Management of Radicular Pain

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Management of Radicular Pain

A. Background

B. Epidemiology

C. Diagnosis

D. Treatment
A. Background

- Names and concepts
  - Radicular pain
  - Radiculopathy

- Structures that can produce radicular Sx
  - Sinu-vertebral nerve
  - Nerve root

- Mechanisms of pain
  - Direct toxic effect of disc material
  - Chemical substances
B. Epidemiology

- Occurs in 3-5% of the population
  - More frequent in males in their 40’s
  - More frequent in females in their 50’s
- In sporting population
  - More frequent in sports that combine spinal flexion/extension with rotation
  - Fast bowlers, gymnasts, dancers, RU backrowers, golfers, weightlifters, baseball pitchers
C. Diagnosis

- Radicular pain is only a descriptive symptom
- Diagnosis is made on the usual basis of
  - History
  - Clinical examination
  - Appropriate investigations (when required)
History

• Acute LBP radiating to buttock / lower limb
• Worse with flexion, sneezing, coughing. Sitting worse than standing
• Some pointers
  – Referred pain from L1-3 does not reach the knee
  – Unusual Symptoms (weight loss, fever, chills) point to something else
  – Beware of *cauda equina*: surgical emergency
Neurological Examination

- Sensation
  - Subjective
  - Objective (light touch, pinprick)

- Dermatomal distribution is a poor indicator of the level of pathology (Albert et al. 2010)
Neurological Examination

- Power: Identify what levels are deficient

Segmental motor innervation of the lower limb
Neurological Examination

• Reflexes
  – Patellar tendon (knee jerk)
    • L2/3/4
  – Ankle tap (ankle jerk)
    • S1
Differential diagnosis

- Disc protrusion / extrusion (nerve root compression)
- Hip pathology (L1-2 dermatome distribution)
- Trochanteric bursitis (buttock / thigh pain)
- SIJ incompetence (pseudosciatica)
- Facet joint pain (usually no leg pain)
Investigations

- To confirm or exclude a specific diagnosis
- X-ray: to exclude organic bone pathology
- CT scan: good to assess bone and disc hernias
- MRI: best modality to assess soft tissues
- Caution: treat the patient, not the picture

35% of normal 35 y.o. females show some form of “pathology” on MRI
Investigations
D. Treatment

• Initial
  – Non-operative
  – Surgical

• Aspects of Rehabilitation and secondary prevention (of recurrences)
Non operative Treatment of disc herniation

• Regular analgesia (not p.r.n)
• Anti-inflammatories
  – NSAIDS
  – Early peri-radicular steroid injection?
• Maintain physical activity (ADLs at least)
• Extension exercises (if extrusion or sequestration extension can make pain worse)
• For how long???
Non operative Treatment of disc herniation

- As long as there is improvement, continue non-operative treatment for up to three months.

- If progress is not adequate patient will tell you
Surgical Options (for disc herniation)

• Surgical decompression is a QOL decision
• Long term results similar to non-operative measures
• There is a 10% recurrence rate
• Discectomy +/- laminotomy +/- rhyzolysis of the nerve root
• Microdiscectomy does not mean a smaller incision, but the use of vision augmentation
Aspects of Rehabilitation

• Make patient self-sufficient, independent of
  – Medication
  – Health practitioners
    • (doctors, physios, osteos, chiros, massage Rx, etc)

• Prevention of recurrences
  – General fitness
  – Lumbopelvic stability training
  – Manual handling and postural training