

# Cauda Equina Syndrome

Mr Usman Ahmed MBBS PhD FRCS(Orth)

Trauma & Orthopaedic Registrar

Birmingham Orthopaedic Training Programme



# What is it?

A disorder in which the lumbosacral nerve roots are compressed causing neurological symptoms

-

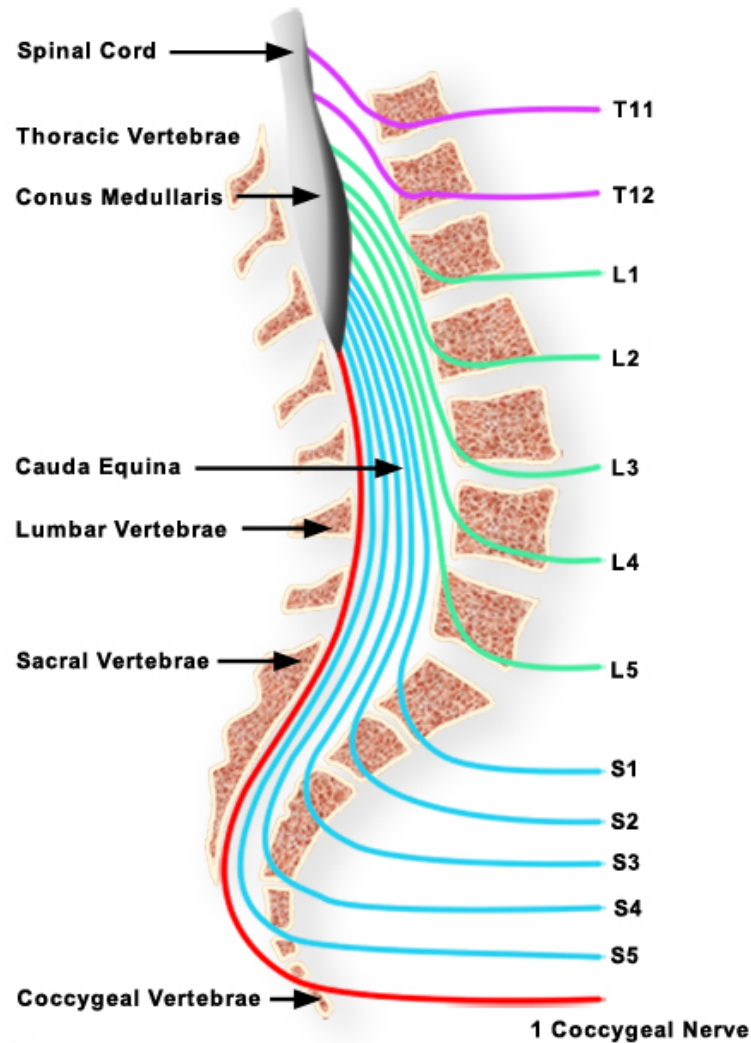
