

Is it Really “Just” Low Back Pain

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Introduction

- My goal for today is to review *some* of the low back complaints that develop in athletic populations, which present unique diagnostic or treatment issues.

Historic Clues

- Typical PQRST – don’t skimp on these!
- Patient description of pain
- Timing of symptoms
- Concurrent symptoms
 - GI
 - GU
 - Extremity
 - Referred pain patterns?

Red Flags

- Major trauma mechanism
- Age > 50 or < 20
- Hx of cancer
- Cauda equina symptoms
 - Saddle anesthesia
 - New onset bladder dysfunction
 - Severe or rapidly progressive neurological symptoms

Red Flags

- Constitutional symptoms
 - fever
 - chills
 - unexplained wgt loss
 - recent bacterial infection
 - IV drug abuse
 - immune suppression
 - pain worse with supine position
 - severe nighttime pain

Physical Exam Clues

- Pain with backward bending
 - Associated with rotation/side-bending?
 - Unilateral or bilateral?
 - Compressive exacerbation?
 - Active vs. passive?

Physical Exam Clues

- Radiation or reproduction of pain with maneuvers
- Differentiate b/n lumbar, sacrum, pelvis and hip problem
 - “Joint-above and joint-below” thinking is not adequate in this region

Localizing the Problem

Standing flexion test

- Pt is standing.
- Place your hands on the iliac crests bilaterally, and your thumbs should fall right into the area of the PSIS. Move your thumbs to the inferior notch of the PSIS.
- As patient bends forward, monitor thumbs – whichever ***side*** moves cephalad first (and usually the farthest) is dysfunctional.
- Could be lumbosacral, sacroiliac, or pelvis dysfunction

Localizing the Problem

Seated flexion test

- Pt is seated, with feet flat on floor, knees spread a bit, so hands can pass freely in middle.
- Place hands as in standing flexion test, pt bends forward at waist.
- Interpretation of results same as in standing flexion test.
- If (+), indicates a lumbosacral or sacroiliac dysfunction

Lumbar vs. Sacral Problems

Double Leg Raise

- (+) SLR
- Note angle and then repeat SLR w/ both legs
 - If > degree of motion before pain, then SI
 - If < degree of motion before pain, then LS

Lumbar vs. Sacral Problems

Goldthwaite's Test

- Palpation technique
- Place cephalad palm underneath the LS spine and perform a SLR w/ caudad hand
 - If pain occurs before LS movement is detected, then SI
 - If pain occurs as LS movement is detected, then LS

Lumbar

- Discogenic
- Facet
- Soft Tissue
- Stenosis

Lumbar

Discogenic

- Nerve tension tests
 - SLR
 - Bowstring / Cram
 - Lasegue (bent-knee)
 - Braggard's / Sicard's
 - Slump
 - Nachlas (upper lumbar)
 - Bonnet's
 - Buttock
- Malingering tests
 - Flip test
 - Hoover
 - Axial Compression
 - Simulated rotation

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- Knee to Chest position after a (+) SLR
- Differential Dx for (+) buttock sign
 - Osteomyelitis
 - Septic arthritis / bursitis

- Neoplasm
- Abscess
- Need emergent imaging and further diagnostics

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Lumbar

Facet

- Standing and Seated Kemp's Test
 - Prefer seated
 - Indicates more of a disc early, facet later in maneuver
- Hyperflexion test
 - Pt. supine, flexes hips maximally
 - Will aggravate a disc and relieve a facet problem

Lumbar

Soft Tissue

- Anatomy, Anatomy
- Palpatory skills
- Diagnostic injection?
- Fatigue vs. strain
- Ligamentous vs. muscular
- '-itis' vs. '-osis'

Lumbar

Stenosis

- Pheasant's / Homer Pheasant's Test
 - Sort of a Phalen's for the low back
- Bicycle test
 - Helps with neural vs. circulatory claudication

Sacroiliac Lesions

- Fabere's test
 - SI or hip

- Yeoman's test
 - LS, SI, or hip
- Gaenslen's test
 - SI
- Hibb's Test
 - SI or hip
- Diagnostic injection?

Hip

- Fabere's test
- Capsular pattern
- 'Scrub' test
- Buttock sign
- Diagnostic injection?

Diagnosis and Treatment

- Pars Interarticularis Fracture
- Facet Syndrome
- Lumbo-sacroilitis
- Iliolumbar ligament sprain
- Atypical Scheuermann's
- Four-pack Syndrome

Pars Interarticularis Fracture

- aka, Pars Fracture
- Focused pain, worse w/ ext.
- May be acute or chronic in onset
- Lumbar Xrays w/ obliques
- SPECT scan
- Tx
 - Active rest
 - Brace, PT, or both
 - OMT to reduce abnormal loads

Facet Syndrome

- Can mimic Pars Fx
 - Focused pain, worse w/ ext.
 - Can be acute or chronic
- Imaging vs. Diagnostic Injection
- Tx
 - Active rest
 - PT
 - OMT to reduce abnormal loads
 - Prolotherapy

Lumbo-sacroilitis

- Somatic dysfunction
- Generalized inflammation
- Traumatic arthritis
- Tx
 - OMT
 - PT
 - NSAIDs?
 - Active rest

Iliolumbar ligament sprain

- Easy to miss
- Can refer pain to anterior thigh or groin
- Palpation vs. Diagnostic injection
- Tx
 - Acutely, like any other sprain
 - **OMT to reduce abnormal loads**
 - **Active Rest**
 - **SI belt**
 - Chronically
 - **Prolotherapy**
 - **Ablation**
 - **SI belt**
 - **OMT**

Atypical Scheuermann's

- Diagnosis of exclusion in teenage athletes
- Endplate changes
 - Wedging
 - Schmorl's nodes
- Tx
 - Active rest
 - PT
 - OMT to reduce abnormal loads
 - Tincture of time

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Four-pack Syndrome

- aka, Dead-Butt syndrome

- Combination of:
 - Improperly trained lower abdominals
 - Hypertonic iliopsoas
 - Tight anterior hip capsule
 - Inhibited gluteus
- High-level athletes can adapt around this temporarily
- Can present with any of the previous diagnoses initially, but this is very commonly the causative circumstance

Four-pack Syndrome

- Lower ab testing
 - Static vs. dynamic
- Tx
 - Treat any other disorder
 - OMT
 - Iliopsoas
 - Anterior hip capsule
 - PT
 - Dynamic lumbar stability
 - Lower abs

Conclusion

- I'd like to thank
 - Primal Pictures® for the movies and the computerized anatomy slides
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