

APSS Travelling Fellowship Report 2021

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Host:

1. Professor Kuniyoshi Abumi, Department of Orthopaedic Surgery, Sapporo Orthopaedic Hospital-Center for Spinal Disorders, Sapporo, Japan
2. Professor Shoichi Kokubun, Department of Orthopaedic Surgery, Tohoku University, Sendai, Japan
3. Professor Yasuhisa Tanaka, Department of Orthopaedic Surgery, Tohoku Central Hospital, Yamagata, Japan

Date of fellowship: 29th November to 17th December

Introduction

Asia Pacific Spine Society (APSS) DePuy Synthes Spine Travelling Fellowship 2021 arranged for me to visit Sapporo Orthopaedic Hospital-Center for Spinal Disorders, Tohoku University and Tohoku Central Hospital from 29th November to 17th December. I would specially like to appreciate the APSS providing me this great opportunity and fellowship centers which welcomed me with great hospitality despite the current COVID-19 situation. I believe this travelling fellowship program enhanced my clinical knowledge and surgical techniques. I would like to share these experiences locally and regionally in our department. I learned that spinal disorder treatment varied from region to region in Japan. Moreover, I have built a good relationship with many spine doctors from other university throughout this travelling fellowship program in terms of not only clinical and basic research but also my private life.

Fellowship program

[29th November – 3rd December]

I reached Sapporo Chitose airport at afternoon on 28th November. Next morning, I arrived at Sapporo Orthopaedic Hospital-Center for Spinal Disorders at 9 am and was warmly welcomed by Prof. Kuniyoshi Abumi and his colleagues. Many spine fellows from all over the world including APSS fellows study spine surgery especially cervical deformity treatment there. There are only 2 spine surgeons including Prof. Abumi, but they conduct 3-400 spine surgeries per year. After greeting, we went to the operation theatre. Prof. Abumi planned to conduct posterior corrective fusion from C2-Th4 in the patient with drop head syndrome. I had a chance to learn his procedure as an assistant. I was surprised at his technique of quick cervical pedicle screw insertion and deformity correction.



On 30th November, Prof. Abumi arranged for me to visit National Hospital Organization Hokkaido Medical Center. Dr. Manabu Ito who is one of the famous scoliosis surgeons worldwide works there. Dr. Ito is our research collaborator of genetic study for congenital scoliosis and adolescent idiopathic scoliosis, and I met him again after a long time because of COVID-19 pandemic. He conducted posterior corrective fusion (Th2-L2) in 20 year-old patient with neuromuscular scoliosis and I learned his theoretical concept for scoliosis correction as an assistant.



After surgery, I returned to Sapporo Orthopaedic Hospital-Center for Spinal Disorders and observed a posterior spinal fusion in the patient with PJK after posterior corrective fusion. In evening, Prof. Abumi invited me to dinner with his colleagues who are all spine surgeons from affiliated hospital of Hokkaido University.



On 1st December, Prof. Abumi arranged for me to visit Hokkaido Spinal Cord Injury Center in Bibai city 1.5 hours (by car) away from Sapporo city. Almost all patients with spinal cord injury are transported to this hospital from whole of Hokkaido around the clock. Dr. Kota Suda welcomed me and I participated his cervical surgery as an assistant. I learned his technique of quick and safe cervical pedicle screw insertion. I also observed two microscopic surgeries at lumbar spine.



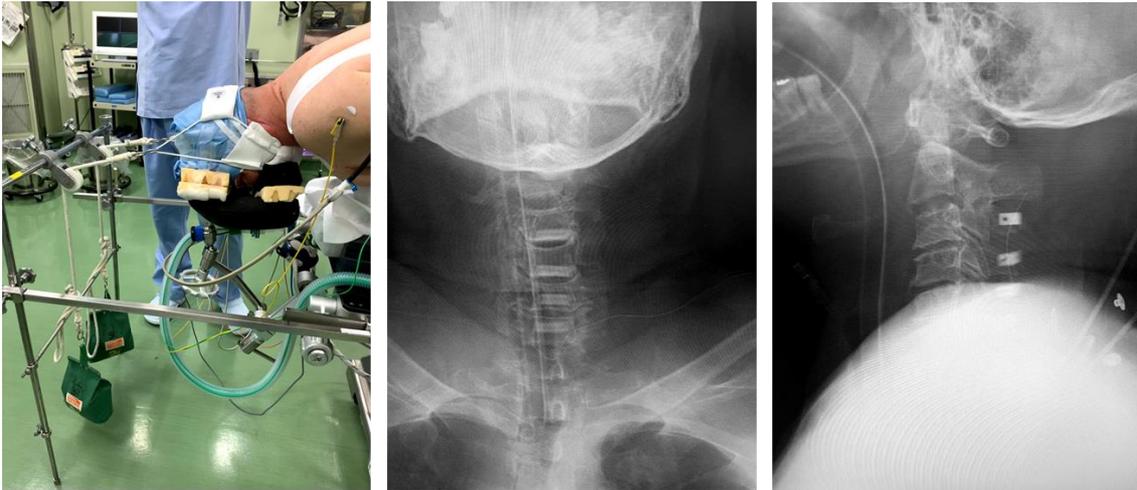
On 2nd December, I also visit National Hospital Organization Hokkaido Medical Center. In the morning, heavy snow fell in Sapporo city. I participated in posterior corrective fusion (Th4-L3) in AIS patient conducted by Dr. Hideki Sudo who is an associate professor of Hokkaido University. Dr. Sudo is also our research collaborator of genetic study for scoliosis. The posterior corrective fusion was conducted using an instrumentation developed by his team and achieved 3-dimensional correction.



