

### Case

- 50 y.o., unemployed
- L (L4/5) pain
- Pain can radiate to buttock
- Onset 3 weeks ago after sleeping on sofa
- MRI in 2007 showed "degeneration at L4/5"

- Sharp pain, 10/10
- Episodic throughout day
- Stiff in the morning taking 30 minutes to ease

**AF:** walking, standing for long periods of time, twisting, sit to stand is most painful

**RF:** heat (sauna & steam room), stretching, ibuprofen

**AA:** difficulty sleeping (wakes up on turning, only getting approx. 5hrs / night)

### Extra

- Has asthma (Fostair inhaler)
- Bilateral knee meniscal surgery after injury playing tennis (still having physio, was doing cryotherapy)
- Maternal: hypertension, asthma, osteoporosis
- Paternal: kidney disease, IHD (ischemic heart disease)
- Allergic to penicillin

### Physical Examination Findings

### General observations

- Hypokyphotic Cx spine
- Hyperlordotic Lx spine
- Hyperextended knees
- R shoulder higher than L
- Hypotonic glutes
- Slight antalgia to R
  
- Poor proprioception

### ROM

- **AROM Lx:** RLF & RR reproduced L sided LBP @ end range; flexion limited @ 90° due to pain
- **PROM Lx:** full & pain free
- **Hip ROM:** R int. rot. reproduced L LBP (otherwise full & pain free)
  
- **FFD:** 31cm (better flexion than during AROM testing)
- **SLR:** L reproduced pain @ 50°, R tight hams. @ 70°
- **L leg:** longer prone & supine
- **L SIJ:** stiff on springing but no pain

### Myofascial

- Tight ES bilaterally in Lx
- L QL tight & TTP, R QL tight
- TTP in adductors bilaterally, quads bilaterally
- Hip flexors TTP
- Tight glut. med. L

### Functional

- Abdominal dead bug <30s w/ recruitment of accessory muscles
- Iliopsoas & glut. max. strength reduced bilaterally
- Quad length test reduced on R & caused LBP

### Clinical tests

- **Braggards & Rural NTT:** on L reproduced back pain
- **Bonnets, Bowstrings & all other LL NTT:** -ve
- **Fabere's, Kemp's, Thomas, Single-leg hyperextension:** -ve
- Gaeslen's & McKenzie glide:\*\* on L caused L LBP

## Discussion

### Working diagnosis

- Mechanical LBP complicated by L4/5 disc degeneration

### Hx

- Mechanical triage
- 10/10 pain w/ night pain potentially concerning (**not red flag specifically**)
- MRI findings of disc degeneration at L4/5 10 y. ago ↑ disc involvement (**doesn't mean it's the cause**)

### Disc involvement suggestions

- Antalgia (position/movement to alleviate pain)
- SLR on the L being reduced & causing LBP
- Braggards & Rural NTT on the L reproducing the LBP

### Lx radiculopathy:

- Should be differential based on buttock pain, antalgia & nerve tension signs(**however wouldn't be working Dx**)
- Monitor pt for any neurological deteriorations



### Learning outcomes

#### Ddx for LBP with buttock pain

- **Lx radiculopathy:** numbness, weakness, tingling, spasms, reduced ROM, atrophy, positive SLR test
- **Sciatica entrapment:** pain, numbness, tingling, or weakness in buttock, leg, or foot
- **Lumbar disc herniation:** LBP that radiates into buttock, leg, or foot
- **Spinal stenosis:** LBP that radiates into buttock, leg, or foot, & numbness, tingling, or weakness
- **SI joint dysfunction:** LBP that radiates into the buttock, hip or thigh
- **Piriformis syndrome:** LBP that radiates into buttock, hip, or leg
- **Osteoarthritis:** LBP, stiffness, reduced ROM, pain in buttock & hip
- **Ankylosing spondylitis:** LBP, stiffness that radiates into buttock & hip

#### Red flags for back pain (+/- radiculopathy)

- **Hx of cancer:** persistent BP that worsens over time
- **Trauma:** may indicate a fracture or other injury (e.g. fall or car accident)
- **Age:** people over 50 can have signs of spinal stenosis, degenerative disc disease, other related spine changes
- **Fever &/or chills:** may indicate infection (e.g. osteomyelitis or UTI)
- **Progressive neurological symptoms:** BP w/ radiculopathy w/ progressive weakness, numbness, or tingling in legs/feet may indicate nerve damage/compression (prompt medical attention)
- **Loss of bladder/bowel control:** medical emergency & requires immediate medical attention
- **Severe night pain:** may indicate more serious condition (tumour/infection)
- **Hx of IV drug use or injection:** may indicate spinal infection or other more serious conditions
- **No improvement after 4 weeks of conservative care**

#### Guidelines & evidence for manual therapy in treatment of acute & subacute LBP

- Don't offer traction or acupuncture
- Manual therapy (spinal manipulation, mobilisation, soft tissue) ONLY WITH exercise

#### Types of disc disease

##### **Herniated disc:**

- Inner portion of disc protrudes through outer layer & can compress nearby nerve
- **Sx & Ssx:** Pain, numbness & tingling, muscle weakness, radiating pain, changes in reflexes

##### **DDD:**

- IVD breakdown over time
- **Sx & Ssx:** Back pain, neck pain, pain that worsens w/ activity, neurological symptoms (in this case sciatica)

##### **Discitis:**

- (aka. IVD infection) relatively rare condition, but can cause significant pain & discomfort
- **Sx & Ssx:** Back pain, spinal tenderness, limited mobility, fever, spinal deformity or instability, neurological symptoms

