

# Lumbosacral Cyst

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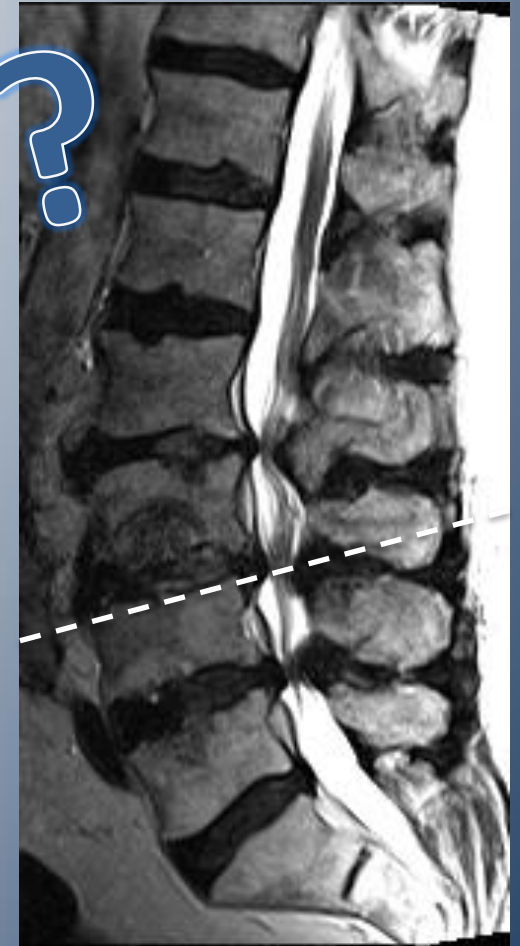
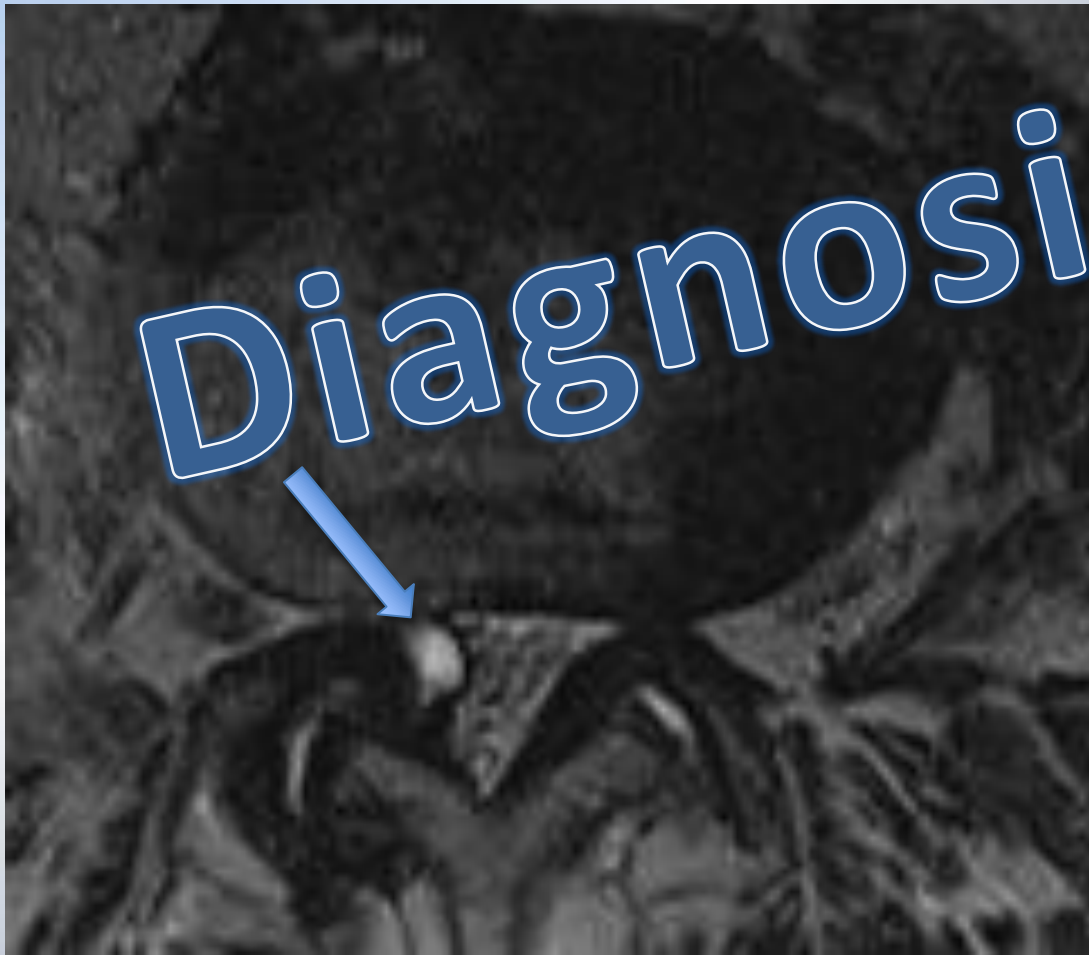
# CASE 1

- 79 y/o man with history of Myasthenia Gravis
- Bilateral hip replacements in the past
- Several years history of back and leg pain
- Recently relying on a wheelchair because standing causes pain in his legs
- On standing or walking, pain in his “hips” and both lower extremities > worse on the right

# CASE 1

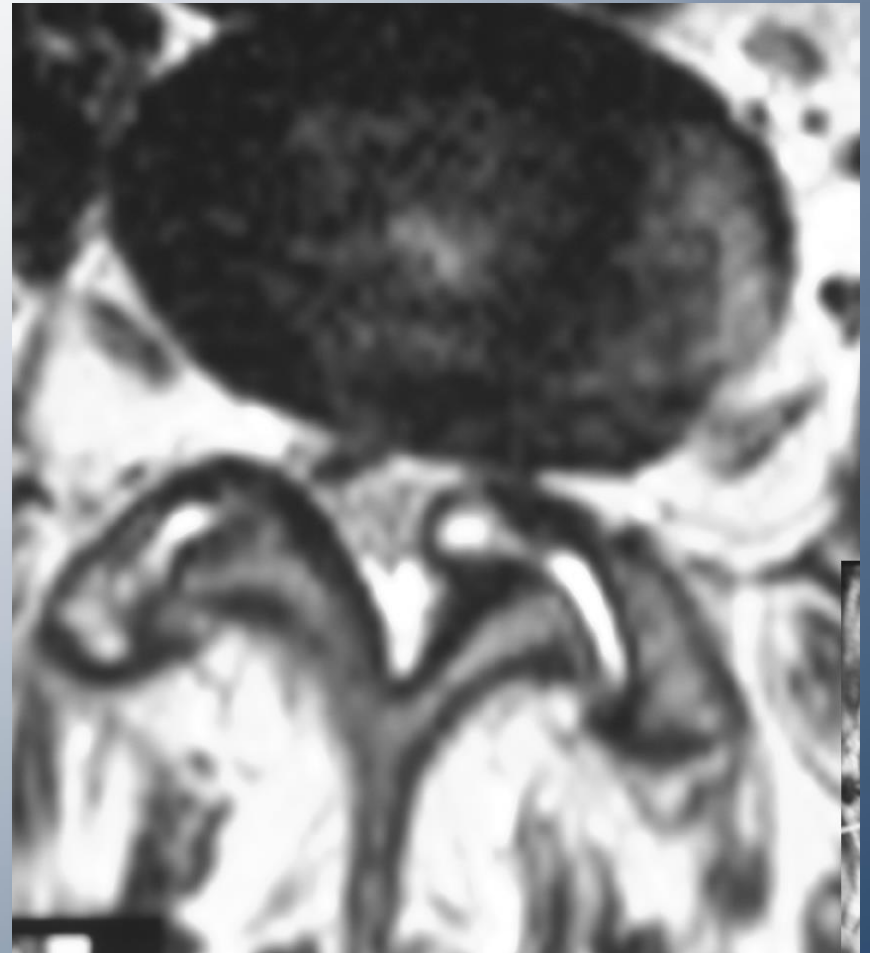
- Able to walk with a cane
- Shuffling, flat footed gait
- Diminished pin prick sensation in right 5<sup>th</sup> toe
- Good EHL strength bilaterally
- Some difficulty standing from seated position
- Absent reflexes in the lower extremities

