

Spinal cord and nerve root syndromes

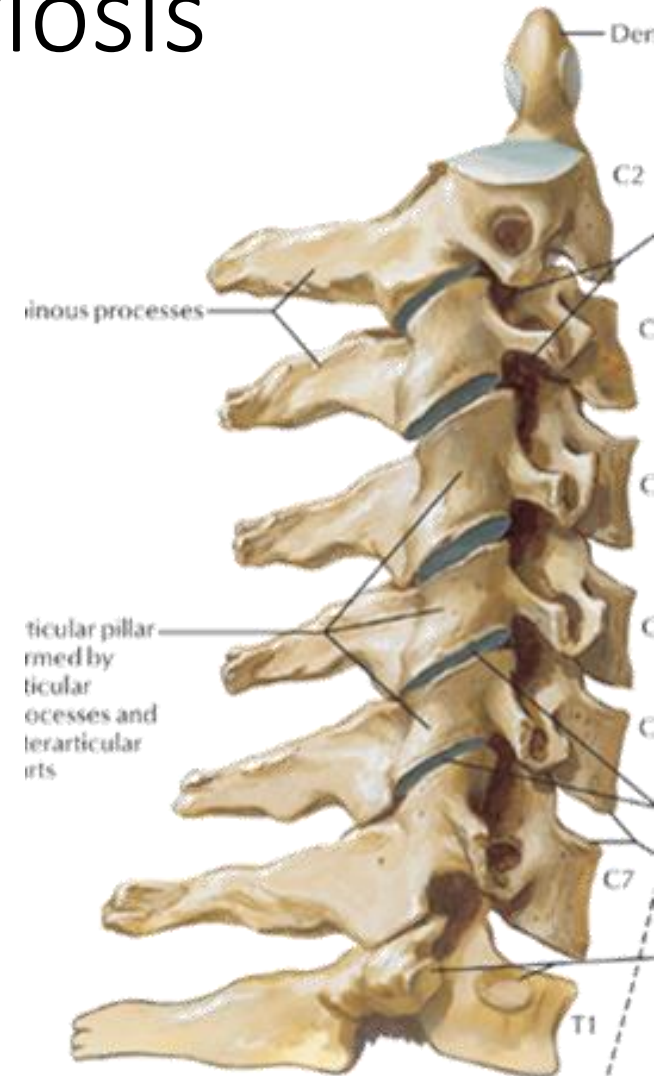
Myelopathy and Radiculopathy

Causes

- The syndromes are defined by location of disturbance
- A careful clinical assessment should identify:
 - Whether the cause is compression of nerve or spinal cord
 - The site of compression
 - The cause of compression
- Commonly the cause will be a disc prolapse
- Alternatives:
 - Tumour, infection, haemorrhage
- Medical causes include inflammatory conditions, demyelination...