**Surgical Emergency!**

-

Early recognition & thorough clinical evaluation

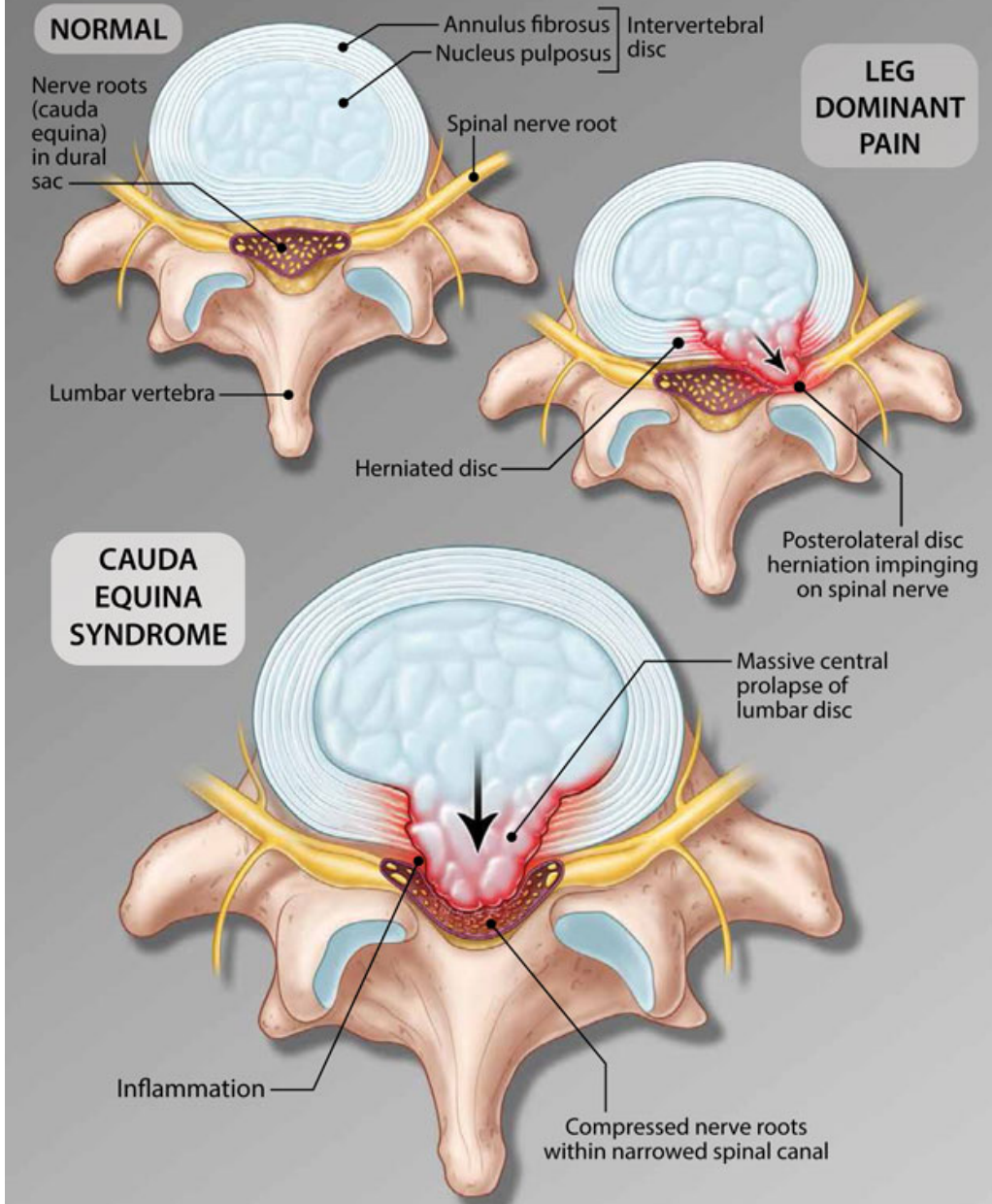


# What is the Cauda Equina?



- “Horse’s tail” (Latin)
- The spinal cord terminates at L1 (T12 – L3)
- The nerve roots then progress to relevant vertebral level where they exit

