

## **APSS-Ganga Hospital Spine Fellowship 2023**

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Host: Professor S. Rajasekaran

Fellowship Centre: Ganga Hospital, Coimbatore, India.

Duration of Fellowship: 12 June 2023 – 1 July 2023

First of all, I would like to express my heartfelt gratitude to APSS and Ganga Hospital for selecting me to undergo this spine fellowship at Ganga Hospital, Coimbatore, India from 12 June to 1 July 2023. This fellowship was initially scheduled in 2020, however, due to the Covid-19 pandemic, this fellowship was postponed. Many thanks to Ms Jennifer Matthew and Ms Kaelyn Liew from the APSS and Mr Mohan from Ganga Hospital for all the trip arrangements to ensure that I have a smooth fellowship. Also, I would like to thank my colleagues in Universiti Malaya for covering my work duties during my fellowship. This was a great opportunity for me to visit and experience how does a major spine centre practice and to develop professional connection and friendship.

I started my journey by taking a flight from Kuala Lumpur to Singapore and then from Singapore to Coimbatore on 11<sup>th</sup> June. Once I have arrived at the Coimbatore International Airport, I was greeted by a staff from Ganga Hospital and he brought me to the CPC Guesthouse. Once I reached the guesthouse, Dr Mengistu, an Ethiopian spine fellow showed me around the place and nearby amenities. The accommodation was provided by Ganga Hospital. It was clean, and well-equipped. There were daily housekeeping and laundry services. The guesthouse was located about 3 km from the hospital. There was daily bus service provided by the hospital in the morning and the evening.

Ganga Hospital is a 650-bedded specialty hospital solely dedicated to Orthopaedics, Plastic Surgery and Trauma Surgery with more than 2500 spine surgeries operated per year. On day 1, I managed to meet Prof Rajasekaran in the Operation Theatre. After that, I was given the opportunity to participate in the OT. I was amazed with the number of cases and the variety of cases operated here. There were 6 operation days in a week. There were 2 to 4 OTs operating spine surgeries at the same time in a day. I have a busy schedule during my fellowship at Ganga Hospital. I have opportunities to observe or assist all the consultants – Prof Rajasekaran, Dr Ajoy Shetty, Dr Rishi and Dr Vijay. There was a variety of cases here, ranging from anterior cervical discectomy and fusion, foramen magnum decompression, scoliosis, tuberculous kyphosis, spine trauma, spine infection and lumbar decompression and fusion surgeries. During my 3-week stay here, I have observed osteotomies for severe scoliosis and healed tuberculous kyphosis using intraoperative CT navigation system. I also managed to learn the intraoperative management and postoperative pain regime for scoliosis patients from the anaesthetists.

I also joined the morning teachings which were held on every Tuesdays. During the teaching, there would be journal club and audit presentation by the spine fellows. Prof Rajasekaran has delivered two interesting talks on Spinal Tuberculosis. Through these teachings, I managed to

pick up important clinical pearls and the team's approach in decision making and surgical consideration.

On day 5 of my stay, I was given the opportunity to visit the Ganga Spine Injury Rehabilitation Centre where patients will continue the postoperative rehabilitation after their surgeries. They also have an in-house prosthetic and orthotic centre where braces for scoliosis are fabricated here as well. Later, we visited the Ganga Research Centre. It was an awe-inspiring experience for me to visit one of the top research centre that generates multiple award-winning basic science papers in the field of intervertebral disc degeneration.

This was an excellent fellowship and I truly enjoyed it. Having spent 3 weeks in a single large volume centre allowed me to fully involve in their daily routine in Ganga Hospital. I was blessed to be able to learn some surgical tips and tricks from all the spine consultants in dealing with complicated surgeries. Not only that I learned the clinical aspects of spine surgery, this fellowship also enables me to establish new friendship with the Ganga Spine Team as well as international spine fellows from Ethiopia and Ghana. Prof Rajasekaran is a great spine surgeon with great personality. Not only that I learned spine surgery from him, he also inspired me with his life philosophies that are significant for the development of a spine surgeon. Thank you to APSS, Ganga Hospital and Universiti Malaya for giving me this wonderful experience.



