in learning.



OPD and Scoliosis Clinic

Routine weekly schedule contained specialty OPD for scoliosis apart from routine OPD. I had the opportunity to spend more time with faculties there and discuss many aspects in patient care especially conservative management and bracing protocol, importance of school health screening for scoliosis, delayed complications in post-op patients, management of spasticity in cerebral palsy etc. Expansion of MAGEC (Magnetic Expansion Control) and its assessment by USG interested me a lot.

Excellent data maintenance by Electronic Medical Record system at the centre helped me to understand natural the history and diversity of each spinal condition.

Academic Meetings

There were multiple in-hospital and inter-hospital academic meetings during my fellowship period. Topic selection and content of each meeting was excellent and relevant. Each meeting involved case presentations, analysis of those cases by all participants, consensus on management and literature review.

Topics:

- MIS and Endoscopic techniques
- Scoliosis in polio
- Add on in Scoliosis
- Vascular injuries in spine surgery
- Anterior reconstruction and OLIF

Cadaveric workshop for OLIF and vascular injury repair on live pig models were one of the best experiences.

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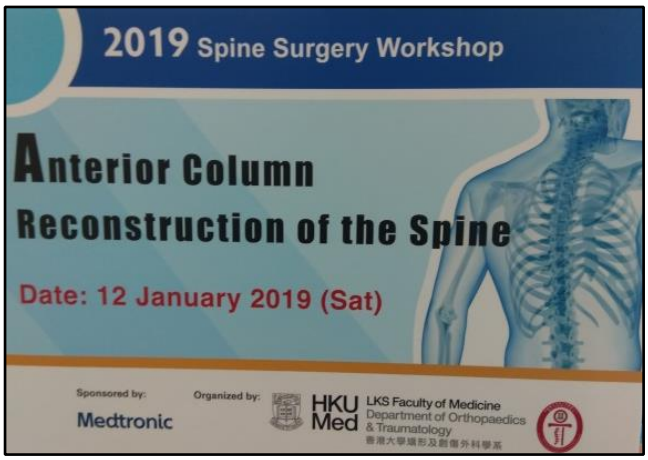
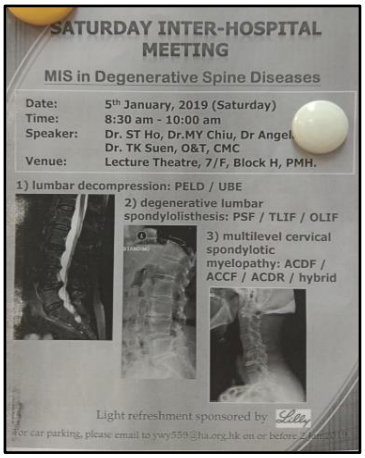
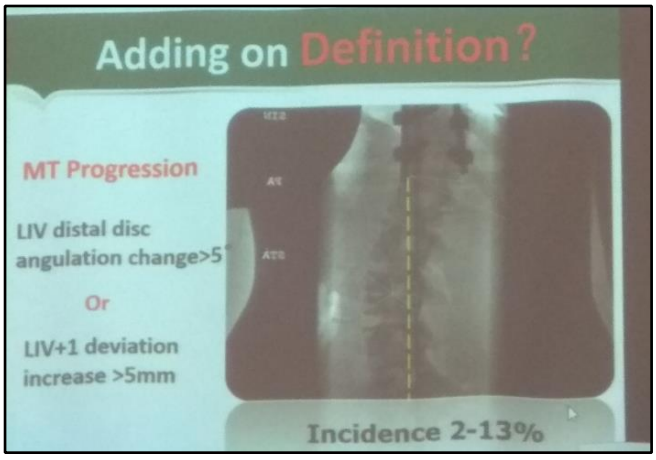




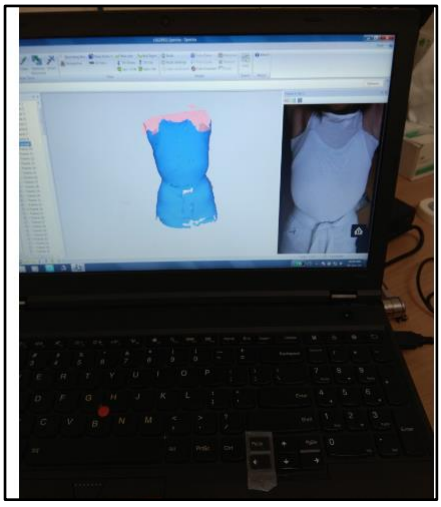


3 D Printing, Bracing, Rehab

The centre has facility for 3D printing which helps in understanding complex severe scoliosis & tumour cases and pre-op planning.