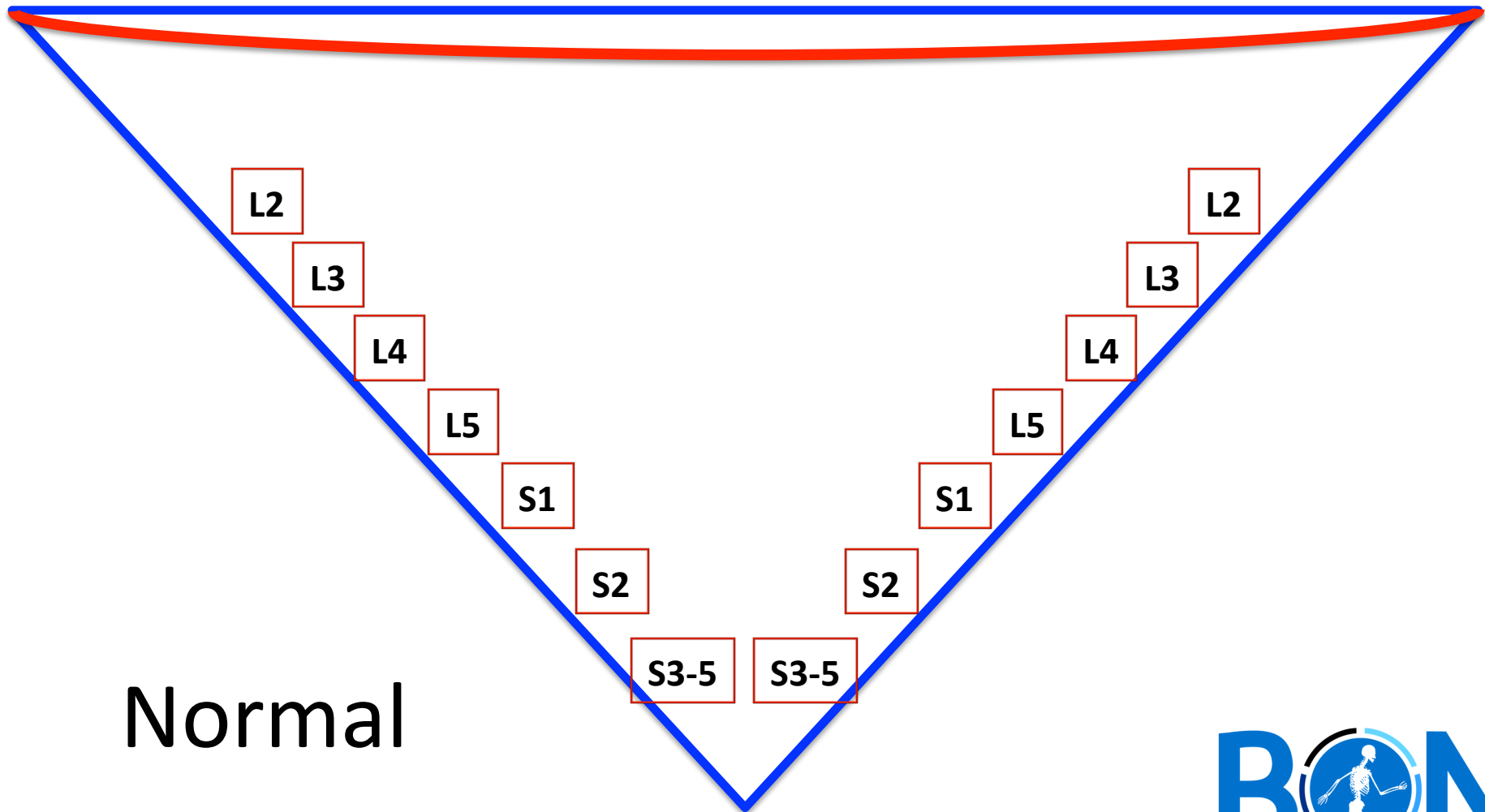
# Cauda Equina Syndrome (CES)



