

**APSS – DEPUY SYNTHES  
CLINICAL FELLOWSHIP 2018**

**FELLOWSHIP REPORT**

**Dr. N.C. Marasinghe**

**Fellow:**       **Dr. N.C. Marasinghe**  
MBBS, MRCS (Eng), MD (Orthopaedics)  
Consultant Orthopaedic surgeon  
Neuro-Trauma Spine Unit  
National Hospital of Sri Lanka, Sri Lanka.

**Trainer:**       **Dr. Orso L. Osti**  
MD, PhD, FRACS, FAOrthA  
Calvary Hospital, Surgery of the Spine  
North Adelaide, Adelaide  
Australia

**Fellowship duration:** 17<sup>th</sup> June 2018 to 6<sup>th</sup> July 2018 (3 Weeks)

**Centers Visited:**

Surgery of the Spine –North Adelaide  
Calvary North Adelaide Hospital  
Women’s and Children’s Hospital – Adelaide  
Royal Adelaide Hospital – Adelaide



## Fellowship Schedule and Introduction

Monday	Tuesday	Wednesday	Thursday	Friday
<p><b>AM</b></p> <p>8am – Spine Trauma meeting Royal Adelaide Hospital</p>	<p>8.30am – Dr Osti, Calvary Hospital, North Adelaide Operating</p>	<p>9am – Prof Peter Cundy Women’s &amp; Children’s Hospital (King William Street, Adelaide) Operating</p>	<p>9am- Dr Osti, Calvary Ward Round</p> <p>10am – Dr Osti’s Rooms, Private Outpatients</p>	<p>9am – Prof Peter Cundy Women’s &amp; Children’s Public Spinal Outpatients</p>
<p><b>PM</b></p> <p>1pm – Dr Osti’s Rooms Private Outpatients (12 Walter Street, North Adelaide, )</p>	<p>Dr Osti. Operating</p>	<p>Assoc Prof Peter Cundy Women’s &amp; Children’s Hospital Operating</p>	<p>12.30 – 1.30pm Lunchtime Meeting Women’s &amp; Children’s Hospital</p>	<p>FREE</p>

Well before my arrival at Adelaide, APSS secretariat and Dr. Osti and his staff has been in contact with me to arrange the necessary paperwork and by the time I arrived on the 17<sup>th</sup> of June 2018, I had all my credentials and approvals done to enter the healthcare facilities in Adelaide. My airport transfers and accommodation was well arranged.

### Trauma meeting at the Royal Adelaide Hospital

Dr. Osti arranged me to visit the Spine Trauma meeting on Monday morning at the Royal Adelaide Hospital which is the regional adult trauma center for spine. They would receive patients from South Australia as well as far from Alice springs and Darwin in the Northern Territory.

The Fellows who were on call during the weekend would present the cases at the presence of the whole spine team including the Spine Consultants, Radiologist, Nursing and physiotherapy representatives. They would discuss in length of the patients’ presentations, immediate and subsequent management and the constrains they faced during the management.

It was a very good learning experience to learn the Assessment and management of such patients as well as how organized the hospital to provide care for these trauma patients and a large majority of these patients has had surgical interventions done within 24 hours of admission. They had 24 hour MRI and theatre coverage.

They also discussed spine patients who were referred from other centers ie. with tumours as well as the scheduled elective surgeries for that week.

The value of such a meeting is that you get the opportunity to get the ideas from wide range of professionals to give the optimum care for the patients and you would act upon the consensus of the team. Also since all the relevant stakeholders are in the team it would be easy to rectify any constrains encountered in management.



Ex. A patient was transferred from Darwin (4 hour flight) following bifascetal dislocation of C5/C6 and the air ambulance had informed of the patient prior to his arrival. However, there had been a delay in getting the MRI at the patients' arrival and hence the surgery was also delayed by few hours. This was escalated at this meeting and steps were taken to prevent further such incidence in the future.