*From left to right: Dr Monowar Tarik (APSS Fellow), Prof Rajasekaran, me, Dr Ajoy Shetty and Dr Rishi Kanna*



*Photos with the team (clockwise from top left): Prof Rajasekaran, Dr Ajoy Shetty, Dr Rishi Kanna, Dr Sri Vijay Anand*



*Photo at the front gate of B Block, Ganga Hospital*



*Photo at the Ganga Spine Injury Rehabilitation Centre (from left to right): me, Dr Monowar (APSS Fellow), Dr Tolgou (Fellow from Ghana), Mr Vignesh (Manager of the Rehab Centre)*



*Photo with the Research Scientists at the Ganga Research Centre*

## Surgical Logbook

No	Date of Surgery	Diagnosis	Surgery	Role	Surgeon
1	12.06.23	Arnold Chiari Malformation	Foramen magnum decompression	Observer	Prof Rajasekaran
2	12.06.23	Severe AIS Lenke 2AN	PSF T2-L3 + thoracoplasty	Observer	Prof Rajasekaran
3	12.06.23	L3-L5 degenerative spondylolisthesis	TLIF L3-L5	Observer	Prof Rajasekaran
4	12.06.23	L5/S1 grade 3 isthmic spondylolisthesis	Delta fixation	Observer	Prof Rajasekaran
5	12.06.23	L5/S1 spondylodiscitis post discectomy (elsewhere operated)	Debridement + L5S1 fusion	Observer	Dr Rishi
6	12.06.23	L4/5 spondylodiscitis post TLIF (elsewhere operated)	Debridement + revision TLIF	Observer	Dr Rishi
7	13.06.23	L3/4 degenerative spondylolisthesis	TLIF L3/4	Observer	Dr Rishi
8	13.06.23	AIS Lenke 6CN	PSF T4-L4	Observer	Dr Rishi
9	13.06.23	L4/5 degenerative spondylolisthesis	MIS TLIF L4/5	Observer	Dr Rishi
10	13.06.23	L1 fracture with neurological deficit	Posterior instrumentation & stabilisation	Observer	Dr Rishi
11	14.06.23	Congenital scoliosis with T10 hemivertebra	PSF T7-L3, T10 hemivertebra excision	Assistant	Prof Rajasekaran
12	14.06.23	C3/4 stenosis, C4-7 DISH	ACDF C3/4	Assistant	Prof Rajasekaran
13	14.06.23	Severe L4/5 stenosis with PID	Microdiscectomy	Observer	Dr Ajoy
14	14.06.23	T5/6 extradural cyst	Decompression + cyst removal	Observer	Dr Ajoy
15	14.06.23	L3/4, L4/5 stenosis post L4/5, L5/S1 decompression + dural tear	TLIF L4/5, PLF L3/4	Observer	Prof Rajasekaran
16	14.06.23	AIS Lenke 1ARN	PSF T4-L4	Observer	Prof Rajasekaran
17	14.06.23	C4/5 PID	ACDF C4/5	Assistant	Prof Rajasekaran
18	14.06.23	T12 pseudoarthrosis	PSF T9-L3	Observer	Prof Rajasekaran/ Dr Vijay
19	15.06.23	L3/4 PID	Microdiscectomy	Observer	Dr Rishi
20	15.06.23	Scoliosis with neurofibromatosis	PSF T2-L2	Assistant	Dr Rishi
21	15.06.23	L4/5 degenerative spondylolisthesis	TLIF L4/5	Observer	Dr Rishi
22	15.06.23	Congenital scoliosis with T10, L2 hemivertebra	PSF + Hemivertebra excision T10 and L2	Observer	Dr Rishi
23	15.06.23	CSM C4/5, C5/6	ACDF C4/5, C5/6	Observer	Dr Rishi
24	17.06.23	Congenital scoliosis with L3 hemivertebra	PSF + L3 hemivertebra excision	Observer	Dr Ajoy
25	17.06.23	C1/2 instability with achondroplasia	C1/2 fusion	Observer	Dr Ajoy
26	17.06.23	Neuromuscular scoliosis	PSF T3-L3	Assistant	Dr Ajoy
27	17.06.23	L4/5 degenerative spondylolisthesis	TLIF L4/5	Observer	Dr Ajoy