# MRI Lumbar Spine



# Spinal Synovial Cyst (SSC)

- Up to 10% of symptomatic patients have SSC
- 75 % of SSC occur at L4/5 & L5/S1
- Found on medial border of facet joints
- May impinge on exiting and/or traversing root
- 38% to 50% degenerative spondylolisthesis



# Management of SSC

- Conservative management: Bed rest, NSAIDs, PT and bracing?
  - Injections
    - Epidural?
    - Intra-articular?
  - Surgery
    - Decompression?
    - Stabilization?
- **Minimally invasive decompression**
    - Late fusion 2%
    - Recurrence 1%
    - Instability 2%

# CASE 2

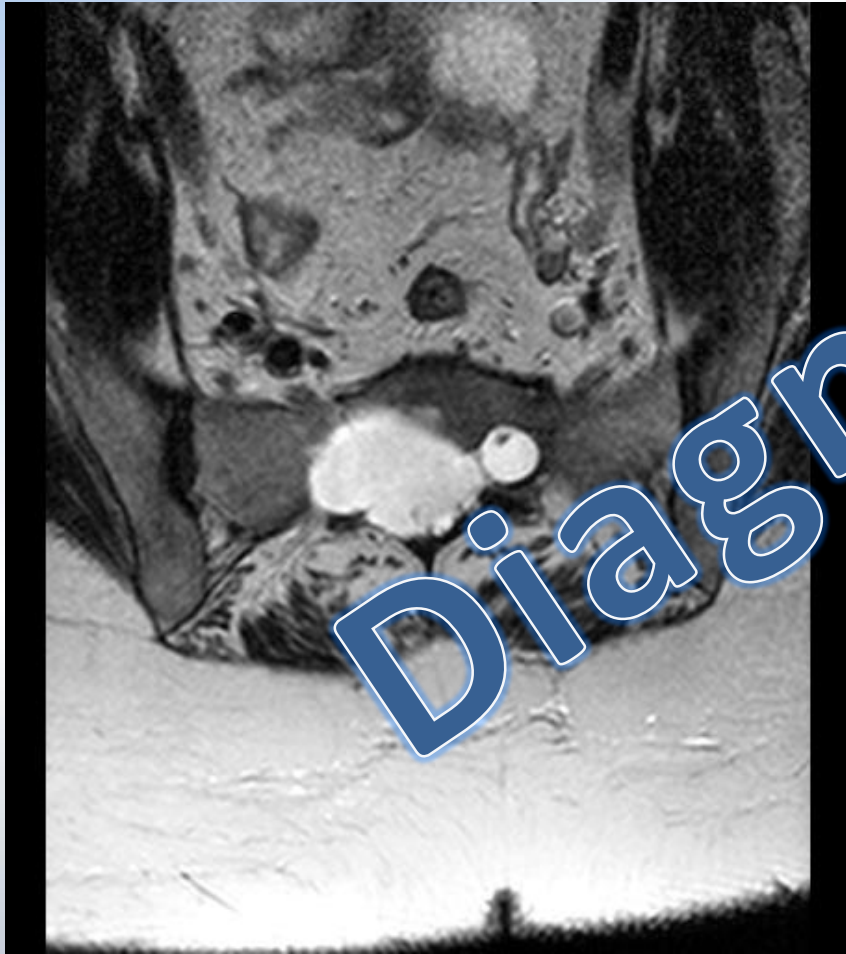
- 56 y/o ♀ referred by an orthopedic surgeon
- Intermittent painful paresthesia right LE
- History of Addison's disease
- 40 pound weight gain in 5 months due to steroid therapy
- No left leg symptoms
- No motor weakness
- No reflex abnormality

