Role of surgery in back pain

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Role of surgery in back pain

- Surgical Indications (Hard & Soft)
- Interpreting radiology
- Non-Surgical options
- Cases for discussion
Surgical Indications (Hard)

- What do these things have in common?
Surgical Indications (Hard)

- Decompression of nerves
- Stabilisation of instability
Surgical Indications (Soft)

- Non-radicular Pain - removal of potential pain generators
Interpreting radiology

- We have no gold standard scan for pain
- Dynamic imaging (erect X-rays)
- Cross sectional imaging (CT & MRI)
- Nuclear medicine studies
Interpreting radiology

NERVE
Interpreting radiology

FACET

- Lumbar (L1–L5)
- Lower lumbar/gluteal (L2–S1)
- Posterior thigh (L3–S1)
- Lateral thigh (L2–S1)
- Anterior thigh (L3–S1)
- Groin (L3–S1)
Interpreting radiology

- Radiologist (by their nature) do not have the patient in front of them - they cannot correlate potentially pathological findings with actual pathology.

- Degenerative changes are common to universal
Interpreting radiology

• Wheat from the chaff:
  • “Effacement”
  • “Stenosis”
  • “Listhesis”
Non-Surgical options (from a surgeon)

1. Education, Education, Education
2. Activity modification
3. Pills (targeting pain generators)
4. Injections
5. Other
Education, Education, Education

- Catastrophising
- Fear avoidance behaviour
- Chronic pain
Activity modification

- Weight & Exercise & Mood
Pills (targeting pain generators)

- Mechanical Pain = Synergistic Paracetamol NSAIDS
- Radicular Pain = Neuro-modifiers
- ?Steroids / Benzodiazepines / Opioids
Injections

- Diagnostic vs Therapeutic
Other

- Complex / Chronic Pain Management Programme
- Radio Frequency Ablation
- Spinal Cord Stimulation
Cases for discussion

• “What would you do with this pt?”
Case 0 - Normal?
Case 1 - Tumour

- The CT report notes a malignancy - 1
  1. Always refer to a Oncologist
  2. Always refer to a surgeon
  3. Sometimes refer
  4. Refer to a surgeon AND/OR Oncologist
Case 2

- 45M, Twist -> LBP, 48/24 later Left Leg pain
Disc Protrusion

What are indications for urgent surgical referral:

1. Presence of a disc protrusion on report
2. Sciatica & Numbness
3. Painless Weakness
4. None of the above
Case 3

- 45M, Twist -> LBP, 48/24 later Left Leg pain
- 7 days later cough, now bilateral leg pain
- Bowel / Bladder normal
Cauda Equina Syndrome

- Index of suspicion - represents (uncommon/rare) worst case scenario
- No gold standard symptoms
Case 4

- 62M, 20+ yrs LBP, complains he can’t garden anymore
Spinal Stenosis

- 60% of 60yo have radiological spinal stenosis
- Natural history indolent
- Decompression effective (but not crucial)
Case 5 - Insufficiency Fracture

- I manage this so commonly that I have no X-rays to show in my files...
Case 6

- 16M, Gymnast, Chronic LBP, wants to get back to sport
Lytic Spondylolisthesis

- Low grade (<50%) Common ~7% Population - non-progressive
- High Grade (>50%) Rare - Progressive
- Radiculopathy indication to operate
Case 7

- 74F, 20+ yrs LBP, complains she can’t garden anymore
Facet widening
Degenerative Spondylolisthesis

- Common
- Instability is key - fusion gets results
- Method of fusion more controversial
Case 8

- 35M, Unemployed, Father of 2, Can’t stand straight
Spinal Imbalance Case
Spinal Imbalance

• This is difficult

• And thankfully reasonably uncommon
<table>
<thead>
<tr>
<th>Condition</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tumour</td>
<td>+/- (Stability)</td>
</tr>
<tr>
<td>Herniated Nucleus Pulposus</td>
<td>+/- (Neuro Deficit)</td>
</tr>
<tr>
<td>Acute Cauda Equina Syndrome</td>
<td>++++</td>
</tr>
<tr>
<td>Spinal Stenosis</td>
<td>- / + (Eventually)</td>
</tr>
<tr>
<td>Insufficiency #</td>
<td>- (Usually)</td>
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<tr>
<td>Lytic Spondylolisthesis (Low grade)</td>
<td>- - - / +</td>
</tr>
<tr>
<td>Lytic Spondylolisthesis (High grade)</td>
<td>+</td>
</tr>
<tr>
<td>Degenerative Spondylolisthesis</td>
<td>-/+</td>
</tr>
<tr>
<td>Complex Imbalance</td>
<td>+/-</td>
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</tbody>
</table>
Surgical Indications (Hard)

- Decompression of nerves
  - Disc protrusion with Radiculopathy
  - Cauda Equina Syndrome
- Tumour / Trauma
- Stabilisation of instability
  - High grade spondylolisthesis
- Tumour / Trauma
Surgical Indications (Soft)

- Non-radicuляр Pain - removal of potential pain generators
  - Evidence is contradictory
  - When all else has failed*
Interpreting radiology

• We have no gold standard scan for pain
• Dynamic imaging (erect X-rays)
• Cross sectional imaging (CT & MRI)
• Nuclear medicine studies
Interpreting radiology

“more is missed by not looking than not knowing”

Thomas McCrae
Non-Surgical options
(from a surgeon)

• “There is a difference between painful and harmful”
• “nobody ever died of a sore back”…