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Lumbar Disc Prolapse: Who needs an operation?



Total Hip Replacement

- Progressive arthritis
- Patient decides
 - Increasing pain
 - Decreasing function
- A winner
 - Reduces pain
 - Restores function



ACL reconstruction

- For instability
- Considerations
 - Age and patient demand
 - Type of sport or work
 - Intra-articular wear
- Discretionary
 - Surgery versus Rehab



Lumbar Disc Prolapse

- Patients in pain
- Good prognosis
- Some don't improve

- How do we pick them?
- How do we manage pain?



Prevalence

- Various estimates
- Lifetime
 - 5% men and 4% women
- Annual prevalence 2%
- Incidence 1% per year

A common problem



Risk Factors

- Age peak 45-64 yrs
- Height and Weight
- Smoking
- Mental stress
- Occupations
 - Lifting while bending and twisting
 - Driving vibrations



Prognosis

- Good
 - 50% recover in 4 weeks
 - 90% recover in 6 months
- But
 - 10% will not recover
 - Some will need surgery
 - How do we pick them



Example: Resolution







Sciatica

- Unilateral leg pain below the knee
- Pain to foot or toes
- Numbness and paraesthesiae
- Nerve root tension signs
 - Sciatic stretch and Bow String sign
- Weakness
 - Corresponding to the nerve root involved



Pathophysiology

- Pressure and stretch
- Chemical
- Dorsal Root Ganglion
- Inflammation
 - A process often delayed



Diagnosis

- History
 - Back pain, then leg pain
 - Postural pain
 - Radicular pain
- Examination
 - Posture, gait, ROM
 - Reflex, power, sensation
 - Root tension signs



Red Flags

- Tumor and Infection
 - Known pathology
 - Weight loss
 - Malaise
 - Fevers



Example: Tumor





Investigations

- Needed if the result changes treatment
- Red Flags
- Uncertain Diagnosis
- Can usually wait at least 4 weeks
 - But may help with anxiety
- Pain and prognosis not dependent on size of disc lesion



Treatment

- Explanation
- Reassurance
- Short period of rest
- Simple analgesia
- Activity modification
- Regular review



Treatment

- Traction?
- Heat and massage for spasms
- Anti-inflammatory medication?
- Cortisone injections?

• Time, the Great Healer



Who needs an operation? Urgently

- Cauda Equina Syndrome
 - Bladder and bowel dysfunction
 - Saddle anaesthesia
 - Hospital admission
- Progressive weakness
- Severe unrelenting pain



Indications for Discectomy

- Persistent strong pain
- Positive root tension signs
- Failure to improve
- Concurrent disc lesion on MRI or CT



Contra-indications for Discectomy

- Unclear diagnosis
- Normal or non-matching scan
- Chronic pain
- More severe spinal conditions
 - Stenosis, scoliosis, spondylolisthesis may need other forms of surgery



Example: spondylolisthesis





Non-medical Indications for Surgery

- Economic
 - Unable to work for a prolonged time
 - Impending promotion, change of job
- Social
 - Planning travel, wedding, etc
 - Planning pregnancy



Results of Surgery

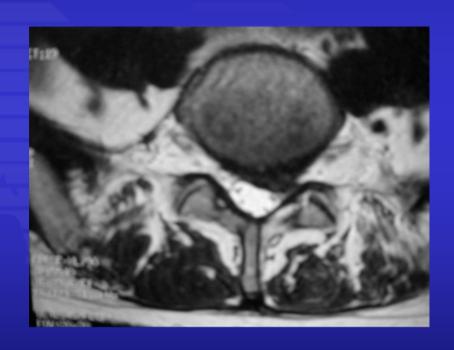
- More than 90% good and excellent
- A Winner
 - At 1 yr surgery clearly better
 - At 4 yrs surgery still better
 - At 10 yrs equal to non-op care

Surgery reduces the period of pain



Example: persistent S1 pain







Complications of Surgery

- Wrong level surgery
- Dural tear
- Nerve root injury
- Instability
 - Facetectomy or pars defect
 - Laminectomy
- Too little or too much



Outcomes of Surgery

- Pain relief often instant
- Weakness my improve
- Back pain short time
 - Sometimes progressive
- Recurrence of prolapse 5-10%



Who needs Referral

- Most patients don't they improve
- Cauda Equina requires hospital admission
- Uncertain diagnosis and Red Flags
- Deteriorating signs
- Failure to improve
- Need for imaging



Thank you



Dr Andreas Loefler Joint Replacement & Spine Surgery