# CES

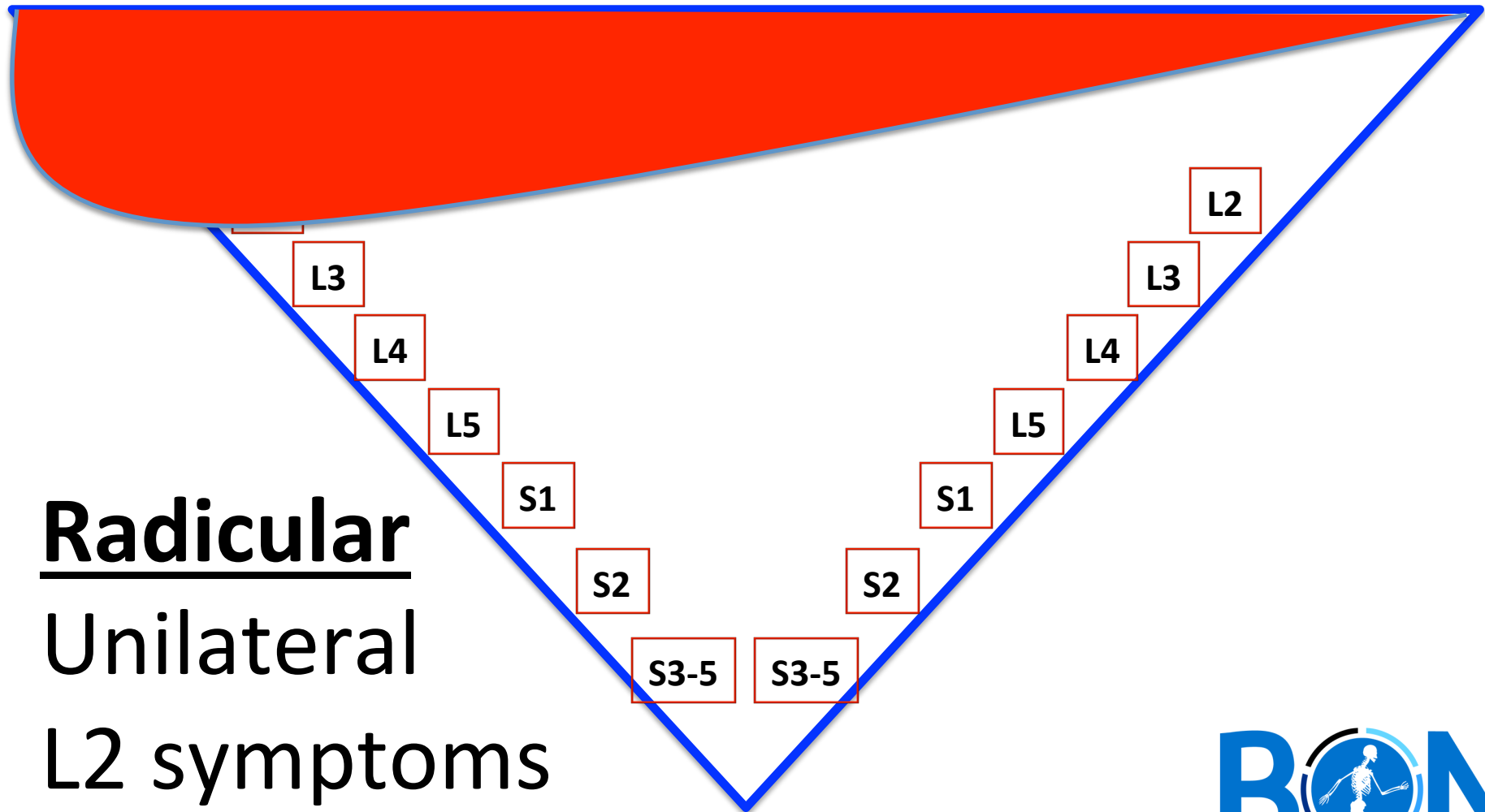
- The Cauda Equina is compressed resulting in neurological dysfunction
- Multiple causes

