Objective

- Present common case presentations
- Explain different exam features of different diagnoses that have common presenting complaints
- Present some information new diagnoses and treatments
- Highlight some key areas - not be all encompassing

Why do this talk

- Half of all practicing primary care providers did NO rotation in orthopedics
- Many internists said felt more comfortable managing ICU patients on the vent than simple orthopedic injuries like ankle sprains
- 70% of patients who present to primary care offices have musculoskeletal complaints

Basic Questions

- What hurts
- What happened
- Are you hurt or are you hurting
- Has it been?
- What?
- Has this happened before?
- Is it getting better?
- Are you concerned about it?

Shoulder pain

Image of a shoulder with red highlights on it.
Basic shoulder questions

Where does it hurt
When does it hurt
Was there an injury
Does the pain radiate

Rotator cuff tear
Ac joint dpl
Basic shoulder exam

Shoulder pain vs Cervical pain

Cubital Tunnel Syndrome Pain
Hip Pain

- Where
  - Anterior (groin)
  - Hip Flexor
  - Upper Lumbar etiology

- Lateral
  - Bursitis
  - Tendonitis/tear
  - Lumbar

- Posterior
  - Piriformis
  - Hamstring

Lateral Hip Pain

Trochanteric Anatomy

Radiology

Abductor Tendon Function
**Bursitis vs. Tendon Tearing**

### Bursitis
- Trochanteric pain
- Pain with side sleeping
- Prolonged sitting
- Posterior Lateral

### Abductor Tearing
- Pain with walking/standing
- Abnormal Gait
- Pain with rising/stairs
- Balance

Both can refer pain down ITB (past Gerdy’s Tubercle) to lateral calf.

Makes diagnosis hard to discern from Radicular Pain.

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**Abductor Tears**

- **Insidious Pain Onset**
  - Attritional wear
  - Can have acute tears

- Usually 50-60 years old

- Female >> Male (4:1)

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**Exam**

### Trochanteric Pain
- ITB tightness
- Not associated with Lumbar ROM

### Trendelenberg Gait
- Pain with single leg stance
- Pelvis drops

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### Pain with Single Leg Step Up
- Pelvis Drops
Treatment

- Tears are not dangerous
- Many are asymptomatic

- Corticosteroid injections
- Ambulation Assistance (Cane)
- Physical Therapy Program
- NSAIDS

Surgery for Recalcitrant Cases

Arthroscopic Surgical Treatment

Clear the Inflamed Trochanteric Bursa

- Elevate Distal Edge of Tendon
- Prepare Healthy, Bleeding Bone

Rotator Cuff of the Hip

- Pass Sutures to Repair the Tendon

Postop
- Major Test of Patience!!
- Hip brace to Limit Stress/ROM
- 25# weight bearing for 6 weeks
- Full ROM at 8 weeks
- 3 months strengthening
Groin Pain

You haven’t seen hip impingement?

Has it seen you

One study showed:

- Hip pain
- Abdominal surgery
- Laparoscopy
- Hernia surgery

Presents with insidious or sudden onset groin pain

- Flexion or rotational activities
- Night pain
- Popping
- Pain when getting up from seated position
- Pain with prolonged sitting

Hip Impingement

- Impingement Test
  - Flexion
  - Adduction
  - Internal Rotation
- FABER Test

Try to compress the anterior femoral head and neck - GROIN PAIN

Hip Impingement

Two Types

Cam

Pincer

Over half the time they are present together
CAM Impingement

"Out of round" femoral head/neck cannot rotate in round acetabulum

Loss of normal Head/Neck Offset or "Bump"

Labral Bruising and Tearing
Cartilage Delamination

Pincer Impingement
Abnormal "pinching" of anterior labrum/wall onto femoral neck due to excess bony overhang anteriorly (retroversion)

As neck contacts anteriorly, tries to lever out posteriorly – contra/coup lesion

Abnormal bone along anterior socket or malpositioned socket
Anterior labral abutment and tearing

Head levers posteriorly - contre-coup lesion

Surgical Dislocation

Surgical Dislocation
42 yo L hip pain

Typical Female Imaging

Imaging

42 yo postop (1mo)

Typical Measurements

Pincer Impingement

Pincer Impingement

Bilateral Acquired Pincer Impingement – Labral Ca+

30 year old female returned to unrestricted tennis after 3 years of being unable to play
Post Op

38 year old female
Returned to horseback riding and barrel racing

Cam Impingement

35 year old returned to job as truck-driver after 18 months of being unable to sit for prolonged time

Patient Evaluation

Goal is to **discover a definite cause** as treatments are more successful when can be focused on specific diagnoses

History

- **Onset of Pain**
  - Spontaneous
  - Malalignment
  - Overuse (Activity level, with running/squatting)

- **Specific Injury** – blunt cartilage/SC bone injury

- **After Surgery** – scar/neuroma/irritation
**History**

- Description of Pain
  - With motion only?
  - Sharp/Dull/Deep/Superficial
- Disability related to Pain or Instability
- Other symptoms
  - Crepitus/Catching
  - "Giving Away"

**Medical Comorbidities**

- Rashes/gout/hip problems
- Referred Pain Areas

**Observation**

- Palpation
  - Patellar Tendon
  - Quadriceps Tendon
  - Retinacula
  - IT Band
  - Prepatellar Bursa
  - Pes Anserine Bursa

**Specific Tests**

- Extension Crepitation
  - DISTAL Pole lesions
- Flexion Crepitation
  - PRONOMAL Pole lesions
- Mid-Range Medial Crepitation
  - Plica

**Tests**

- Patellar Apprehension
  - Test at 30° of flexion
Patella Exam

ACL Exam

Meniscus

**Function**
- Weight-bearing
- Increases stability
- Increases congruency
- Cartilage nutrition

**Medial Meniscus**
- Covers 30% joint
- Bears 50% weight
- Firm Peripheral Attachment

**Lateral Meniscus**
- Covers 50% joint
- Bears 70% weight
- Loose Peripheral Attachment
Meniscus Nutrition

Outer 25% from lateral and medial genicular arteries
Inner 25% from synovial diffusion

Meniscus Exam

ACL Exam

Algorithm

- Injury
  - Twist, collision, "pop" – sports
  - Falls
- No Injury
  - Painful
  - Nonpainful, recurrent

ACL Exam

Lachman and Pivot Shift
Pivot Shift
Initial

1. Short period of immobilization
2. Aspiration if tense
3. PT for ROM and quad control
4. Patellar stabilizer brace
5. RTP when full motion and strength and no apprehension with agility testing

30 year old
Stumbles while running
Falls directly on knee
50 year old active farmer
2 days worsening swelling after hauling wood
Had a knee "scope" in same knee 5 years ago
For "torn" cartilage
Done well, though occasionally sore, until now

Exam
Effusion
Knee is more bowlegged than other (varus)
Lacks 5 degrees of extension, flexes to 120 degrees
Medial joint line tenderness, crepitation

Aggravation of arthritis
Need for Weight-Bearing Xrays

Initial
- Aspirate and Inject
  - Cortisone
- PT for ROM, maximize extension
  - ? Offloader bracing
  - ? heel wedges
- TKA when ready

Technique of Injection

45 year old
Worsening knee pain
Recurrent effusions that resolve with NSAIDS
Summary

- Familiarize with common orthopedic complaints
- Recognize different pathology that present similarly
- Never wrong to spend time to get the diagnosis

Thank You