This concept of and the model of multidisciplinary team approach to management is the future for developing nations like Sri Lanka and was something to take home which would certainly benefit our patients.

### **Dr. Ostis' practice – Surgery of the spine**

I was at the Dr. Ostis' practice on Monday afternoons and on Thursdays.

I had the opportunity to sit beside Dr. Orso Osti in his practice whilst he would see his patients. Been a senior spine surgeon who has been in the circuit for nearly 35 years, it was a mesmerizing experience to see how he approached his patients and problems.



He had a large variety of patients with spinal disorders particularly of degenerative in nature. I encountered both new patients as well as his follow ups and was able to discuss the management in great detail. His method of explaining the diagnosis and the options to patients was really fascinating and truly a valuable experience.

The outcome in vast majority of his post op patients was good and particularly with the patients inserted with the surgically implanted spinal cord stimulator. This is a technology which is

becoming quite popular with chronic spinal pain and intractable pain despite valid surgery and yet not reached Sri Lanka.

I was also able to meet with the industrial representatives and the Spinal cord stimulator programmers whilst in Dr. Ostis practice and learn about the spinal cord stimulation in depth, ie different programs, battery types, number of leads, frequency and depth of stimulation etc.

The overall set up of the private practice was also new to me and I find it a good concept compared to rest of the world.

### **Surgery at the Calvary North Adelaide Hospital**

Tuesday was Dr. Ostis' theatre day and he Operated whole day. I was fortunate to learn from him whilst he performed surgery. He performed wide variety of degenerative spine surgeries.

- Micro-discectomy,
- Decompressions.
- TLIF
- Spinal cord stimulator insertions
- Rhysolysis.



### **Learning points.**

#### **Preserving midline**

During bilateral laminectomy decompression Dr. Osti would only do subperiosteal dissection of muscles on one side and do a spinous process osteotomy. Thereby the spinous process with its undissected musculature on the opposite side could be shifted away from midline thus paving the way to do a full laminectomy. This technique preserves the midline and its tension band as well as minimal morbidity due to muscle dissection. Surprisingly it gives good enough access for a good decompression

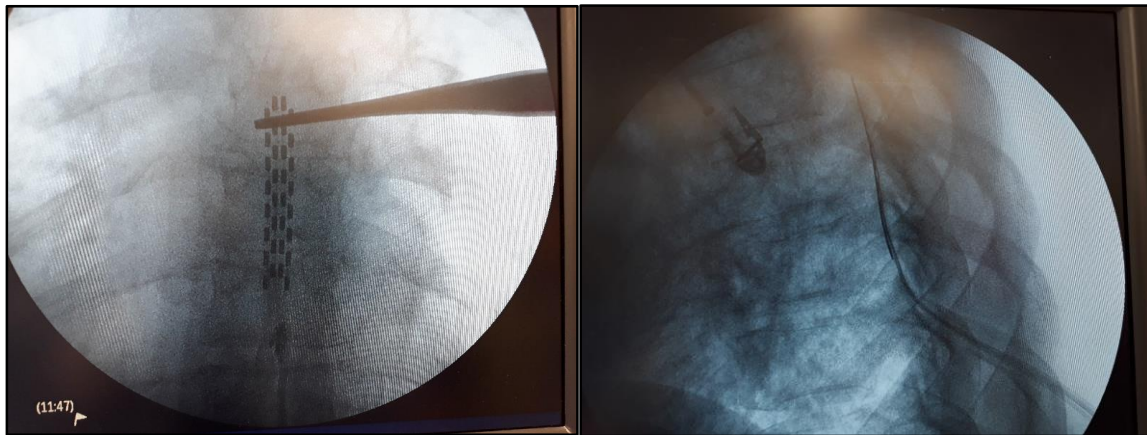
#### **Spinal cord stimulator Insertion**

The surgically implanted spinal cord stimulator is known to be superior to percutaneously implanted wires and this could be done with limited laminectomy at mid thoracic spine to give adequate stimulation to thoraco-lumbar spine. 16 or 32 paddle transducer is placed extradurally and to gain the maximum effect it should be placed on the center of the spine to get symmetrical stimulation.