For preparing patients' specific brace, 3 D scanning of patients' torso is done by the Department of Orthotics and Prosthetic. After making necessary correction on compiled image, the system generates blueprint of the brace as per correction required. Finally, brace is made using 3 D printing technology. Thermo-sensitive device is applied on inner aspect of brace, recording from which gives idea about brace compliance.

The hospital has a dedicated excellent rehab centre with physiotherapists, occupational therapists, nursing, paramedical staff and all modalities of physical and vocational training of paraplegics/quadriplegics.


Operative Exposure

I was honoured to see a good number of deformity cases which was the main charm including complex neuromuscular, syndromic (NF, Marfan), congenital and idiopathic scoliosis apart from many metastatic spinal lesion (nasopharyngeal, GI, Lung), degenerative and trauma (Ank spond) cases.

They use intra-operative neuro-monitoring, operating microscope, burr and ultrasonic bone-scalpel routinely. It was good to learn tips and tricks from experts. Use of fulcrum bending views for pre-op planning and correlation with intra-op correction achieved was new method to learn for me. Cervical Laminoplasty was a routine procedure for myelopathy cases and I learnt better technique to avoid complication.

All faculties allowed me to be actively involved in operative procedures and also encouraged me to point out the differences I noticed and discuss them. This opened horizons of my thinking over many aspects of surgical care and practices.

I also learnt technique of many injection procedures for spine and SIJ such as root block, trans-foraminal block, media branch block, facet injections and SI Joint injections.

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Logbook

No	Age	Sex	Date of Surgery	Diagnosis	Management	Operating surgeon	Role
1	11y	Male	19/11/2018	Neuromuscular scoliosis	Deformity correction (T3 to ilium)	Prof Yat Wa Wong	Observed
2	64y	Male	20/11/2018	Cervical Myelopathy at C3/4	ACDF with iliac crest autograft	Dr P Koljonen	Observed
3	65y	Female	20/11/2018	Cervical Myelopathy at C3 to C6	Left open door Laminoplasty	DR WY Cheung	Observed
4	65y	Male	20/11/2018	L4/5 spondylolisthesis with fascet effusion	Aspiration and Injection	Dr P Koljonen	Observed
5	83y	Female	20/11/2018	L5 radiculopathy	Left L4/5 Tranforaminal Epidural Injection	Dr P Koljonen	Observed
6	75y	Female	20/11/2018	Left L5 radiculopathy	Left L4/5 Tranforaminal Epidural Injection	Dr P Koljonen	Observed
7	48y	Female	20/11/2018	Restenosis L3/4 with listhesis	Revision decompression with PLF	Prof Yat Wa Wong	Observed
8	57y	Female	22/11/2018	Operated cervical myelopathy (OPLL+OLF)	Posterior decompression at C2	Prof Kenneth MC Cheung	Observed
9	69y	Female	22/11/2018	Back pain	Medial branch block	Dr P Koljonen	Observed
10	41y	Male	22/11/2018	Gluteal Pain	SI Joint Injection	Dr P Koljonen	Observed
11	60y	Female	22/11/2018	Occipital Neuralgia	Greater Occitital Nerve Block	Dr P Koljonen	Observed
12	49y	Male	26/11/2018	C4/5 PID right	ACDF with iliac crest autograft	Prof Yat Wa Wong	Observed
13	34y	Male	26/11/2018	Spinal metastasis at T4 (Nasopharyngeal Carcinoma)	Separation surgery	Prof Yat Wa Wong	Assisted
14	21y	Female	27/11/2018	Adolescent Idiopathic Scoliosis	Deformity correction (T5 to L4 PSF)	Prof Yat Wa Wong	Observed
15	36y	Male	27/11/2018	PID L5/S1 left	Discectomy	Dr P Koljonen	Observed
16	24y	Female	27/11/2018	Adolescent Idiopathic Scoliosis	Deformity correction (T5 to T12 PSF)	Dr J Cheung	Assisted
17	63y	Female	27/11/2018	Spinal stenosis with Right L5 radiculopathy	Root Block	Dr J Cheung	Observed
18	23y	Female	29/11/2018	Adolescent Idiopathic Scoliosis (Neglected)	Deformity correction (T2 to L2 PSF)	Prof Yat Wa Wong	Assisted
19	12y	Male	29/11/2018	Cerebral palsy	Baclofen refill	Prof Yat Wa Wong	Observed
20	78y	Male	4/12/2018	Cervical Myelopathy	Left open door laminopasty C3 to C6 with foraminotomy	DR WY Cheung	Observed