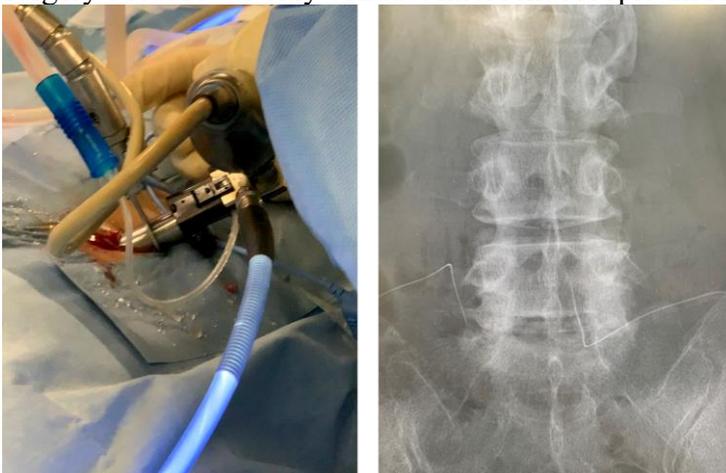
On 3rd December, Prof. Abumi arranged for me to visit Hokkaido Orthopedic Surgery Memorial Hospital to learn Minimally invasive spine surgery. Dr. Itaru Oda welcomed me and I participated TILF with CBT as an assistant. Dr. Oda invited me to dinner with his colleague after surgeries.

[6th – 10th December]

I reached Sendai airport in early morning on 4th December. Dr. Chikashi Kawahara who is one of colleagues of Prof. Shoichi Kokubun invited me to dinner regardless of it being an off day. Moreover, Dr. Kenichiro Yahata who is also a colleague of Prof. Kokubun picked me up from my hotel to National Hospital Organization Sendai Nishitaga Hospital every day. I would specially like to thank them for their kindness. National Hospital Organization Sendai Nishitaga Hospital used to be a tuberculosis sanatorium which is a little far away from Sendai city, and is currently one of the high volume spine centers in Tohoku University (Approximately 600 spine surgeries per year). On 6th December, I was warmly welcomed by Prof. Kokubun and his colleagues and talked with him for about 30 minutes. After that, Dr. Yahata took me to the operation theatre and I participated cervical laminoplasty conducted by Dr. Kawahara and Dr. Yahata as an assistant. I was surprised at their operating table developed by Prof. Kokubun. Their cervical laminoplasty procedure was spinous process splitting double-door laminoplasty developed by Dr. Kurokawa, while our procedure was expansive open door laminoplasty developed by Dr. Hirbayashi. We deeply discussed the differences between two procedures and their history.



On 7th December, I participated microendoscopic laminectomy (MEL) and lumbar foraminotomy (MELF) conducted by Dr. Seiji Yamaya. Dr. Yamaya is a famous endoscopic surgeon in Japan. Dr. Yamata taught me many tips of microendoscopic surgery because we only conduct microendoscopic discectomy (MED) in our hospital.



On 8th December, I participated in posterior corrective fusion (Th2-L2) with CT based navigation in AIS patient conducted by Dr. Yahata and Dr. Morozumi as an assistant.

On 9th December, Prof. Kokubun and Prof. Toshimi Aizawa from Tohoku University arranged for me to visit Tohoku University Hospital. Dr. Ko Hashimoto picked me up in front of the hospital and took me to the operation theatre at 9 am. After I met Prof. Aizawa, I participated posterior corrective fusion (Th10-iliac) in the patient with adult spinal deformity as an assistant. They conducted surgery safely using O-arm navigation system. Prof. Aizawa and Dr. Hashimoto invited me to dinner with his colleagues after surgeries.



On 10th December, I observed Prof. Kokubun's outpatient clinic all day. I learned his clinical examination and diagnostic technique. I also learned usefulness of K-point injection developed by Prof. Kokubun for the patients with nonspecific neck pain. I did not know a concept of myogelosis and Prof. Kokubun taught me how to exam and diagnose with myogelosis. After outpatient clinic, he gave me a certification as follows. Moreover, I had a presentation to them about our genetic research for scoliosis for 30 min.



[14th – 17th December]

It took about one hour by bus from Sendai to Yamagata. Tohoku Central Hospital is located in Yamagata city, and also one of the high volume spine centers in Tohoku University (Approximately 700 spine surgeries per year). On 14th December, I arrived at Tohoku Central Hospital at 7:30 am and Dr. Kusakabe who is a spine fellow took me to the conference room. I was welcomed by Prof. Tanaka and his colleagues. 7 spine surgeons including Prof. Tanaka and one spine fellow work at the hospital. I participated a spine conference. They had the presentations of all cases who underwent surgeries within the previous one week. They also decided the surgical procedures of all cases (15 cases per week) the following week. After the conference, they took me to the operation theatre and I participated single level PLIF at L4-5 and fenestration at L4-5 as an assistant.



On 15th December, Prof. Tanaka had a morning round where I had an opportunity to see the clinical results of the patients who underwent spine surgery. He taught me how to diagnose with C4 and C8 radiculopathy caused by cervical disc hernia or foraminal stenosis.

From 15th to 17th December, I had a lot of opportunities to participate spine surgeries including XLIF, fenestration, Kurokawa's spinous process splitting double-door laminoplasty and cervical foraminotomy as an assistant. I would like to thank them for their kindness. Moreover, Prof. Tanaka and his colleagues invited me to Yamagata dinner. On 17th December, Prof. Tanaka gave me a certification as follows.



Conclusion

I would specially like to appreciate Prof. Abumi, Prof. Kokubun and Prof. Tanaka providing me these great opportunities to visit many hospitals and meet great spine surgeons. I have built a good relationship with many spine doctors from other university throughout this travelling fellowship program and would like to keep in touch with them. Finally, I would like to appreciate APSS providing me this opportunity.