



# Asia Pacific Spine Society (APSS)

( Spine Section of APOA )

## APSS MEDTRONIC FELLOWSHIP REPORT 2025

**Fellowship Program:** APSS Medtronic Fellowship Programme 2025

**Fellowship Date:** 28 May 2025 to 19 June 2025

**Fellow:**



**Rajesh Kumar Chaudhary**

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**Host:**



Tohoku Central Hospital

Yamagata, Japan

**Mentors:**

1) Prof Yasuhisa Tanaka



2) Dr Tsubakino

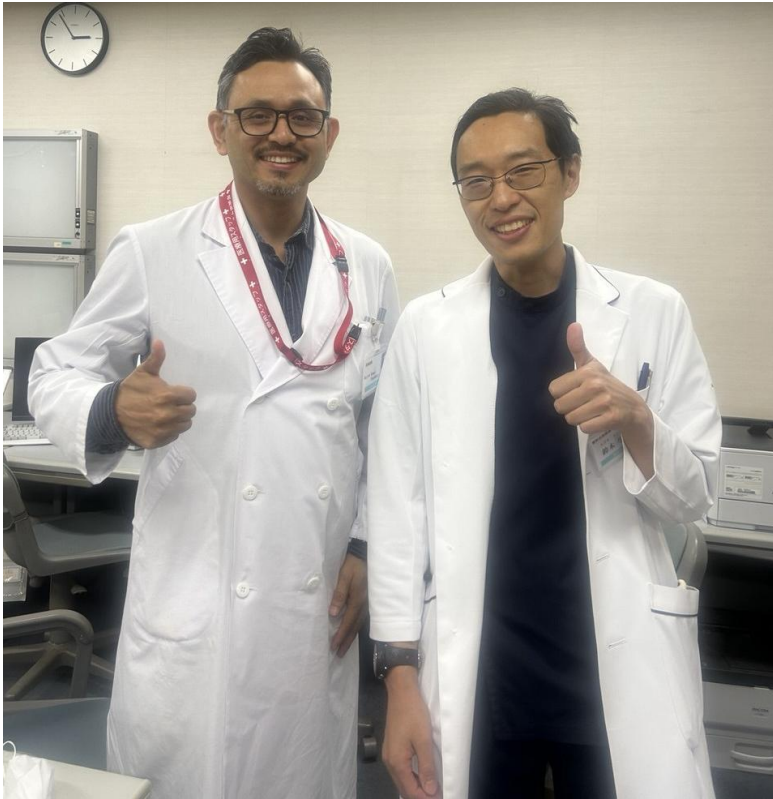


3) Dr Nakamura





4) Dr Suzuki



5) Dr Miyake



**Background:**

When I started my job as an orthopedic surgeon, I was already decided that I will be a spine surgeon in future. I attended APSS Operative Course in Kathmandu in 2015 and became member of APSS. I completed my clinical fellowship in spine surgery in 2017 and started working as spine surgeon in same hospital where I work now. I applied for APSS travelling fellowship in 2019 and was granted fellowship to travel in Malaysia, South Korea and Japan. The COVID pandemic started and the fellowship was postponed and later turned into online fellowship. I withdraw from the online fellowship requesting for opportunity in future. I applied for APSS Medtronic Fellowship 2025 and luckily got the opportunity again. My dream came true.

Being a spine surgeon working in a developing country like Nepal, I always wanted to visit developed countries to see the advanced technologies or techniques in spine surgery and the level of spine care. As a full time, practicing spine surgeon, I wanted to visit for short duration. APSS Medtronic Fellowship was the best option for me in that regard. I was interested in degenerative spine and pediatric deformities. I wanted to visit Japan, South Korea or Singapore. Probably, that was the reason Tohoku Central Hospital was chosen as host center for me. I m very thankful to APSS for providing what I had dreamt of.