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21	26y	Male	4/12/2018	PID L5/S1 Right	Discectomy	Prof Yat Wa Wong	Observed
22	62y	Male	4/12/2018	Cervical Myelopathy	Left open door laminopasty C3 to C6	DR WY Cheung	Observed
23	25y	Male	4/12/2018	Cerebral palsy	Baclofen refill	Dr P Koljonen	Observed
24	8y	Male	6/12/2018	Dystrophic scoliosis NF-1	Traditional Growing Rod application	Dr J Cheung	Assisted
25	43y	Male	6/12/2018	Cervical Deformity	Anterior release + Combined Fusion C3 to T2	Prof Kenneth MC Cheung	Assisted
26	62y	Female	10/12/2018	L3/4 and L4/5 spinal stenosis	Posterior decompression	Dr K Kwan	Assisted
27	72y	Female	10/12/2018	L4/5 spinal stenosis	Posterior decompression	Dr K Kwan	Assisted
28	71y	Female	11/12/2018	Cervical Myelopathy	Left open door laminopasty C3 to C6	Dr P Koljonen	Observed
29	12y	Female	11/12/2018	Adolecent Idiopathic Scoliosis	Deformity correction (T4 to L3 PSF)	Dr K Kwan	Assisted
30	61y	Female	11/12/2018	Lumbar Canal Stenosis	Posterior decompression L4/5	Prof Yat Wa Wong	Assisted
31	18y	Female	11/12/2018	Cerebral palsy	Baclofen refill	Dr P Koljonen	Observed
32	12y	Male	12/12/2018	Congenital Scoliosis	Posterior In situ Fusion (T6 to L1)	Prof Kenneth MC Cheung	Assisted
33	13y	Female	14/12/2018	Operated AIS with add on	Extension of Fusion T2 to L3	Prof Kenneth MC Cheung	Assisted
34	64y	Male	14/12/2018	C4/5 Fracture dislocation in Ank Spond	C2to T1 PSF+ Anterior reconstruction	Dr P Koljonen	Assisted
35	12y	Female	18/12/2018	Adolescent Idiopathic Scoliosis	Deformity correction (T5 to L2 PSF)	DR WY Cheung	Assisted
36	19y	Female	18/12/2018	Adolescent Idiopathic Scoliosis	Deformity correction (T5 to T11 PSF)	Dr K Kwan	Observed
37	16y	Female	20/12/2018	Adolescent Idiopathic Scoliosis	Deformity correction (T5 to T12 PSF)	Dr P Koljonen	Observed
38	59y	Male	24/12/2018	Left C6 radiculopathy	C5/6 ACDF	Prof Kenneth MC Cheung	Assisted
39	79y	Female	24/12/2018	Multilevel Lumbar Canal Stenosis	Posterior decompression L/4 & L4/5	Dr J Cheung	Observed
40	35y	Male	24/12/2018	Cranio-cervical Deformity	Halo ring application	Prof Yat Wa Wong	Assisted