Cervical Spondylosis

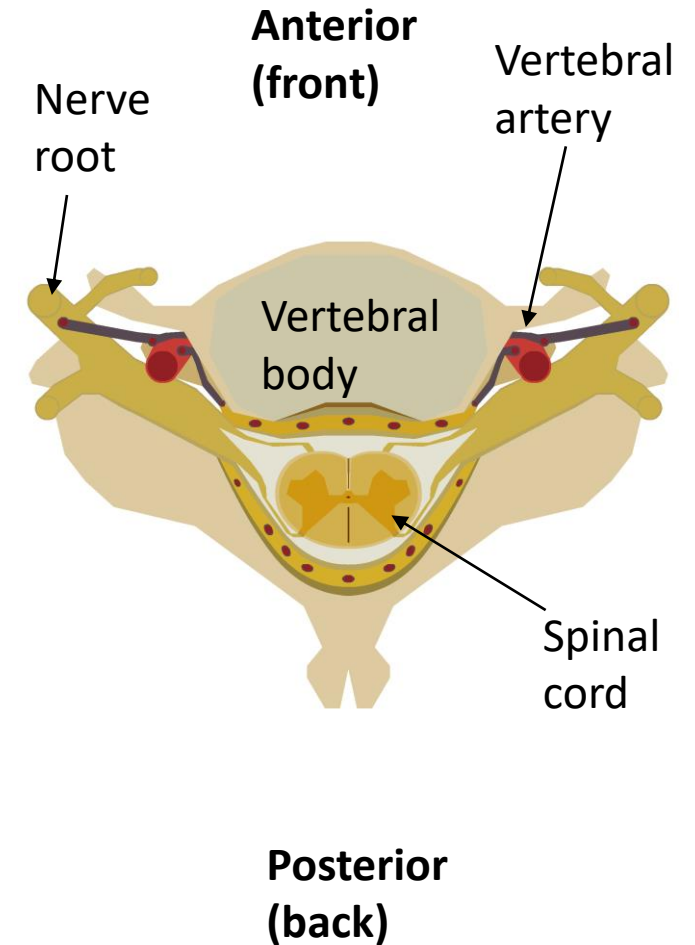
- Arthritis of the neck
- Common – 85% of over 60y old
- Risks – neck injuries, occupational
- Disc dehydration – loss of height
- Increased pressure on facet joints
- Erosion of cartilaginous lining
- Osteophytosis
- Abnormal motion segment
- Commonest level C5/6





Presentations of cervical spondylosis

- Neck pain
- Radiculopathy – nerve root syndrome
- Myelopathy – Spinal cord syndrome
- Instability
- Deformity
- Vertebral insufficiency - rare



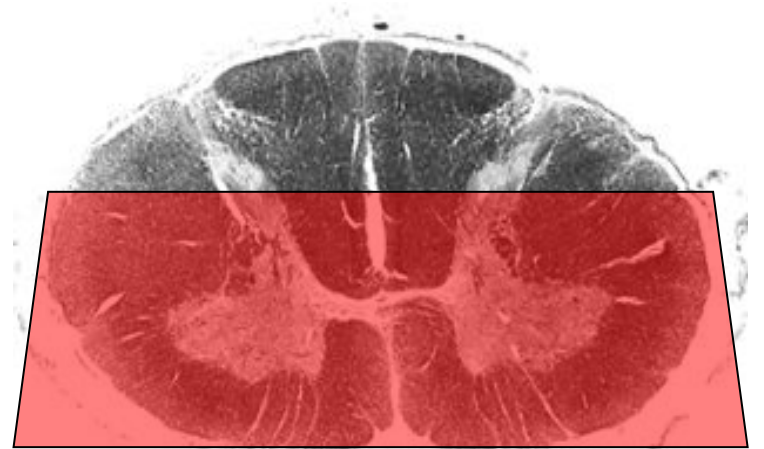
Spinal cord syndromes

- Myelopathy refers to disease of the spinal cord
- Syndromes may be complete or incomplete
- Complete spinal cord injury – no function below the level of injury
 - Cervical cord injury – loss of motor (movement) and sensory (feeling) in arms and legs
 - Loss of control of bladder and bowel (incontinence)
 - High cervical injury can result in inability to breathe (diaphragm)

Incomplete spinal cord syndromes:

