RADIOGRAPHY FOR THE LOW BACK PAIN PATIENT

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RADIOGRAPHIC STUDIES FOR LOW BACK PROBLEMS

1. What should I order?

2. When should I order it?

3. What in the hell is the radiologist saying and is any of it important?
RADIOGRAPHIC STUDIES - what and when to order

1. Few reasons to get x-rays - no reason to get before 4-6 weeks, unless looking for fracture

2. MRI - best tool
   A. If progressive weakness, numbness, cauda equina concerns, pain not controlled with usual methods
   B. If Red Flags
   C. I use often to rule out anatomic problem
D. Insurance companies want (sometimes)

(1) 4-6 weeks of activity alteration
(2) PT, NSAIDs, and/or oral steroids

Positive SLR, numbness, weakness, or reflex changes

3. CT - virtually never necessary
   - used to evaluate fractures, fusions
   - do not order just because it is cheaper
   - significant radiation
WHAT DOES THE REPORT MEAN?

1. Normal aging characteristics
   - DDD - starts in teens, twenties, by 60s it is seen in 100% of x-rays, mri scans
   - Stenosis - product of aging-more than 8mm is usually assymptomatic
   - Disc space narrowing - no relationship to pain
   - Bulging discs-”just like wrinkles on the face”
WHAT DOES THE REPORT MEAN?

2. What I tend to ignore on the report:
   - hemangiomas, disc degeneration, disc collapse, disc bulging, foraminal stenosis,
   - mild stenosis, stenosis of 9mm or more

3. What I do not ignore on the report:
   - fractures, spondylolisthesis, stenosis <8mm,
   - disc herniations, disc fragments, discitis, tumor
WHY ARE RADIOGRAPHS LESS IMPORTANT THAN H AND P

- Incidence of important radiographic findings on patients with LBP: fracture 0.7%, infection 0.4%, tumor 0.7%, stenosis 3%, symptomatic stenosis 3%, DDD-90% in patients >65
- Multiple studies—poor correlation between back pain and MRI findings
- 32% asymptomatic patients have abnormal MRI
- 47% LBP patients have normal MRI
REPORT SOUNDS BAD
REPORT SOUNDS OK
SEVERE PAIN-NORMAL SCAN

- 45 year old female with long history of low back pain.
- Long history of oxycontin use 240mg per day
- Significant tenderness, multiple positive Waddell’s signs
Why obtain EDX testing in patients with spinal disorders?

- To establish and/or confirm diagnosis
  - Radiculopathy vs. entrapment neuropathy vs. polyneuropathy
- Localize a lesion
  - Nerve root vs. plexus vs. peripheral nerve
- To correlate findings noted on physical exam and imaging studies
- To determine extent, severity, and/or chronicity of a nerve injury
What are the limitations of EDX in patients with spinal disorders

- During the first 2-4 weeks after the onset of symptoms, EDX findings may be difficult to detect
- Needle EMG detects motor axon loss and does not detect sensory axon loss or demyelination
- Can be technically difficult in patients who are morbidly obese or with significant lower limb edema
- Poor patient tolerance
Other patient considerations

- EDX can be performed in patients on anticoagulants or have pacemaker/defibrillator
- If patient has a stimulator, this needs to be turned off for the test and can be turned back on after test is completed
- Some patients may have some mild discomfort after the testing.