No	Age	Sex	Date of Surgery	Diagnosis	Management	Operating surgeon	Role
41	66y	Female	30/12/2018	Spinal Stenosis L2/3 (operated L3 to L5 PSF)	Extension of Fusion L2 to S1+ TLIF L5/S1	Prof Kenneth MC Cheung	Observed
42	49y	Female	30/12/2018	PID L4/5 Left	Microscopic Discectomy	Dr J Cheung	Assisted
43	73y	Male	3/1/2019	L4/5 spinal stenosis	Posterior decompression	Prof Kenneth MC Cheung	Observed
44	79y	Female	3/1/2019	Wound infection	Debridement	Dr J Cheung	Assisted
45	82y	Male	3/1/2019	L4/5 spinal stenosis	L4/5 Transforaminal Epidural Injection	Dr J Cheung	Observed
46	12y	Female	3/1/2019	Cerebral palsy	Baclofen refill	Dr P Koljonen	Observed
47	62y	Male	4/1/2019	Cervical Myelopathy	C4/5 & C5/6 ACDF	Prof Kenneth MC Cheung	Observed
48	13y	Female	7/1/2019	Neuromuscular scoliosis	Deformity correction (T2 to L2 PSF)	Prof Kenneth MC Cheung	Assisted
49	43y	Female	8/1/2019	Scoliosis with Marfan Syndrome	Deformity correction (T9 to L5 PSF)	Prof Yat Wa Wong	Observed
50	43y	Female	8/1/2019	Restenosis L5/S1	Revision decompression with PLF	Dr P Koljonen	Assisted
51	70y	Male	8/1/2019	Left L4 radiculopathy	Left L3/4 Transforaminal Epidural	Dr P Koljonen	Observed
52	19y	Female	10/1/2019	Adolescent Idiopathic Scoliosis	Deformity correction (T2 to L2 PSF)	Prof Yat Wa Wong	Observed
53	63y	Male	14/1/2019	Chordoma at C2/3	Tumour excision + Anterior and posterior Fusion	Prof Kenneth MC Cheung	Assisted
54	67y	Female	15/1/2019	Cervical Myelopathy	Cervical Laminoplasty C3 to C6	Dr P Koljonen	Observed
55	77y	Female	15/1/2019	Multilevel Lumbar Canal Stenosis	Posterior decompression L3/4, L4/5, L5/S1	DR WY Cheung	Assisted
56	67y	Male	15/1/2019	Spinal Stenosis L4/5	Posterior decompression L4/5	Dr P Koljonen	Observed
57	58y	Male	17/1/2019	Cervical Myelopathy C3/4	ACDF C3/4 with Zero P cage	Prof Kenneth MC Cheung	Observed
58	56y	Female	17/1/2019	L4/5 grade II spondylolisthesis	L4/5 OLIF	Prof Kenneth MC Cheung	Assisted
59	38y	Male	21/1/2019	Basilar invagination with C1 C2 instability	OC Fusion	Prof Kenneth MC Cheung	Observed
60	50y	Male	21/1/2019	Spinal Metastasis at D6 D7 (NPC)	Posterior Decompression and Fusion D4 to D9	Dr K Kwan	Observed

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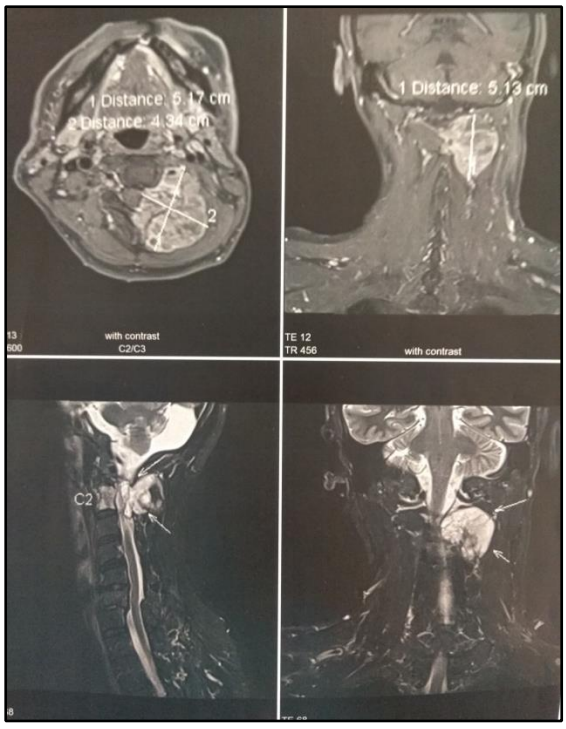
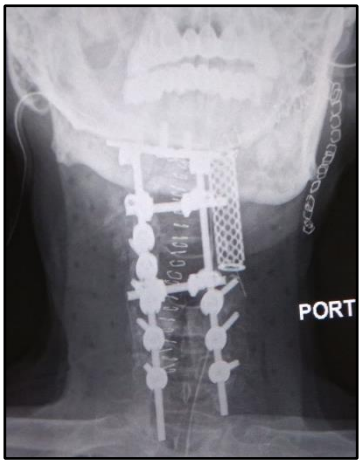
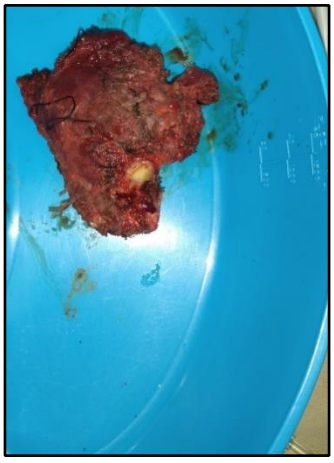
Interesting cases

Case 1:

63 -year-old, Male with normal neurology, diagnosed with biopsy proved chordoma at C2, C3. Operated by a multi-disciplinary team (Onco-surgeon, Neuro-surgeon and Spine Surgeon). Near total excision was done followed by anterior + posterior fusion. One sided vertebral artery was clamped and sacrificed. Post operatively patient did not have any neurological deficit and was gradually mobilized.