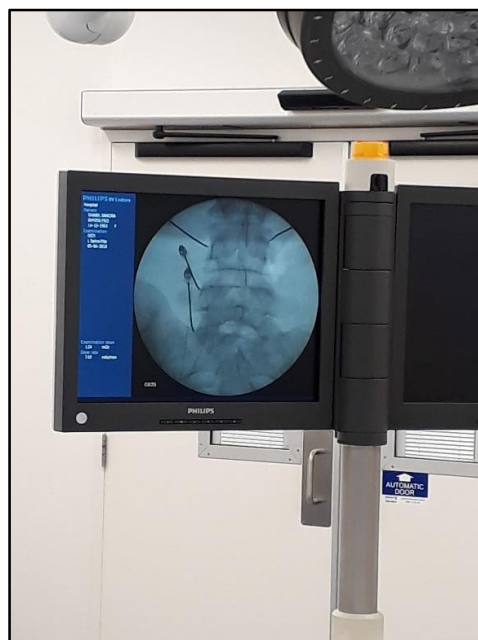
## Rhyzolisis

Dr. Osti performed fascet denervation for patients with mechanical chronic back pain as day case procedure under sedation and the outcomes were quite good.

## Placement of Spinal Cord Stimulator



## Dr. Osti Performing Rhyzolysis



## **Surgery at the Womens' and Chlidrens' Hospital – Adelaide**

I had the opportunity to attend theatre at the Womens' and Childrens' hospital on Wednesdays where they performed complex spinal deformity correction surgery.

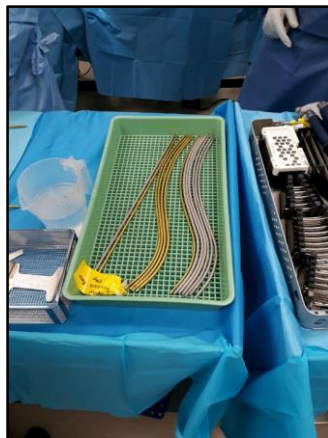
I was fortunate to witness surgery and engage in discussion with Prof. Peter Cundy, Prof. Brien Freeman and Dr. Micheal Selby during this time.

This hospital utilized quite innovative, modern and expensive instruments and implants for their surgeries which made their work much easier. Such as Allen Table, Diathermy sucker, Ultrasonic bone Scalple, Prebended and custom bended long rods for deformity correction.

## **Surgery for Scheuermanns' Kyphosis**



## **Pre Bended Rods to preserve strength**



## **Carbon Fibre Pedical Screws around tumour resection**



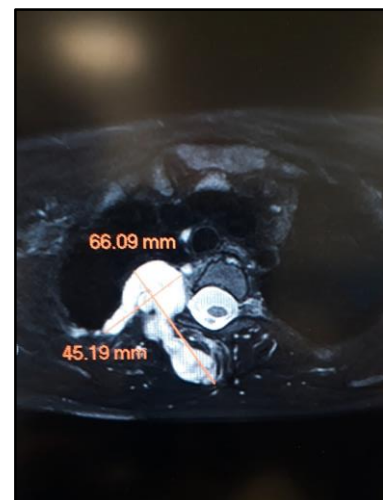
## **Clinic at Womens' and Childrens' Hospital – Adelaide**

I attended the Childrens spine clinic at the Womens' and Childrens' Hospital – Adelaide, which was quite educating.

This hospital received all the complex paediatric spine referrals in the region and the opportunity to engage in discussion of their management and planning surgery with the senior consultants was one of the best experience I had during this period.

There I, saw patients with Adolescent Idiopathic scoliosis, Complex congenital scoliosis, and kids with various syndromes resulting in spinal deformity.