**Travel to Yamagata and Orientation in the Hospital:**

I received kind cooperation from Secretariate of APSS during whole process. I received enough information before travelling to the host center regarding VISA, Travel details, liaison with host center, APSS congress and also requirements after completing fellowship. I travelled from Kathmandu to Bangkok and then to Narita, Japan. From Narita, I took a bus to Tokyo. I travelled 3 hours in a Sinkashen from Tokyo to Japan. A hospital staff came to receive me at the station and said “You have 10 minutes to get prepared in dormitory then you have to visit hospital. Professor is waiting.” After almost 24 hours of travel, it was tiresome but I followed his instruction and visited hospital. Everything in the hospital was so systematic. They already had everything prepared for me; daily routine in the hospital, rules and regulations, white coat, pager etc. I had wonderful interaction with Professor Tanaka and was welcomed with a dinner that evening.

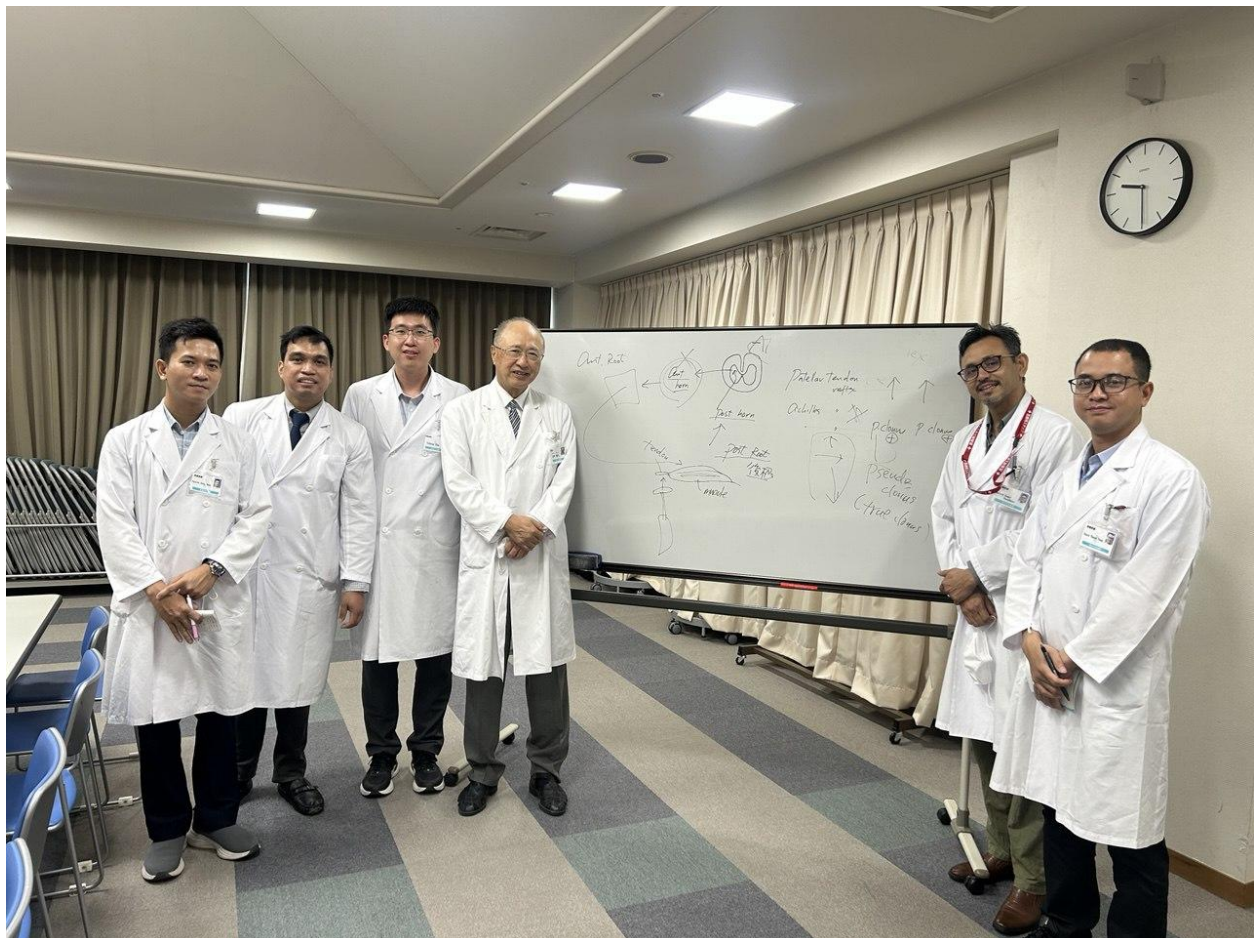
**Academic Routine:**

The academic routine started the next day. Working days started from Monday to Friday. Everyday was operation day and operating room used to start from 9 am. I had to reach operating room 15 minutes before. There were 4 operating rooms and every