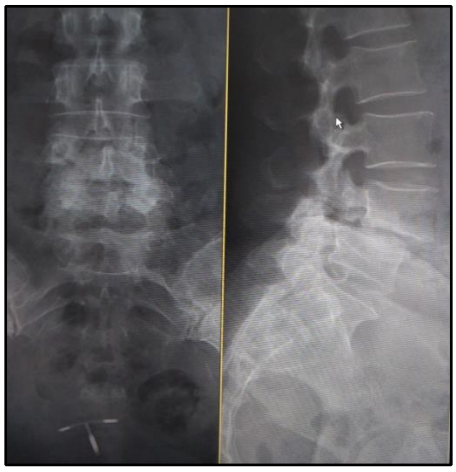


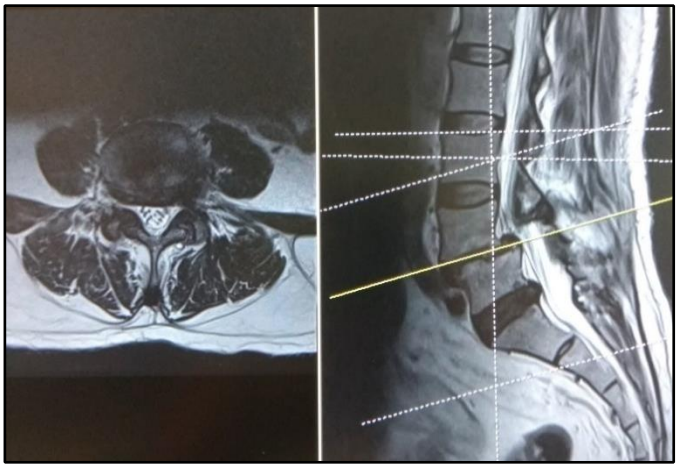
Case 2:

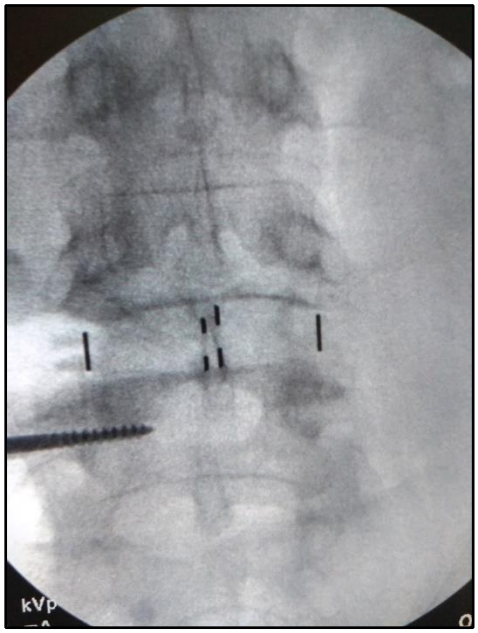
11-year-old male patient with severe neuromuscular scoliosis operated with T2 to pelvis fusion with posterior only surgery with pedicle screws and achieved good correction of curve and sitting balance.

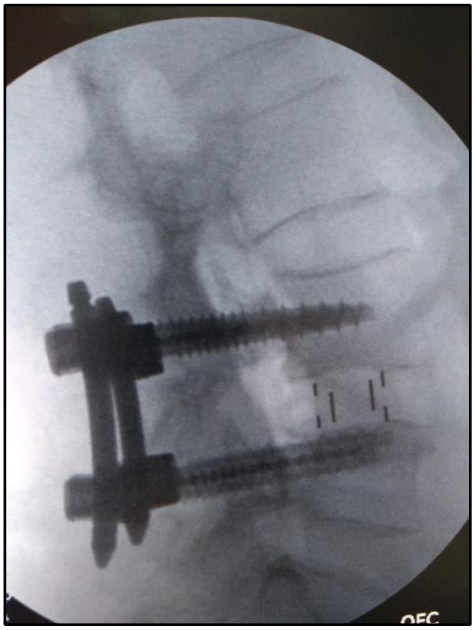
Case 3:

56 year female with grade II lytic listhesis and claudication symptoms was operated for anterior discectomy and interbody fusion using Oblique lateral approach (OLIF) followed by percutaneous posterior fusion.



