

Station 1

A 34 years male fell into a 5 meter low level wetland while driving .He suffered from upper thoracic pain which progressed into paraplegia & complete lack of sensation from the lower thoracic cage downwards after 5 days from the accident

MRI reads: Traumatic vertebral body wedging at D4 to D6 levels, interspinous ligament rupture at D4-D5 level with localized posterior epidural haematoma causing spinal cord compression (associated axial figure).

Kindly describe the level & extent of the haematoma based on the xray provided (1& 2)?

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Two days later a neurosurgeon performed a laminectomy at D4, D5 level evacuated the haematoma with early signs of regaining sensation & power .No thoracic support was performed & movement was encouraged .

One week later (15 days from the accident)complete paraplegia resumed as before.

How can you explain the poor outcome & what is the possible technical defect based on previous xray ?

One month later an orthopaedic surgeon fixed the pedicles of D2, D3, D4, D5, D6, D7 bilaterally (see figures 3& 4)

Patient slowly regained lower leg power & sensation

How can you explain this better outcome ?

Being non ambulant what is the medication recommendedas long as he is lying flat in bed ?

Station 2

A 70 years diabetic lady is suffering from back & leg pains after laminectomy performed in 2010. She recalls having an intervention in 2013 for inability to sit & an amputation for right ischemic leg in 2014 .

Nowadays (2015) she is moving using a wheel chair with predominant pain on the left side:

What is the level & type of intervention in Fig 1?

What is the level type of intervention in Fig 2?

Fig 3 shows a consolidated well demarcated dark picture at the level of L4. What could it be based on her history ?

Fig4 shows an oblique view . What is the possible procedure of the needle present?

Fig 5: Mention the site & name of the procedure ?

Fig 6 Mention the site & name of the procedure ?.

Station 3

A sewer lady is suffering from radicular pain affecting mainly the right thumb.

How can you clinically confirm/test a radicular pain ?

Under image an intervention is done .

What is the expected safe type of intervention ?

What is the level of needle intervention in fig 1 &why ?

What does the dye delineates in fig 2&3 ?

What is the view in fig 4 ?

In order to view better the lamina in the lateral view & ensure an accurate depth of your needle.

Kindly explain how to set your C Arm in order to view the right side epidural space ?

Station 4

A 60 years obese lady is suffer from pain mainly on walking.

She has +ve SLR & +ve Reverse SLR on both sides .

Left lower back pain was elicited on flexion of left hip& knee with internal rotation while lying supine .

Radiographic reports state:

- **Mild forward slippage of L3 over L4**
- **Variable degree of narrowing of lumbar spines mainly L4/L5 .**
- **Rudimentary L5/S1 space .**

What does it mean +ve reverse SLR ?

Figure 1 shows a lateral view of the pelvis with an oblique transparency(in Yellow) running from the left towards the anterior part of the sacrum .

What could this transparency delineate ?

A dye was also injected through a needle .

What is the expected intervention?

Figure 2 & 3 shows an AP view . What does it show ?

Station 5

J. aged 28 years suffers from pain all along the right arm up to mainly the middle & index finger particularly on abduction . She has always attacks of pain & numbness on manual work or when she carries her 3 years daughter . Occasionally pain is associated with bluish colouration of the hand .

EMG : - Delayed F wave latency of right Median Nerve .

- Reduced amplitude of right Ulnar nerve on stimulation on abduction .

Enclosed the plain xray of the cervical spine .

What is the anomaly in such xray ?

Is stellate the ideal treatment ?

A surgery to relieve the compression was decided to relieve the proximal compression (Thoracic Outlet Syndrome).

What is the name of the operation ?

In relation to the first rib tick only the correct statement :

The subclavian artery is anterior to anterior scalene

The subclavian vein is posterior to anterior scalene

The subclavian artery is posterior to anterior scalene

Brachial plexus is medial to subclavian artery

How can you rationalize/explain the blue colouration of the hand& why ?

Station 6

A 20 years student is suffering from metastatic breast cancer .She had right radical mastectomy 2years ago followed by both chemo & radiotherapy .

Recently she received radiotherapy for bony metastasis affecting her 2nd&3rd lumbar vertebra & her right upper femur .

Nowadays she has attacks of severe shooting pain in the right upper thigh as shown in the enclosed diagram despite the below medications :

50µg fentanyl patch

100mg long acting tramadol twice daily

1gm paracetamol twice daily

75mg pregabalin twice daily

What is defective in the current medication ?

How can you explain the development of her recent shooting annoying pain ?

How can you improve her pain status ?

Station 7

A 38 years old worker complains of pain on walking and standing. His job entails heavy lifting. Pain is mainly on the left. Nowadays he is leaning forwards on walking . Plain xray shows scoliosis .

On examination difficulty in lifting his left thigh while supine .

Left lower & upper Paravertebral tenderness .

Based on history & clinical examination how can you explain his leaning forwards & his pain on extension of his upper back ?

Fig1:shows injection of two structures .What are these structures ? & why ?.

Figure 2 & 3 show injection of another structure .

What is your diagnosis & why ?.

What would be your recommendations after the interventions ?.

Station 8

A 23 years professional volley baller has middle line thoracic pain & right sided lower back pain. He has had previous interventions for right lower thoracic facets ,right lower lumbar facets(including right Sacroiliac), right pyriformis with close to 6 month pain relief yet his pain returned more extensively on resuming sports .

Nowadays his thoracic pain is central(middle line) from T5 to T12 besides the previous right sided facetal pain .

What could be the source of these extensive thoracic pain generators ?.

What can the pain clinician do to improve such condition ?.

What are your physical recommendations ?

Station 9

A 65 years opioids tolerant lady is to undergo shoulder joint replacement .

Using a nerve stimulator an interscalene block was done with a catheter using a fixed rate pump for continuous pain relief for 5 days .

Describe :

How would you do it under general anaesthesia ?

What is the target on stimulation & under which intensity ?

What is ideal length of the stimulating needle for an average status ?

Which level you introduce your needle & what is your needle direction ?

On stimulation the patient diaphragm is contracting ; what should you do for better orientation ?

You were able to introduce the catheter & to secure its position ;
what could be the adjustable volume ,concentration & drugs given ?.

Station 10

A 33 years old painter is suffering from left sided leg pain shooting to the lateral side of the leg and dorsum of the foot. Pain comes in attacks particularly in winter.

Which intervention is done in figure 1?

Which procedure is done in figures 2,3,& 4?

How can you justify the last procedure to the patient based on his symptoms?