Bursitis and Tendonitis: PBL

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Director of Sports Medicine, Rush-Copley Family Medicine Residency; Assistant Professor, Rush Medical College

A past AAFP FMX presenter, Dr. Patel practices family medicine and sports medicine in Aurora and Yorkville, IL and is medical director for Rush-Copley Sports Medicine. His specialty topics include musculoskeletal imaging, concussions, stress fractures, osteoarthritis, joint examinations, pediatric overuse injuries, knee pain, and exercise recommendations, as well as evidence-based medicine. He is a fellow of the American College of Sports Medicine. He says that staying current with medical advances and with evidence-based medicine is the most challenging aspect of family medicine.

Learning Objectives

1. Practice applying new knowledge and skills gained from Bursitis and Tendonitis sessions, through collaborative learning with peers and expert faculty.
2. Identify strategies that foster optimal management of bursitis/tendonitis, within the context of professional practice.
3. Formulate an action plan to implement practice changes, aimed at improving patient care.

Associated Sessions

• Bursitis and Tendonitis: More Than Fluid and Inflammation
Chief Complaint

• Shoulder pain

History of Present Illness

• A 55 year old female
• 2-3 months of pain with use of shoulder
• No trauma or swelling

Polling question

• What other history questions do you want to ask?

History of Present Illness- Con’t

• A 55 year old female
• 2-3 months of pain with use of shoulder
• No trauma or swelling
• Pain with overhead, reaching
• Pain with rolling onto that shoulder
Polling question
• What examination tests would you perform (tenderness, strength testing, special tests)?

Rotator cuff tests
• + painful arc test best for rotator cuff (SORT: B)
• normal painful arc test helps rule out rotator cuff (SORT: B)
• + drop arm test possibly helpful (SORT: B)


Polling question
Rotator cuff tests
• Best tests of full thickness tears (SORT: B):
• + external rotation lag for infraspinatus
• + internal rotation lag for subscapularis


Physical Examination
• Our case:
• + impingement, painful arc
• Weakness of subscap and supraspinatus
• Mild scapular tilt

Polling question
Differential diagnosis?
A. Rotator cuff tear
B. Rotator cuff impingement
C. Rotator cuff tendonosis
D. Rotator cuff tendonitis
E. Labrum tear

Polling question
What imaging would you perform?
A. None
B. Xray
C. MRI with IV contrast
D. MRI without IV contrast
E. MRI arthrogram
Polling question:
What percent of asymptomatic patients have a rotator cuff tear on MRI?
A. 10%
B. 25%
C. 40%
D. 60%

Asymptomatic Abnormal MRI:
- 40% asymptomatic > 50 y/o have full RTC tear
- 60% asymptomatic > 60 y/o have partial or full tear
- Another study: 26-56% asymptomatic tears age: 63.1 ± 9
- Overhead athletes 40% with partial or full tear in dominant shoulder
- 55-72% labrum tears in 45-60 y/o

Polling question:
Treatment options/plan?
A. Physical therapy
B. Nsaids
C. Corticosteroid injection
D. Corticosteroid injection + Physical therapy

Plan:
- Activity modification (SORT: C)
- P.T. (scapular and cuff) (SORT: B)
- Analgesics (SORT: C)

Subacromial Impingement/Rotator cuff:
- Corticosteroid: minimal benefit and = placebo, <4 wks.
- Injection + PT > PT at 6 wks, not after
- Ketorolac > triamcinolone
- Cochrane: Injection= ultrasound =acupuncture =NSAIDS
- Ultrasound guided=landmark injection

Plan:
- Steroid injection only for severe, refractory, temporary benefit (SORT: B)
- Imaging if failed above for 6-8 wks and considering surgery (SORT: B)
Rotator Cuff- injection

- Minimal limited pain benefit
- May accelerate tendon degeneration
- “wide use may be attributable to habit, underappreciation of the placebo effect, incentive to satisfy rather than discuss a patient’s drive toward physical intervention, or for remuneration, rather than their utility.”


Elbow

Chief Complaint

- Elbow pain

History of Present Illness

- A 35 year old male with use of elbow. Lateral side. No trauma or swelling. He has full range of motion

Polling question

- What examination tests would you perform (tenderness, strength testing, special tests)?

Physical Examination

- Tender lateral epicondyle
- Preserved strength of elbow.
- Weakness of wrist extensors, supinators
Polling question
Laboratory/Radiology

Indications for imaging is?