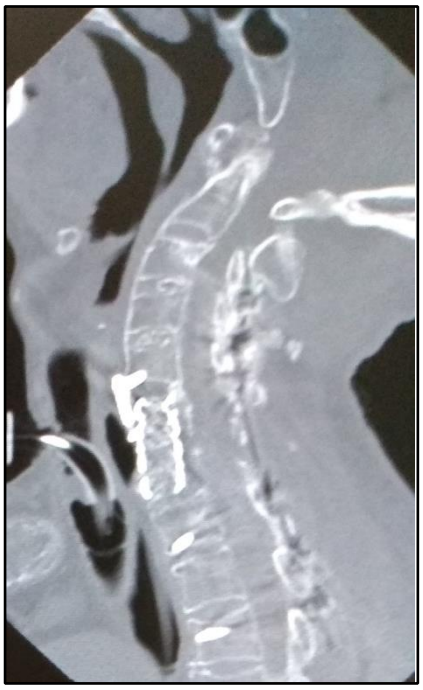


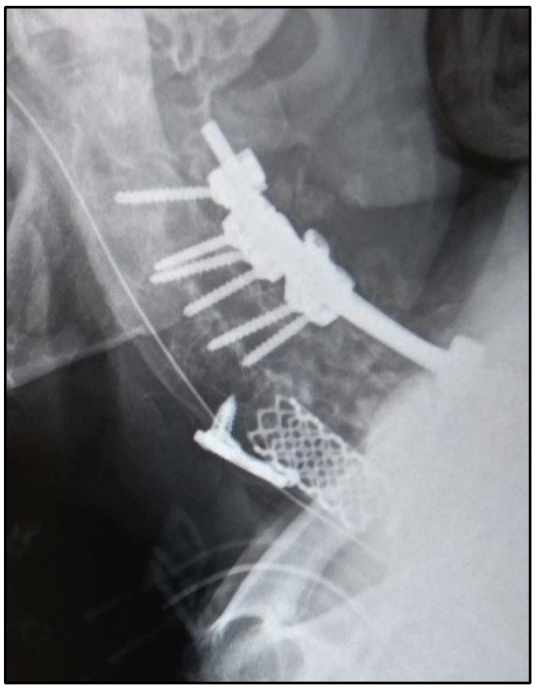




Case 4:

43-year-old, male patient with known case of psoriatic arthropathy and mental retardation presented with history of old neglected trauma and cervical deformity. Patient was put on halo and anterior release by 2 level corpectomy followed by deformity correction and fusion from C3 to T2 (Combined fusion using cage+ plate anteriorly and lateral mass+ pedicle screws posteriorly) was done.





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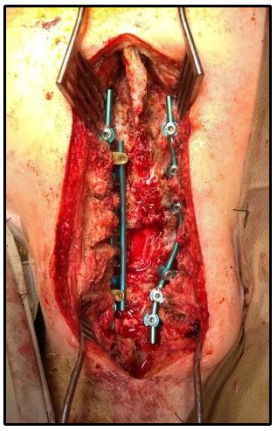
Learning sessions in OT

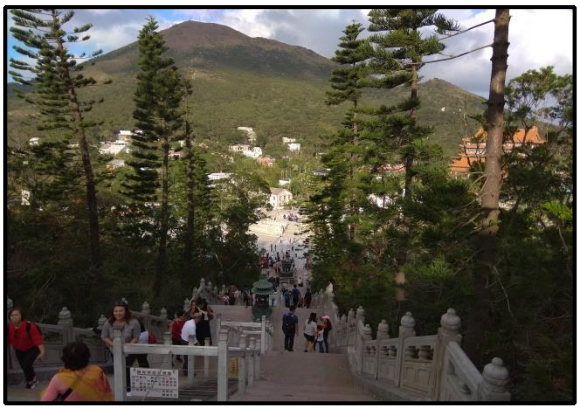


Leisure times, Food and sight-seeing

Favourite food with favourite people

New Year Lunch party at Jockey Club

Natural beauty of Lamma island and Lantau island with Tin tan Buddha visit



Once again thank you very much APSS and Queen Mary hospital, Hong Kong for all learning opportunities, sharing of knowledge and beautiful memories.!