1. Anterior cord syndrome

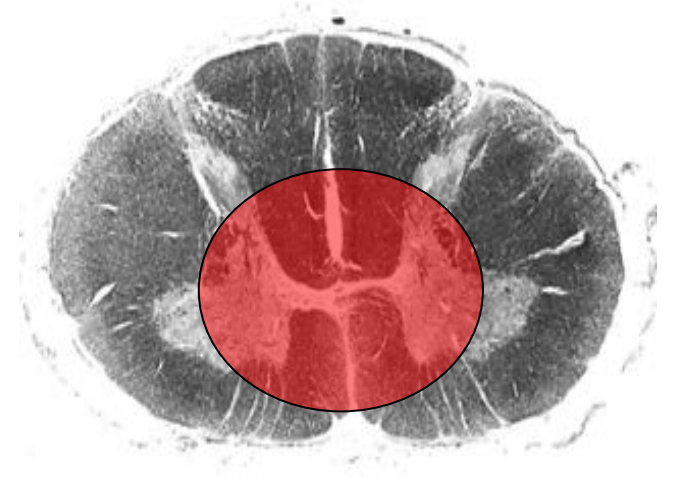
- Common
- Motor: weakness/ paralysis Left and Right (corticospinal tracts)
- Sensory: loss of pain and temperature (anterior and lateral spinothalamic tracts)
- Preserved joint position (proprioception) and vibration sense



Incomplete spinal cord syndromes:

2. Central cord syndrome

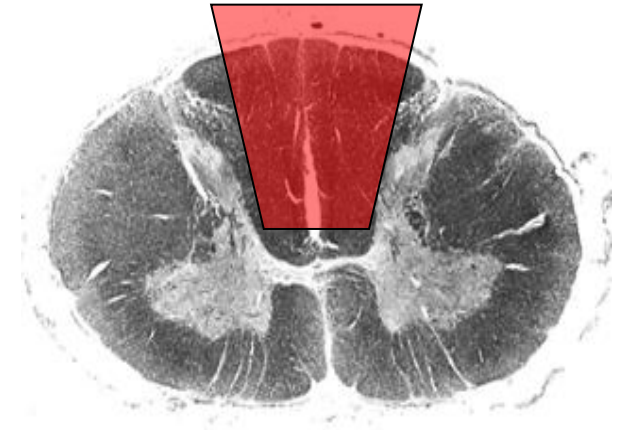
- Common in older patients with established wear and tear changes – bony spur formation (osteophytes)
- Mechanism of injury is usually a fall – hitting forehead, resulting in forced neck extension
- Spinal cord is squashed against the osteophytes
- Hallmark – sudden loss of use of arms, with legs spared (due to arrangement of fibre tracts)
- Good prognosis for recovery (usually)



Incomplete spinal cord syndromes:

3. Dorsal column loss

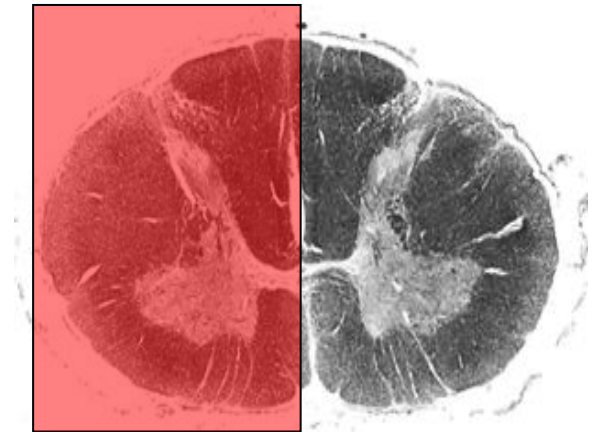
- Unusual
- Loss of joint position (proprioception) and vibration sense
- Poor balance especially in the dark



Incomplete spinal cord syndromes:

4. Brown- Sequard syndrome

- Rare
- Penetrating injury
- Loss of movement on side of injury
- Loss of joint position and vibration on side of injury
- Loss of pain and temperature on **opposite** side to injury
- Referred to as dissociated sensory loss



Cervical radiculopathy

	Root	Frequency	Weakness	Reflex loss	Sensory
C4/5	C5		Shoulder Abduction	BJ	Shoulder pain
C5/6	C6	25%	Elbow Flexion Wrist Extension	BJ SJ	Thumb
C6/7	C7	60%	Elbow Extension Wrist Flexion	TJ	Middle finger
C7/T1	C8		Thumb Extension Wrist Ulnar dev		Little finger