Polling question-Treatment options

• What treatment options would you advise?

Treatment

• Analgesics
• Avoid gripping, twisting or pronated lifting
• Ok to lift with open palm

lateral epicondylitis-

• Limited benefit in pain or function (SORT: A):
  – Bracing,
  – Physical Therapy,
  – Eccentric helps but not superior to other treatment (SORT: B)


Eccentric exercise

Polling question

• Indication for corticosteroid injections?
Lateral Epicondylitis- Injection

- Corticosteroid injection: standard = peppered = via iontophoresis (SORT: B),
- Corticosteroid injection NOT recommended (SORT: A)
- Botulinum toxin A injection, prolotherapy, PRP, or Autologous blood some pain benefit (SORT: B)


Elbow Swelling

Chief Complaint

- Elbow swelling

History of Present Illness

- A 35 year old male has swelling that looks like a golf ball on the elbow. He has full range of motion but swelling

Polling Question
Past Medical History

- What aspects of his medical history would be helpful?
**Polling question**

Laboratory/Radiology

Indications for imaging is?

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**Polling question**

• Indication for aspiration of bursitis is?

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**Bursitis Aspiration**

• Acute hemorrhagic (traumatic) if large and affects ADLs (SORT: C)
• Septic for gram stain and culture (SORT: B)
• Chronic if large, but NO Steroids (SORT: C)

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**Lateral Hip Pain**

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**Chief Complaint**

• Lateral hip pain

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**History of Present Illness**

• A 55 year old female with lateral pain
• Increased with position changes
• No trauma or swelling.
• Pain with rolling onto that hip

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Polling question

• What other history questions do you want to ask?

Polling question

Differential diagnosis?
A. Trochanteric bursitis
B. Gluteal tendinopathy
C. Iliotibial band tendinopathy
D. Hip osteoarthritis

Greater Trochanteric pain Syndrome (GTPS)

• Trochanteric bursitis (acute, rare)
• Gluteus medius tendinopathy
• Gluteus minimus tendinopathy

Polling question

• What examination tests would you perform (tenderness, strength testing, special tests)?

GTPS Exam- Piriformis palpation

<table>
<thead>
<tr>
<th>Test</th>
<th>Sensitivity</th>
<th>Specificity</th>
</tr>
</thead>
<tbody>
<tr>
<td>FABER</td>
<td>82.9%</td>
<td>90%</td>
</tr>
<tr>
<td>Single leg stance 30 sec</td>
<td>100%</td>
<td>93%</td>
</tr>
<tr>
<td>Trendelenburg</td>
<td>72.7%</td>
<td>76.9%</td>
</tr>
<tr>
<td>Isometric hip abduction</td>
<td>80%</td>
<td>75%</td>
</tr>
<tr>
<td>Hip abduction 90deg/hip flexion</td>
<td>88%</td>
<td>97.3%</td>
</tr>
<tr>
<td>Ober</td>
<td>23%</td>
<td>95%</td>
</tr>
</tbody>
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FABER test
- Flexion of hip,
- Abduction of hip
- External Rotation
- Push the opposite ASIS and same knee posteriorly
- Pain in groin=hip pathology
- Pain in Back=SI joint

Single leg stance

Modified Trendelenburg Test
- Stand, Hands on hips, feet together
- Lift 1 leg
- Watch for hip/pelvis drop/tilt
- Weakness of contralateral hip abductors

hip abduction
  - Isometric
  - W/ 90 deg hip flexion

Ober's Test
- Patient lateral recumbent position
- Place 1 hand on hip to prevent trunk rotation
- Hold patient’s ankle & extend thigh
- At maximal extension, allow knee to adduct toward table
- Compare to other leg
- + if significant tightness (knee suspend above the table)

GTPS treatment
- Patient lateral recumbent position
- Place 1 hand on hip to prevent trunk rotation
- Hold patient’s ankle & extend thigh
- At maximal extension, allow knee to adduct toward table
- Compare to other leg
- + if significant tightness (knee suspend above the table)
GTPS treatment

- Eliminate/reduced iliotibial band/Gluteal tension (SORT: C)
- Analgesics (SORT: C)
- Stretching, strengthening (SORT: B)
- Fluoroscopic guided injection= landmark (SORT: B)
  - Short term (<3 month) benefit


Questions

Thanks!

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