28	17.06.23	L5/S1 PID	Interlaminar endoscopic discectomy	Observer	Dr Ajoy
29	19.06.23	L4/5 PID	Microdiscectomy	Observer	Prof Rajasekaran
30	19.06.23	L4/5 degenerative spondylolisthesis	TLIF L4/5	Assistant	Prof Rajasekaran
31	19.06.23	Degenerative spondylotic myelopathy	ACDF C5/6, C6/7	Observer	Dr Rishi
32	19.06.23	C5/6 unifacetal dislocation, C6 right facet fracture	ACDF C5/6, C6/7	Assistant	Dr Rishi
33	19.06.23	L1 fracture AO type B1	Posterior instrumentation & stabilisation	Observer	Dr Rishi
34	19.06.23	T7/T8 fracture AO type C	Posterior instrumentation & stabilisation	Observer	Dr Rishi
35	19.06.23	T11/12 AO type B1, T12 AO type A4	Posterior instrumentation & stabilisation	Observer	Dr Rishi
36	20.06.23	L4/5 degenerative spondylolisthesis	Microdecompression	Observer	Dr Rishi
37	20.06.23	T12-L1 AO type C with ASIA A neurology	Posterior instrumentation & stabilisation	Observer	Dr Rishi
38	20.06.23	T9-T10 AO type B2	Posterior instrumentation & stabilisation	Observer	Dr Rishi
39	20.06.23	C6/C7 traumatic PID	ACDF C6/C7	Assistant	Dr Rishi
40	20.06.23	L5/S1 PID	Right S1 NRI	Observer	Dr Rishi
41	20.06.23	L4/5 PID with tethered cord	Microdiscectomy + tethered cord release	Assistant	Dr Rishi
42	20.06.23	T12-L1 AO type B2, L1 AO type A4 with neurological deficit	Posterior decompression + instrumented stabilisation	Observer	Dr Rishi
43	21.06.23	Thoracic myelopathy, T9/10 OYL	T8-T11 decompression and instrumentation	Observer	Prof Rajasekaran
44	21.06.23	Post tuberculous kyphosis T12/L1	T9-L3 kyphosis correction and fusion	Observer	Prof Rajasekaran
45	21.06.23	L4/5 PID	Interlaminar endoscopic discectomy	Observer	Dr Ajoy
46	21.06.23	L5/S1 isthmic spondylolisthesis	MIS TLIF	Observer	Dr Ajoy
47	21.06.23	C2/3 Intradural extramedullary tumour	Tumour excision and biopsy	Observer	Prof Rajasekaran
48	21.06.23	Congenital cervicothoracic scoliosis, double hemivertebra with contralateral unsegmented bar	T1 hemivertebra excision + bar osteotomy + PSF C5-T5	Assistant	Prof Rajasekaran
49	21.06.23	L3/4, L4/5 spinal stenosis	Microdecompression	Observer	Dr Ajoy
50	21.06.23	L4/5 PID	Microdiscectomy	Observer	Dr Ajoy
51	21.06.23	L4/5 PID	Interlaminar endoscopic discectomy	Observer	Dr Ajoy