# Sagittal MRI





# MRI Axial

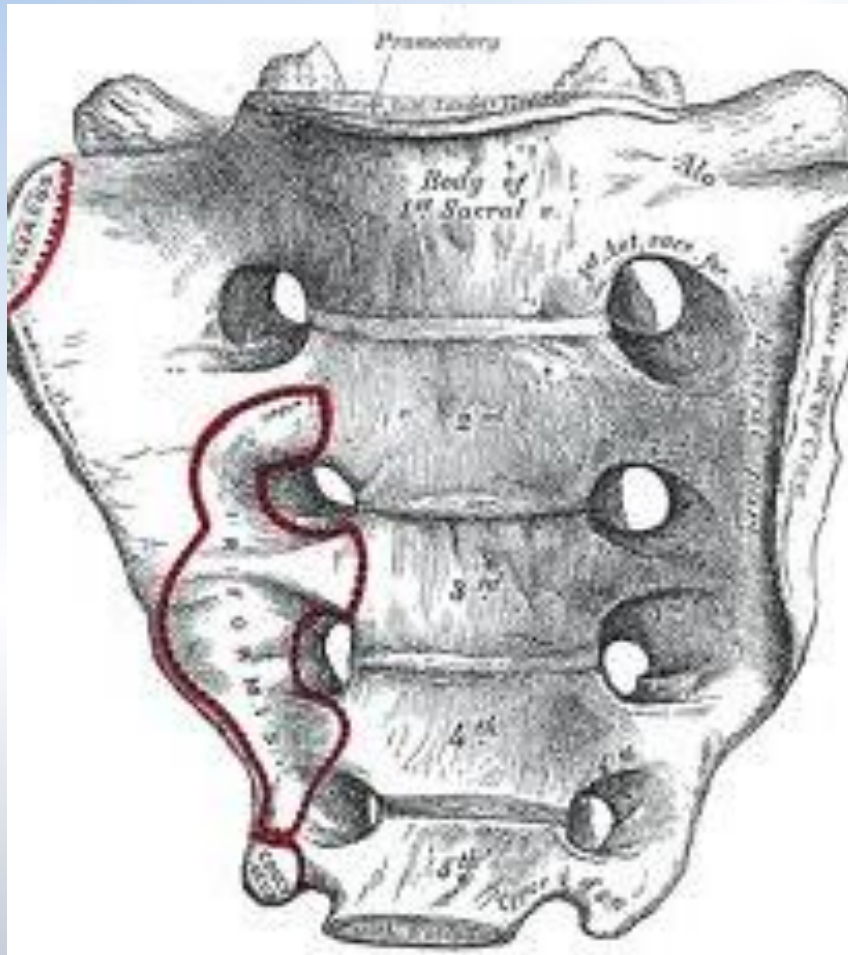


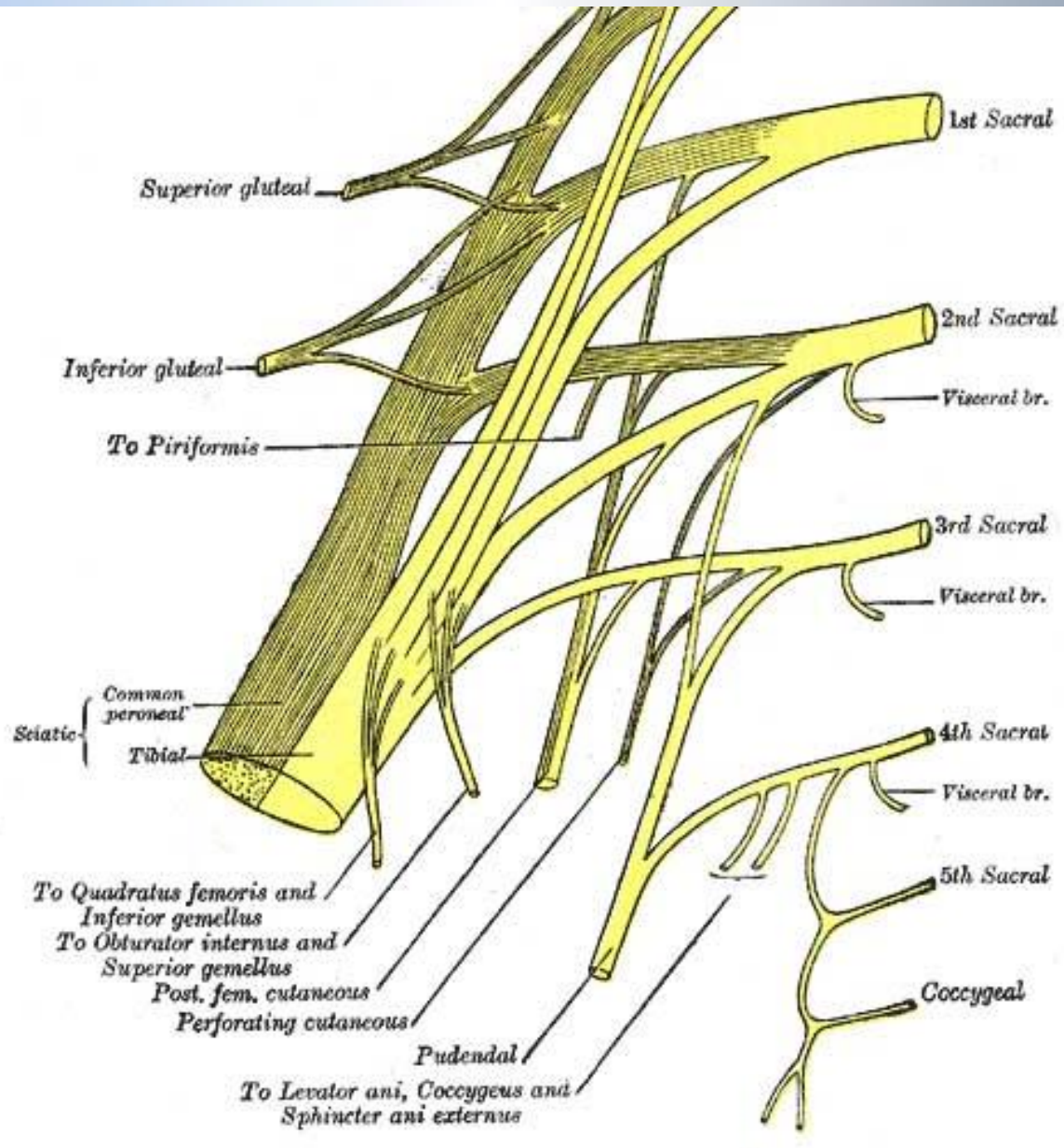
Diagnosis?

# What additional history & exam?

- Genitourinary history:
  - Frequency, urgency, stress incontinence
  - On Detrol LA
  - No dyspareunia
- Sacral function exam
  - Numbness in posterior thigh
  - Saddle numbness
  - Urodynamics