day approximately 5 cases were posted for surgery. I had to scrub as first assistant in at least 1 case which was already decided while preparing OT list. All the cases, I scrubbed were degenerative spine pathologies. The pathologies I got opportunity to scrub in were Lumbar Spinal Stenosis, Cervical Radiculopathy, Cervical Myelopathy due to C1-C2 instability and paraparesis due to epidural abscess. I scrubbed in 14 cases during my fellowship. I, as a foreign fellow was not allowed to interact with the patients and also had no access to patient’s chart or EMR. I used to get opportunity to discuss with surgeon before the surgery in OR. All the imaging (X ray, myelogram, CT myelogram and MRI) were displayed simultaneously and we use to discuss regarding the surgical planning.

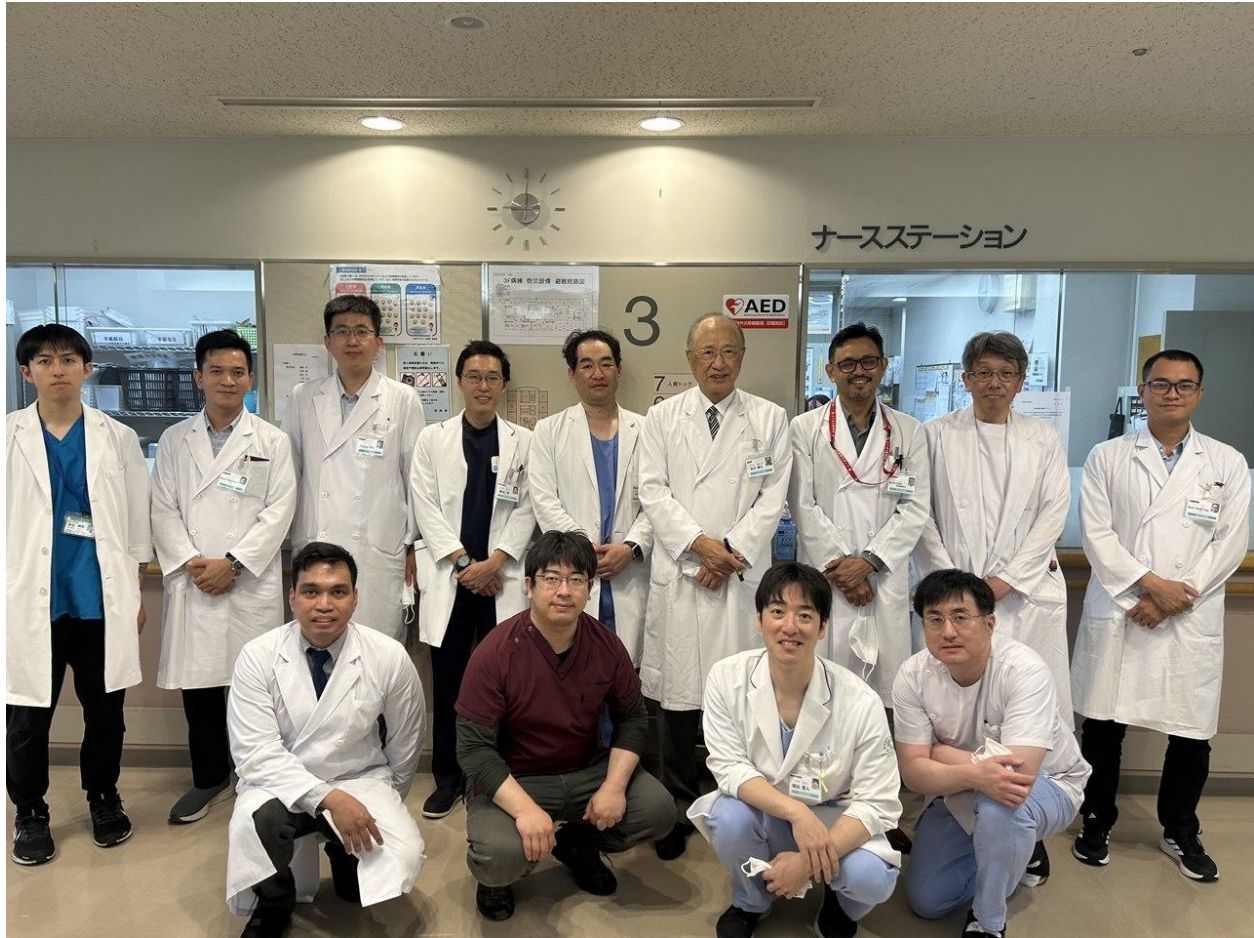
Every Tuesday 7:30 AM, I had to attend a class. The class was led by Professor Tanaka and all the surgeons, fellows and residents used to attend. During the class surgeons used to present the cases operated last week and the cases planned for the current week. There used to be discussion regarding preoperative surgical planning. I as a fellows used to get lots of questions to answer. The postoperative cases were also discussed regarding the technical challenges and any issues related.