## **Plexiform Neurofibroma causing scoliotic spinal deformity**





**A Child with Neuro Fibromatosis-1 and Tracheo-Broncho malasia is with sever thoracic lordosis causing Trachea to collapse at the site of thoracic lordosis**



### Summery

This 3-week clinical fellowship was well organized and had all the necessary elements to learn for a surgeon who is coming from a less developed spinal service like Sri Lanka, and it would have been an even more wonderful experience if I had the chance to assist surgery which is not easy due to Australian rules and regulations. I thoroughly value the opportunity provided by APSS and De Puy Synthes in this endeavor.

### Acknowledgements

- APSS
- De Puy Synthes
- Dr. Orso Osti
- Prof. Peter Cundy
- Staff at Dr. Ostis' practice
- Kaelyn Liew – APSS Secretarat
- Dr. Udai De Silva – APSS Council member – Sri Lanka

Annex : Log book of Surgeries

No	Date	Age	Sex	Diagnosis	Surgery	Surgeon	Hospital
01	22/05/18	64	M	Spinal Stenosis	Decompressive laminectomy L4/5, L5/S1	Dr. Osti	Calvary Hospital
02	22/05/18	65	M	Spinal Stenosis on previous L4/5, L5/S1 TLIF	Removal of implants, decompression, extension of fixation from L3 to S1	Dr. Osti	Calvary Hospital
03	22/05/18	53	M	Sciatica	L5/S1 Microdiscectomy	Dr. Osti	Calvary Hospital
04	22/05/18	53	F	Radiculopathy following TLIF	Repositioning of a screw	Dr. Osti	Calvary Hospital
05	22/05/18	82	M	Mechanical back pain	Rhizolysis	Dr. Osti	Calvary Hospital
06	22/05/18	56	M	Mechanical back pain	Rhizolysis	Dr. Osti	Calvary Hospital
07	22/05/18	50	F	Mechanical back pain	Rhizolysis	Dr. Osti	Calvary Hospital
08	23/05/18	16	F	Scheuermanns Kyphosis	Kyphosis correction	Dr. Micheal Selby	Womens and Childrens
09	29/05/18	44	F	Sciatica	L/ L4/L5 Discectomy	Dr. Osti	Calvary Hospital
10	29/05/18	50	M	Sciatica	L/ L5/S1 Discectomy	Dr. Osti	Calvary Hospital
11	29/05/18	64	F	Chronic spinal pain	T7 Spinal cord stimulator	Dr. Osti	Calvary Hospital
12	29/05/18	49	F	Canal stenosis	L5/S1 Discectomy	Dr. Osti	Calvary Hospital
13	29/05/18	68	F	Mechanical back pain	Rhizolysis	Dr. Osti	Calvary Hospital
14	29/05/18	72	F	Mechanical back pain	Rhizolysis	Dr. Osti	Calvary Hospital

15	30/05/18	15	M	MPS, L2 retropulsion Caudaequina compression	T12 to L3 fixation and L2 decompression	Prof. Freeman	Womens and Childrens
16	05/06/18	72	F	Spinal Stenosis	L4/5 Decompression	Dr. Osti	Calvary Hospital
17	05/06/18	74	F	Chronic spinal pain	T9 spinal cord stimulator	Dr. Osti	Calvary Hospital
18	05/06/18	40	F	Chronic Spinal Pain	T9 Spinal cord stimulator	Dr. Micheal Selby	Womens and Childrens
19	05/06/18	64	M	Wond infection	Wound Debridement	Dr. Osti	Calvary Hospital
20	05/06/18	54	F	Mechanical Back pain	Rhizolisis	Dr. Osti	Calvary Hospital
21	05/06/18	66	F	Mechanical Back pain	Rhizolisis	Dr. Osti	Calvary Hospital
22	05/06/18	83	M	Mechanical Back pain	Rhizolisis	Dr. Osti	Calvary Hospital
23	05/06/18	51	F	Mechanical Back pain	Rhizolisis	Dr. Osti	Calvary Hospital