52	21.06.23	T2 tumour	Kyphoplasty + biopsy T2 + instrumentation T1-T3	Observer	Prof Rajasekaran
53	22.06.23	C5/C6 stenosis	ACDF C5/C6	Assistant	Dr Rishi
54	22.06.23	L5/S1 PID	Microdiscectomy	Observer	Dr Rishi
55	22.06.23	L2 fracture AO type A4 with ASIA C neurology	Posterior instrumented stabilisation + decompression	Observer	Dr Rishi
56	22.06.23	C6/7 AO type C with ASIA C neurology	ACDF C6/C7	Assistant	Dr Rishi
57	22.06.23	L4/5 stenosis	L4/5 TLIF	Observer	Dr Rishi
58	22.06.23	L4/5 degenerative spondylolisthesis	L4/5 TLIF	Observer	Dr Rishi
59	22.06.23	L4/5 degenerative spondylolisthesis	L4/5 TLIF	Observer	Dr Rishi
60	22.06.23	T12 fracture AO type A4	Posterior instrumented stabilisation	Observer	Dr Rishi
61	23.06.23	Post tuberculous kyphosis T11/T12	T8-L3 kyphosis correction and fusion	Assistant	Prof Rajasekaran
62	23.06.23	Adult idiopathic scoliosis	PSF T2-L3	Observer	Dr Ajoy
63	23.06.23	Congenital kyphosis with facet subluxation	Hemivertebra excision and PSF	Assistant	Prof Rajasekaran
64	24.06.23	ASD L3/4, grade 1 listhesis, post TLIF L4/5	OLIF	Assistant	Prof Rajasekaran
65	24.06.23	Severe AIS Lenke 2A+	PSF T3-L4	Observer	Dr Ajoy
66	24.06.23	T8/9 TB spondylodiscitis	Posterior instrumented stabilisation T5-T11 + decompression + biopsy	Assistant	Dr Ajoy
67	26.06.23	L5/S1 PID	Microdiscectomy	Observer	Prof Rajasekaran
68	26.06.23	Post tuberculous kyphosis T11/12	Kyphosis correction and fusion	Observer	Prof Rajasekaran
69	26.06.23	C3/4 myelopathy with stenosis, C4/5 block vertebra	ACDF C3/4	Observer	Prof Rajasekaran
70	26.06.23	L3/4, L4/5 degenerative spondylolisthesis	PLF L3/4, L4/5	Assistant	Prof Rajasekaran
71	26.06.23	L5/S1 PID	Interlaminar endoscopic discectomy	Observer	Dr Rishi
72	26.06.23	L3/4 PID	Microdiscectomy	Observer	Dr Rishi
73	27.06.23	AIS Lenke 6CN	PSF	Observer	Dr Rishi
74	27.06.23	C6/7 AO B3 injury, ASIA C neurology	C6/7 ACDF	Observer	Dr Rishi
75	27.06.23	C5/6 AO C injury, ASIA A neurology	C5/6 ACDF	Observer	Dr Rishi
76	28.06.23	Congenital scoliosis	PSF	Observer	Prof Rajasekaran
77	28.06.23	L4/5 degenerative spondylolisthesis, DISH	L4/5 TLIF	Observer	Dr Ajoy
78	28.06.23	L4/5 PID	Microdiscectomy	Observer	Prof Rajasekaran
79	28.06.23	L4/5 PID	Microdiscectomy	Observer	Prof Rajasekaran
80	28.06.23	C3/4 stenosis with myelopathy	C3/4 ACDF	Observer	Prof Rajasekaran

81	28.06.23	L3/4, L4/5 degenerative spondylolisthesis	L3/4 PLF, L4/5 TLIF	Observer	Dr Ajoy
82	28.06.23	L3/4 spondylolisthesis, L4/5 recurrent PID	L3/4, L4/5 TLIF	Assistant	Prof Rajasekaran/ Dr Vijay
83	29.06.23	C5/6 AO C injury with ASIA A neurology	C5/6 ACDF	Observer	Dr Rishi
84	29.06.23	L4/5 PID	Microdiscectomy	Observer	Dr Rishi
85	29.06.23	L4/5 PID with cauda equina syndrome	Microdiscectomy	Observer	Dr Rishi
86	29.06.23	L4/5 PID	Microdiscectomy	Observer	Dr Rishi
87	30.06.23	L5/S1 PID	Microdiscectomy	Observer	Dr Ajoy
88	30.06.23	Congenital scoliosis, growth rod insitu	Growth rod distraction	Observer	Dr Ajoy
89	30.06.23	Reverse AIS Lenke 2AR	PSF	Assistant	Dr Ajoy
90	30.06.23	C2-C7 OPLL	Laminectomy and Fusion C2-T2	Observer	Dr Ajoy
91	01.07.23	Revision TLIF L4/5 with epidural hematoma	Hematoma evacuation	Observer	Dr Ajoy
92	01.07.23	L4/5 stenosis	Microdecompression	Observer	Dr Ajoy
93	01.07.23	Right torticollis with sternocleidomastoid fibrosis	Sternocleidomastoid release	Observer	Dr Ajoy
94	01.07.23	Severe scoliosis	PSF	Observer	Dr Ajoy