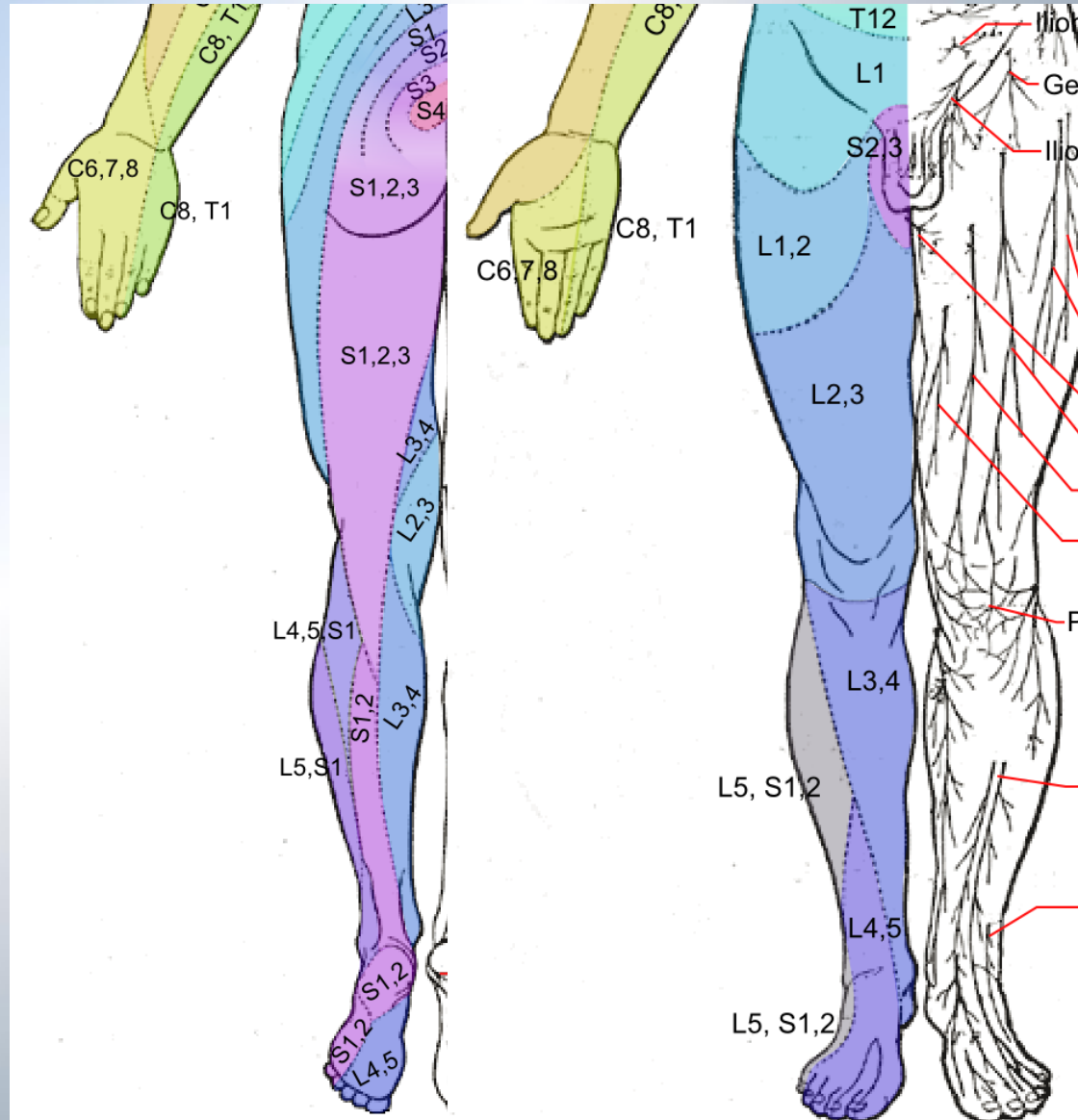
# Tarlov's cyst







# Sacral dermatomes



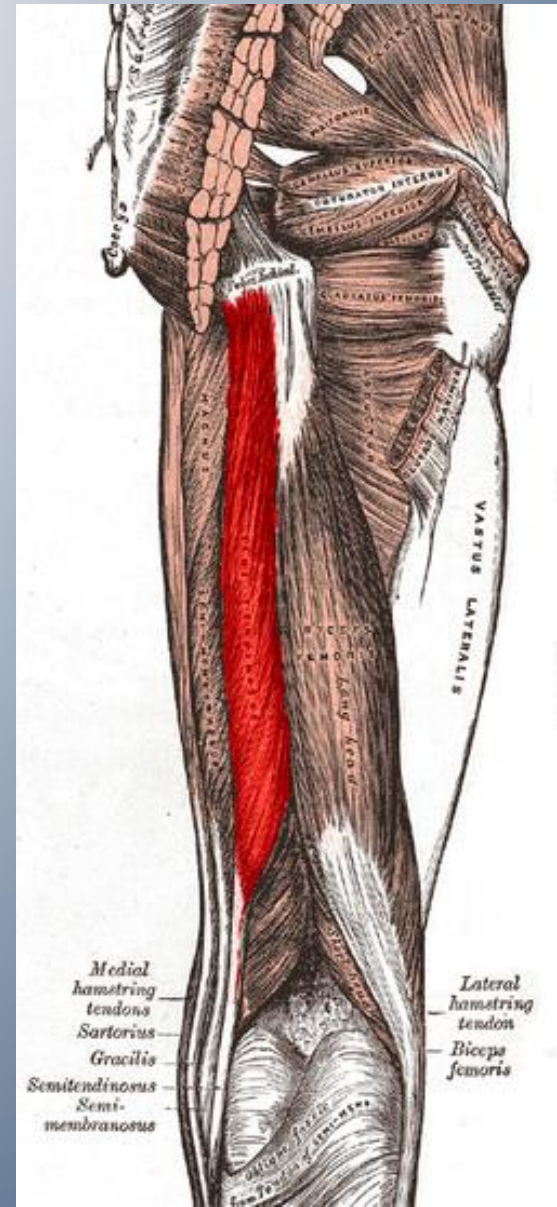
# Sacral Myotomes

S2

sphincter urethrae membranaceae  
gluteus maximus muscle  
piriformis  
obturator internus muscle  
superior gemellus  
semitendinosus  
gastrocnemius  
flexor hallucis longus  
abductor digiti minimi  
quadratus plantae

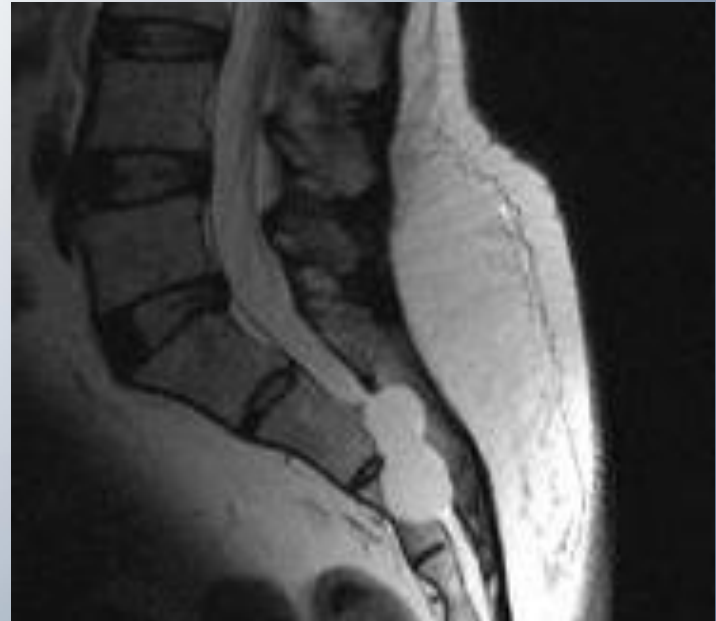
S3

iliococcygeus  
puborectalis  
coccygeus  
sphincter urethrae membranaceae  
superior gemellus



# Tarlov's cyst

- Sacral perineural cyst described by Tarlov in 1938
- Classified as a type II meningeal cyst by Nabors



# Nabor's Classification

- Type I: Extradural meningeal cyst without spinal nerve root fibers
  - IA Extradural meningeal cyst (extradural arachnoid cyst)
  - IB Sacral meningocele
- Type II: extradural meningeal cyst with spinal nerve root fibers (Tarlov's perineurial cyst, spinal nerve root diverticulum)
- Type III: spinal intradural meningeal cyst (intradural arachnoid cyst)



# Treatment

- Conservative (Leave it alone!)
- Analgesics & NSAIDS
- Fibrin Glue (with and without aspiration)
- Shunt (cysto subarachnoid, cysto peritoneal)
- Direct surgical management (ligation, imbrication, resection, fenestration)

# Dissenting view point

- 20% are symptomatic on discovery
- Disproportionately affect women
- Cause intimate, under-reported symptoms
- Surgical treatment has reasonable outcome with few complications