Every Wednesday 8:00 AM, I had to attend a ward round. Whole spine team used to make ward round together and post and pre-operative cases were discussed. This was the time I used to get opportunity to see the patients. Professor Tanaka used to ask questions and used to demonstrate pertinent clinical findings in the patient which were very useful to me. There used to be around 40-50 spine cases admitted in the ward at a time.

I was allowed to leave hospital only after 5:00 PM. I had to stay in the doctor's break room and I used to study or do my research projects there. Occasionally, I used to be called in the out patients' department by the professor and he used to show me the interesting spine cases.







### **Learning During My Fellowship:**

Professor Tanaka was very particular about symptomatology and neurology. According to him, identification of the problem is the key to better outcome after the treatment. From their symptomatology and Neurology, patients tell us the diagnosis and we should try to identify the exact problems pertinent to symptomatology and neurology. I learnt specific tips and tricks of clinical examination of the spine pathologies.

I had never seen myelogram performed. I thought the myelogram was obsolete. In the Tohoku Central Hospital, Myelogram was performed in almost all the cases. I found the myelogram very helpful in identification of the neural compression, its severity and location. I realized the importance of the 3D MRI (i.e., sagittal, axial and coronal section) in identification of the pathology. Simultaneous evaluation of Loading X rays (static and dynamic) in different views, myelogram, CT myelogram and MRI give better information of the pathology in the background of symptomatology and neurology.

In degenerative pathology, treat the issue that is causing problem. Most of the cases I scrubbed were Lumbar spinal stenosis cases with neural compression symptoms so decompression only procedures were performed. I got to assist a “Radical decompression Procedure” for L5 foraminal

stenosis cases which is described by the team from the same hospital. Surgical planning was so meticulous that decompression was so adequate but stability was not compromised. I realized the importance of preserving midline structure during decompression.

All the procedures performed were open surgical procedures. There was neither an advanced technologies like navigation or O-arm nor advanced techniques like minimally invasive spine surgeries, endoscopic surgeries. Yet the outcome was excellent. This made me realize that we need to follow the basic principles, newer techniques or technologies are just to add up in those principles. Safety is utmost priority. I saw intraoperative neuromonitoring being used in all instrumentation and fusion cases and autologous blood transfusion in cases with more risk of bleeding.