# Close Up – Canal with Roots



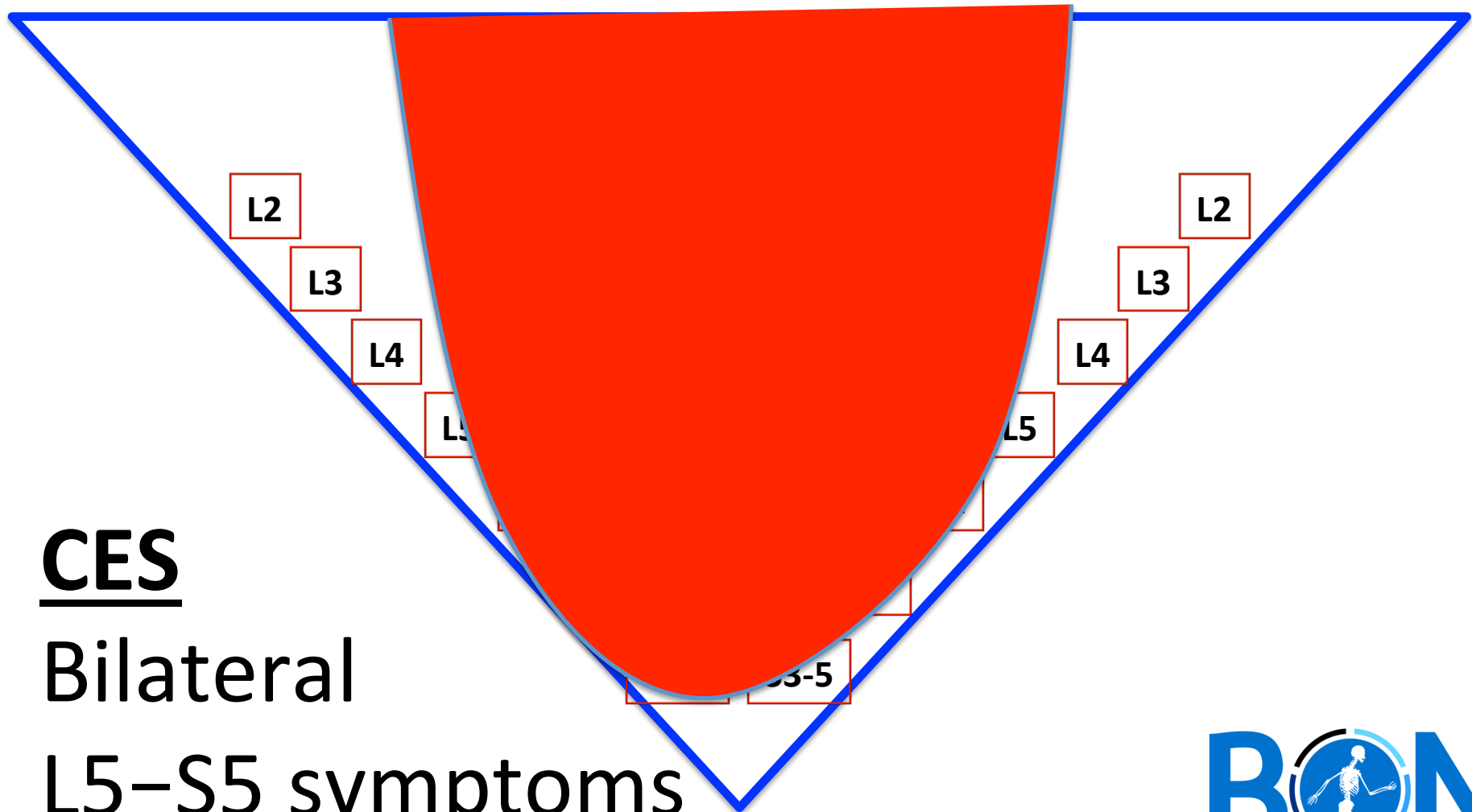
Normal

# Close Up – Canal with Roots



**Radicular**  
Unilateral  
L2 symptoms

# Close Up – Canal with Roots



**CES**

Bilateral

L5–S5 symptoms

# Causes

Encroachment into the lumbosacral canal

- Herniated Disc (most common)
- Spinal Stenosis (anatomical/degenerative)
- Tumour (primary spinal/vertebral)
- Trauma (retropulsed fragments)
- Haematoma (surgical/anaesthetic)
- Infection (abscesses)





# Symptoms & Signs

- BILATERAL
  - Leg pain +/- Back pain
  - Weakness
  - Sensory disturbance
  - Reflex abnormality
- BOWEL/BLADDER DYSFUNCTION
  - No urge to go to the toilet
  - No control
- SADDLE PARAESTHESIA
  - reduced or absent sensation to pinprick in perianal region (S2-S5)
  - Decreased rectal tone or voluntary contracture



# Diagnosis

- High index of suspicion
- Thorough clinical history and examination
  - Including PR examination
  - In addition to symptoms establish time scales
- Confirm with an MRI scan – ASAP
  - If it can't be done locally look for regional centre and liaise early.
- Specialist input from Orthopaedic or Neurosurgical Spinal surgery team.



# Management

- Risk stratification to determine surgical benefit
- Surgery is to
  - Relieve neurological symptoms
  - Relieve leg pain
  - Prevent further neurological deficit
- Risks
  - Failure to improve or continuation of symptoms
  - .....and other surgical risks



# What can I do?

- History & Examination
  - Be thorough
  - Time scales
  - Rectal/Perianal Examination
- Bloods tests (FBC, U&E, Clotting, G&S)
- Keep patient NBM
- Fill in the MRI Request form
- **Call the Registrar**



Thank you!

Presentation available on  
<https://www.bon.ac.uk>