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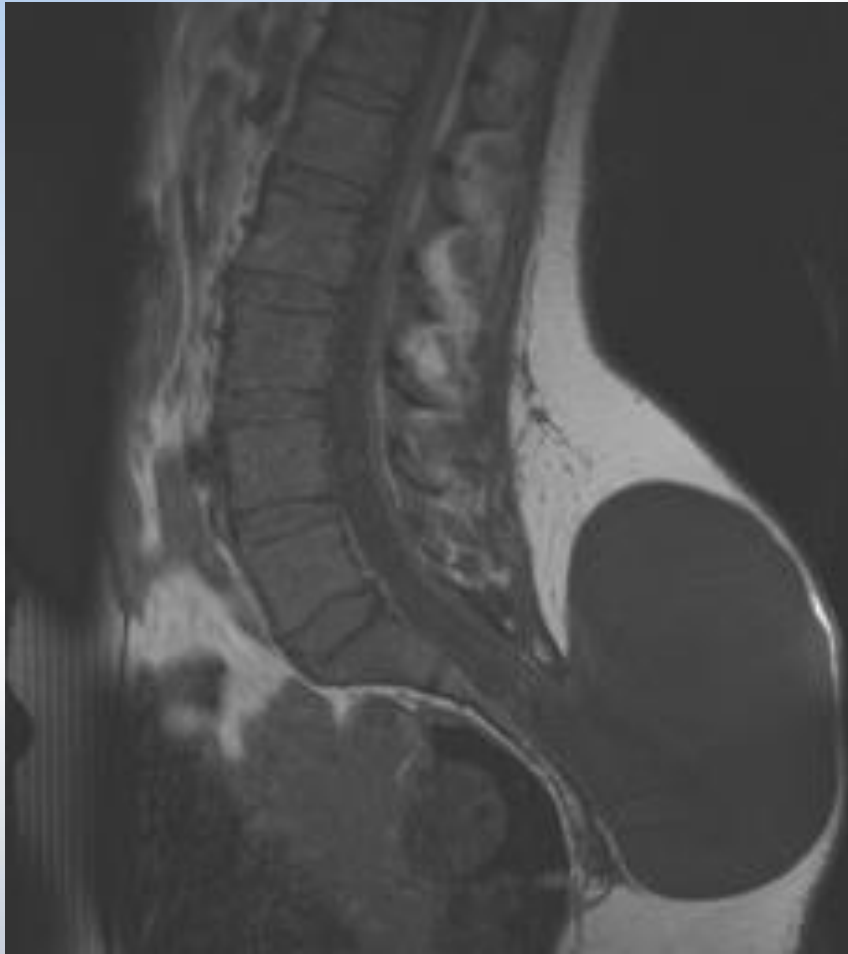
# CASE 3

- 28 y/o woman
- Low back pain which started with a new job
- LBP pain is worse lying down
- Swelling in her low back and tenderness
- Denies any lower extremity symptoms
- Occasional urinary urgency
- Urodynamics showed retention.

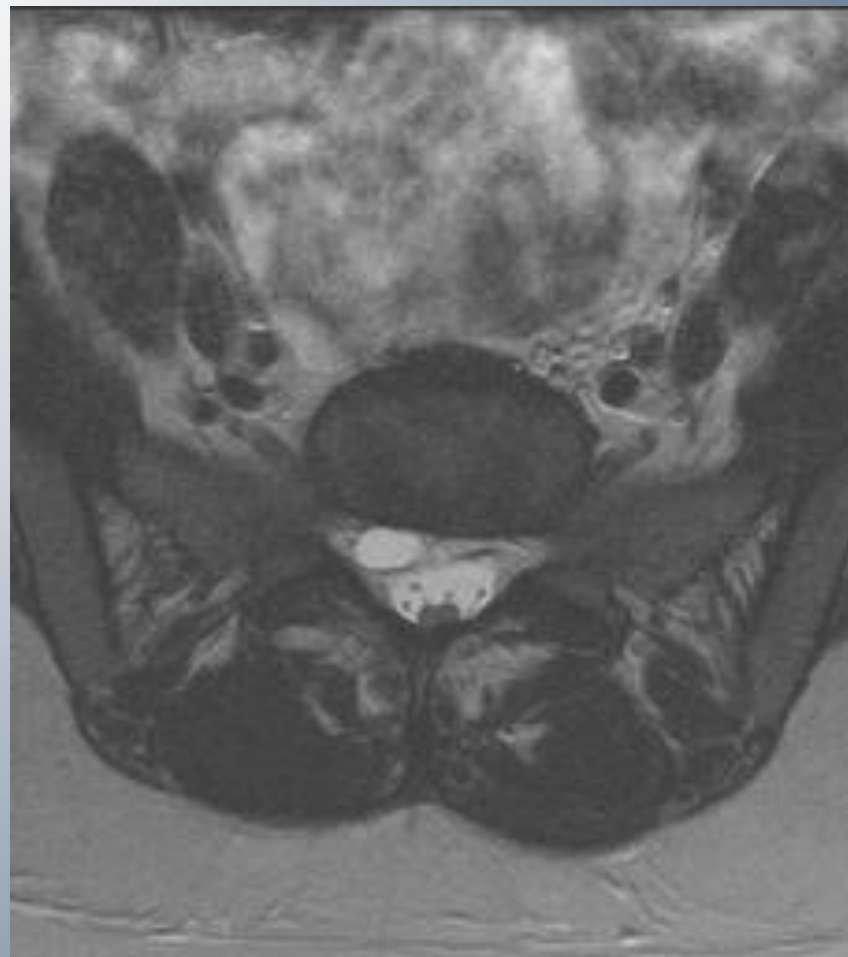
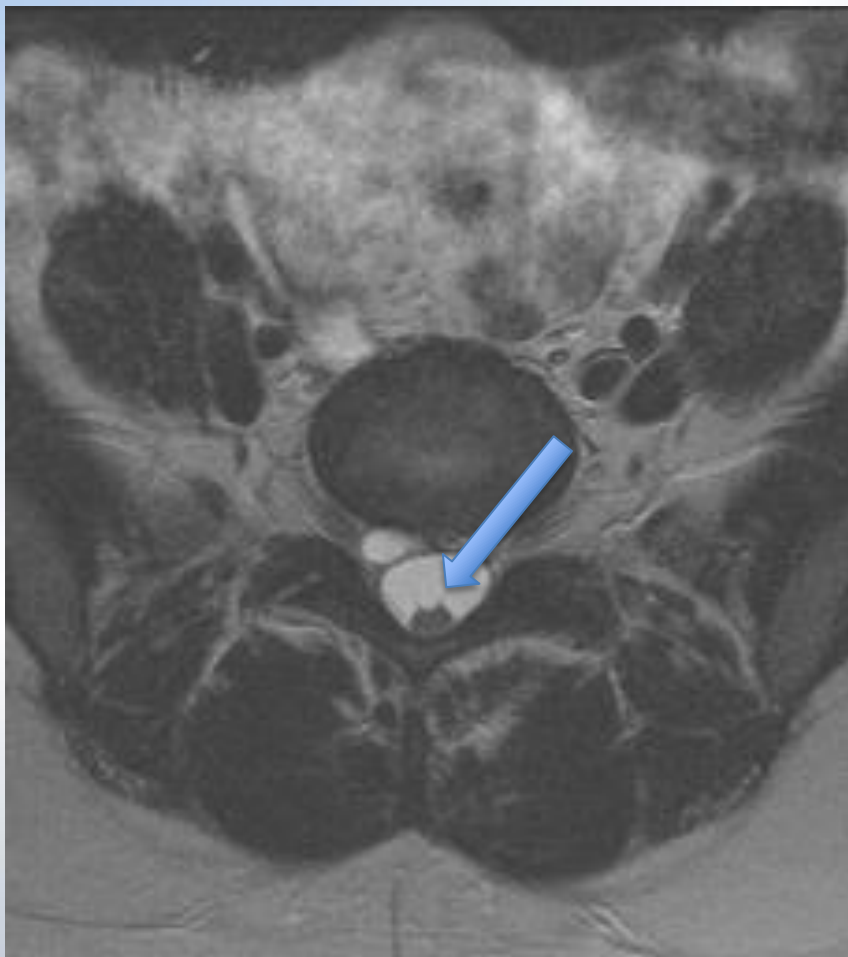
# Back exam