### **Sight Seeing and Social Activities:**

Besides academic learnings; exposure to natural beauties of Yamagata Prefecture was unbelievable. The hospital itself is situated in a lap of green hills. Since it was a spring season it was greenery everywhere. I got opportunity to visit a Rose Garden. Different species of Rose flower were mesmerizing. I, along with other two fellows from Vietnam were taken to Yama Dera. Yam Adera is a temple on the top of the hill, a beautiful place to visit. Kaminoyama-jo castle was another beautiful place we visited. Beautiful fruit garden and fresh fruit juice prepared from the fruits produced in the garden was memorable.

I am very much interested in football. I like to play and watch football matches. I got opportunity to watch a J2 league between Sendai and Yamagata Team. The spirit of the spectators was really inspiring.

There were several dinner parties and outings. A dinner in an Italian restaurant after a CME program is worth remembering.



### **My Expectation Vs Reality:**

My expectation was to see latest advanced technologies and techniques in a developing country like Japan. But in Tohoku Central Hospital, there was neither advanced technologies like microscope, navigation, O-arm nor there was MIS, endoscopic spine surgery etc. Whatever I learnt was for me. I could easily apply in my daily practice from the next day I start working in my



country. Its not the advanced technology or techniques that only provide better outcome but it's the basic principles and the exact identification of the problem and treating accordingly that provides better outcome.

I was expecting skyscrapers, busy traffics, busy people running here and there. I was so fortunate to be hosted in Yamagata, a beautiful place. I was impressed by the agriculture in Japan. Empty roads in Yamagata with very few people walking; disciplined and humble people. The well-preserved heritage sites. This made me realize that it's not the modernization that is marker of prosperity in the country rather its happiness of the people, their satisfaction or longevity of the life that is important.

### **APSS Annual Congress:**

I am very privileged to attend APSS annual conference 2025 in Kuala Lumpur, Malaysia. The symposium blend with the free papers and rapid-fire rounds was wonderful. It was a pride moment for me to receive APSS Medtronic Fellowship Programme 2025 certificate in front the dignitaries of spine surgery in Asia Pacific region.





## Conclusions and Acknowledgement:

The APSS Medtronic Fellowship Programme 2025 was a wonderful experience for me. I learnt spine surgery which is very useful in my daily practice. The exposure to all the activities in Japan really enhanced my horizon. I would like to thank APSS for the opportunity, APSS secretariate for helping me during the process, Thoko Central Hospital for hosting me and the Mentors for teaching different perspective of spine surgery.

## Log Book:

SN	Date	Diagnosis	Procedure
1	5/29/2025	Lumbar Spinal Stenosis	Fenestration+Hemilaminectomy+Discectomy
2	5/30/2025	Lumbar Spinal Stenosis	L4 hemilaminectomy+L2-L3 Fenestration
3	6/2/2025	Lumbar Spinal Stenosis	TLIF L4-L5+Fenestration L3-L4
4	6/3/2025	Lumbar Spinal Stenosis	L3-L4 and L4-L5 Bilateral fenestration and Discectomy L3-L4
5	6/4/2025	Epidural abscess with Paraparesis	Hemilaminectomy D8-D10
6	6/5/2025	Lumbar Spinal Stenosis	Love technique L5-S1
7	6/9/2025	Lumbar Spinal Stenosis with instability	TLIF L5-S1 and Fenestration L4-L5
8	6/10/2025	Cervical Radiculopathy	C4-C5 AND C5-C6 Open Laminoforaminotomy
9	6/10/2025	Cervical Myelopathy with Pseudotumor C1-C2	C1 posterior arch resection (C1 Laminectomy)
10	6/11/2025	Bertolotti Syndrome	L5-S1 fenestration/L5-S1 extraforaminal decompression (Wiltse Approach)
11	6/12/2025	L4-L5 Foraminal stenosis due to disc herniation	Discectomy lateral to the lateral margin of Lamina
12	6/13/2025	LCS BILATERAL LEG PAIN	B/L FENESTRATION L4-L5, L5-L6
13	6/16/2025	Degenerative Lumbar Scoliosis	Fenestration L3-L4, L4-L5+Radical Decompression for L5 Foraminal Stenosis
14	6/17/2025	Cervical Myelopathy	Double Door Laminoplasty