# Sagittal MRI

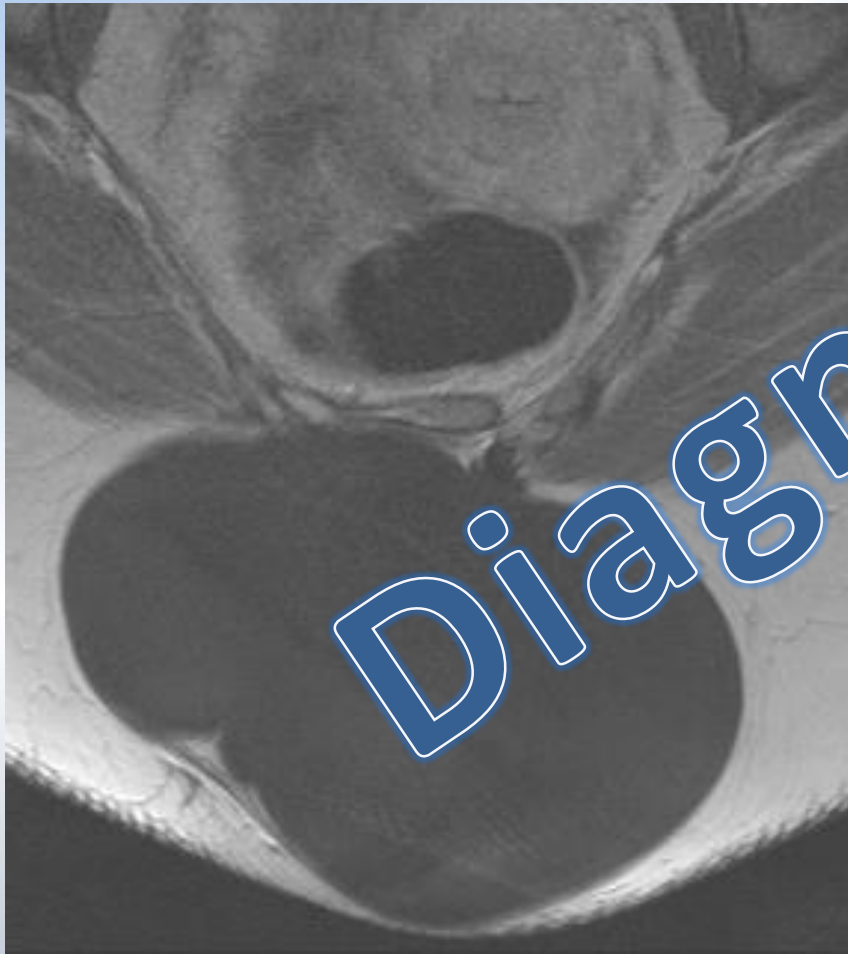


# Axial MRI





# Contrasted MRI



Diagnosis?

# Meningocele

- Failure of the neural tube to close during the first four weeks of pregnancy
- Spinal cord is intact
- Only the meninges protrude through the spinal defect
- Usually detected at or before birth



# CASE 4

- 47 y/o woman
- PSH of transvaginal hysterectomy 1997
- Rectocele repair in 2007
- Subsequent laproscopic bladder suspension for stage 3 cystocele in 2010
- Subsequent “revision” due to repetitive infections

# Present history

- Vague pelvic complaints
- Deep pelvic discomfort
- Vaginal pain (vaginismus)
- Saddle anesthesia
- Incontinence, (previous surgeries?)

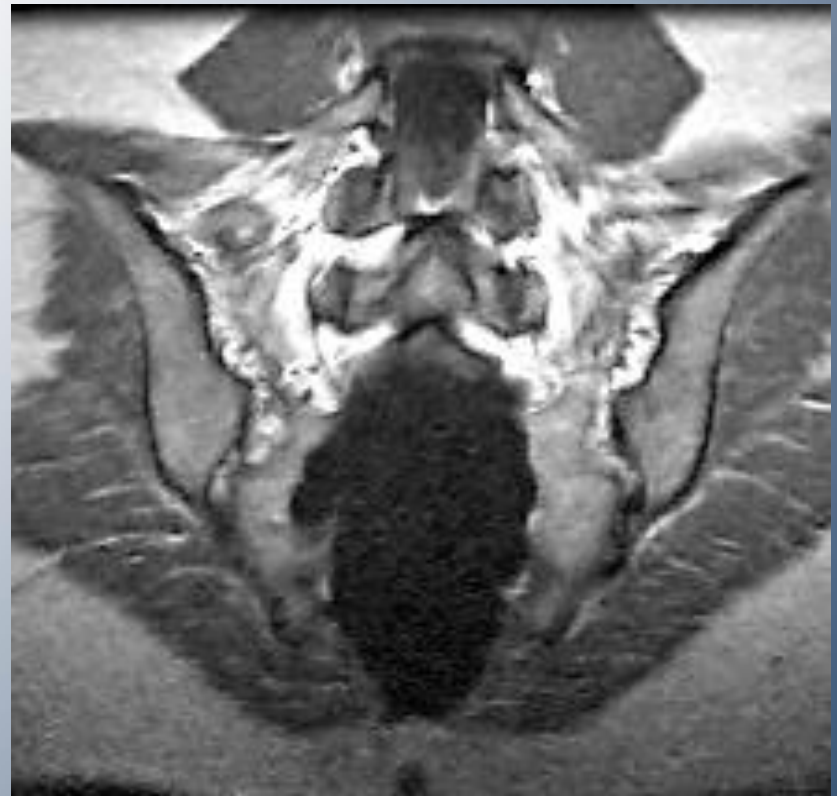
# Physical Exam

- No cutaneous abnormalities in the midline
- Tenderness to palpation of the coccyx.
- Normal distal strength
- Normal lower extremity sensation
- Normal lower extremity reflexes
- Odor of incontinence

# Sagittal MRI Pelvis

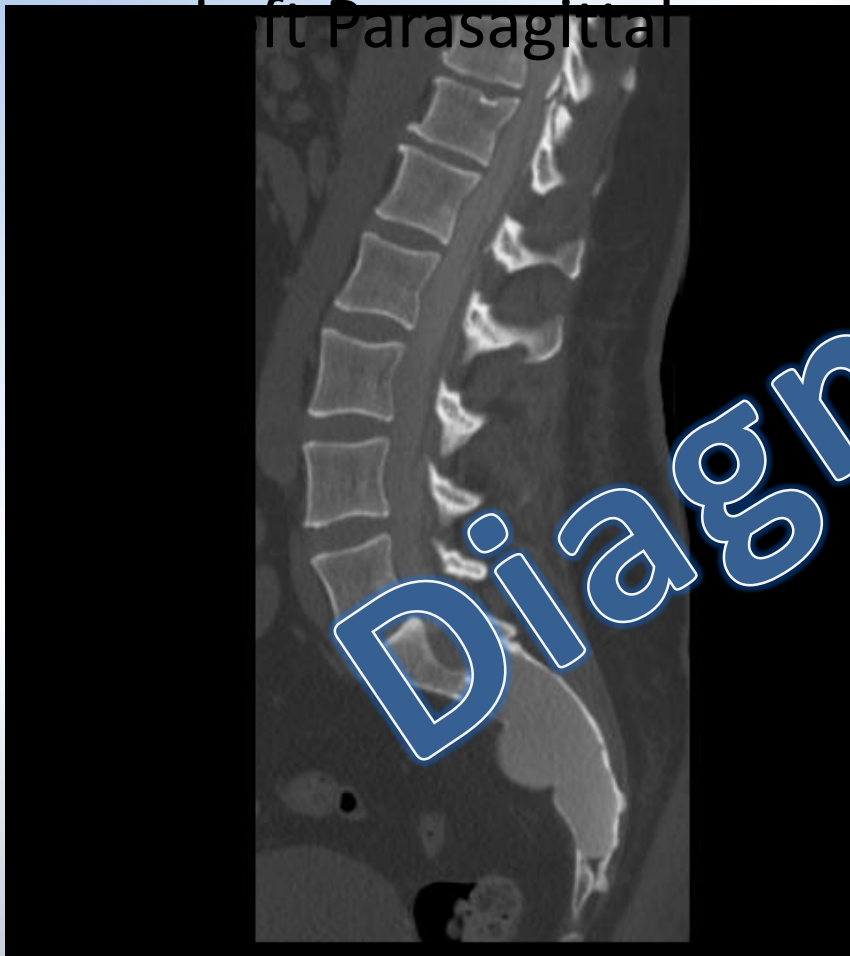


# Coronal MRI Pelvis

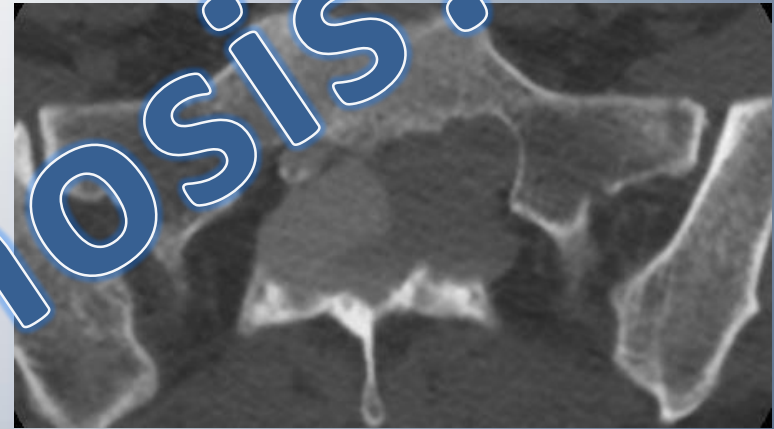


# CT Myelogram

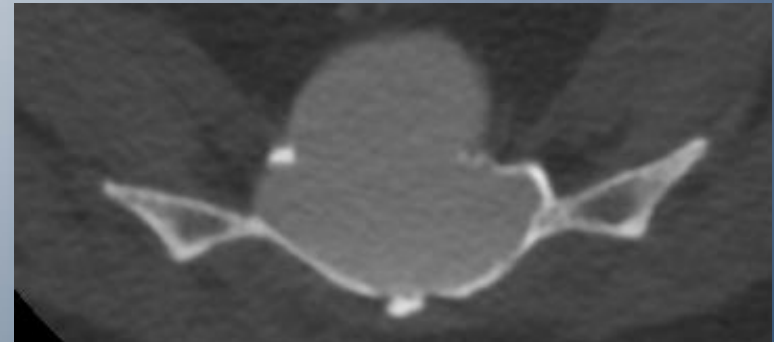
Left Parasagittal



Diagnosis?



S 4



# Diagnosis

**Anterior Sacral  
Meningocele**

# Anterior Sacral Meningocele

- Rare condition, typically congenital
- Symptoms caused by pressure on pelvic organs (constipation, dysmenorrhea, incontinence, dystocia)
- Back pain, pain and numbness in LE
- Headache (low/high pressure)
- Rectal mass is typically palpable



# Currarino triad

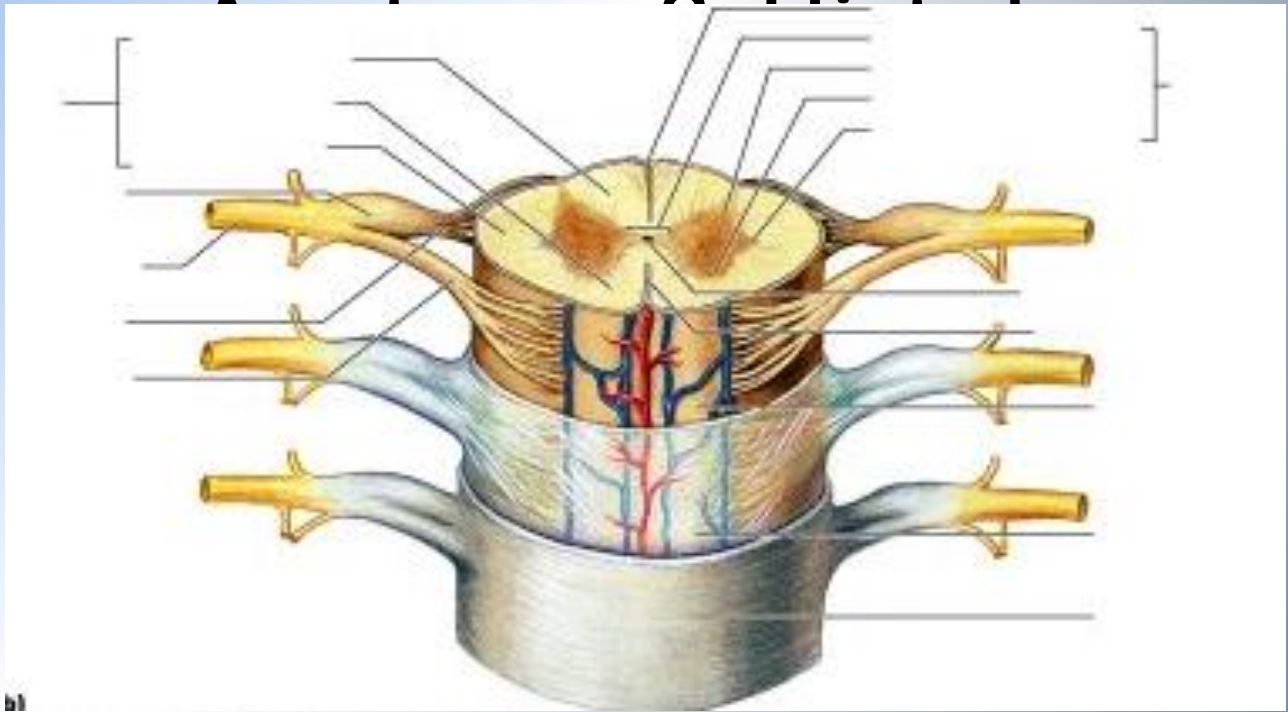
- Scimitar (Sickle shaped) sacrum
- Presacral mass
- Anal atresia



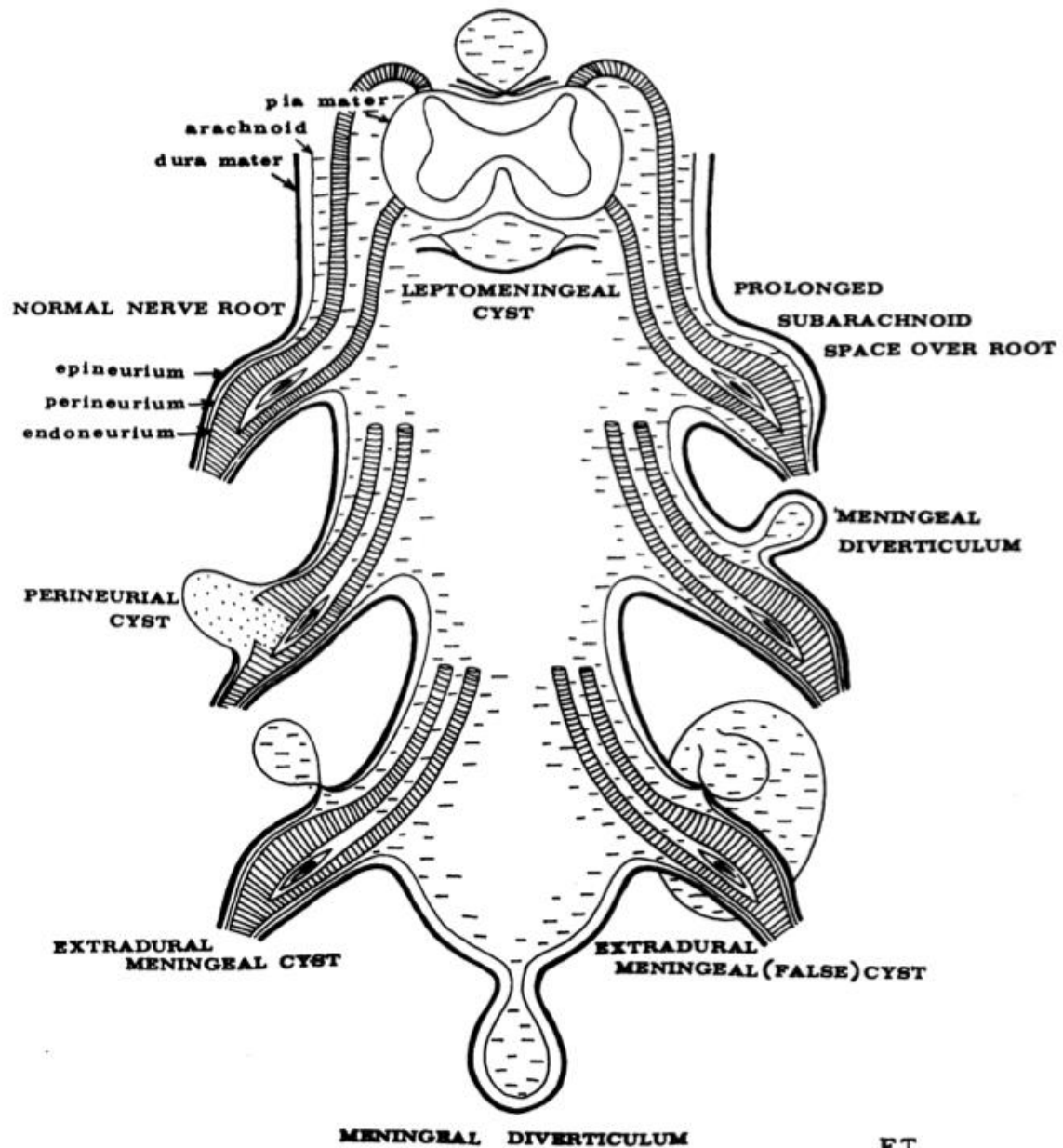
# Treatment

- Literature recommends surgery, experts say no.
- Anterior approach is disastrous
- Posterior laminectomy with ligation of the ostium if no neural elements are present.
- Dural plication if neural elements are present.





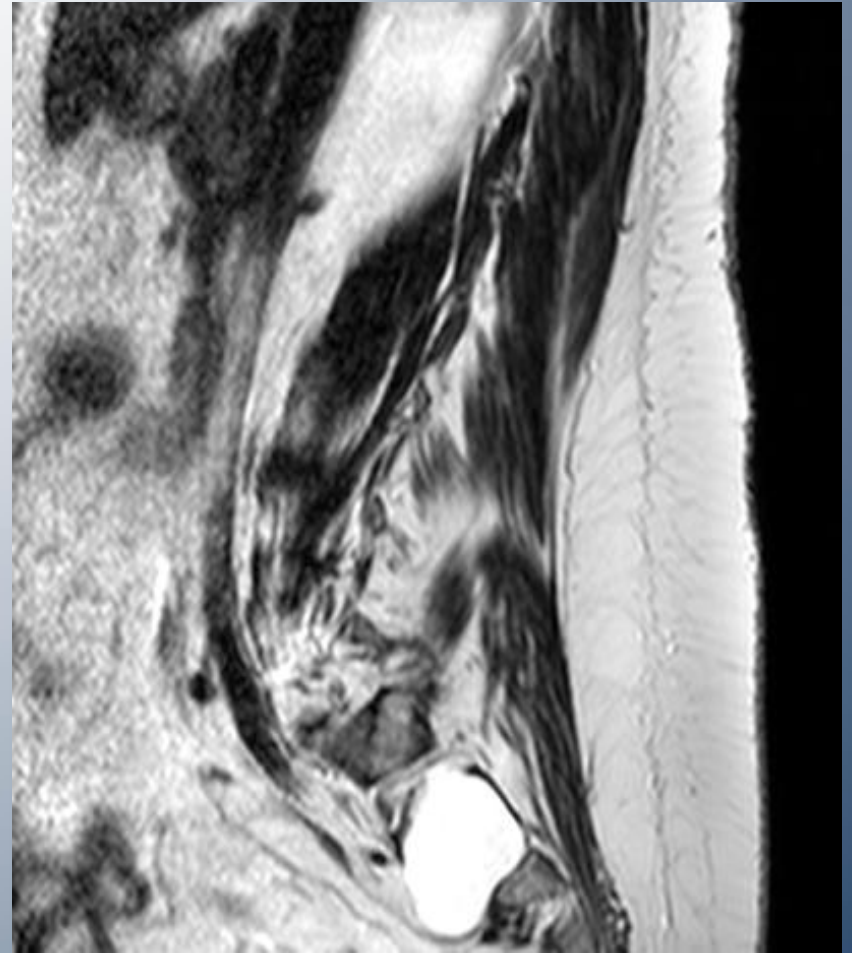
bi



# Meningeal diverticulum



# Case 1





# Dural ectasia

