High Impact Rheumatology

Joint Examination and Injection Techniques Part 1: Upper Extremities

**Injections**

- Steroids, soluble and insoluble
  - Triamcinolone hexacetonide (Aristospan)
  - Triamcinolone acetonide (Kenalog)
  - Methylprednisolone acetate (DepoMedrol)
  - Dexamethasone (Decadron)
- Local anesthetics
  - Bupivacaine (Marcaine)
  - Lidocaine (Xylocaine)

**Cautions About Injections**

- Disinfect injection site
- Wear gloves for your own protection
- Don’t inject through cellulitis or psoriatic skin lesion
- Use a large-gauge needle to aspirate an inflamed or infected joint
- Use small-gauge needle and hold pressure over injection site if patient is anticoagulated
- Do not inject the same joint more than 3 to 4 times a year
- Some steroid will be absorbed systemically and can worsen CHF, HTN, and DM
Anterior Shoulder Exam

- Sternoclavicular joint
- Acromioclavicular joint
- Glenohumeral joint
- Biceps tendon

Rotator Cuff Exam

- Supraspinatus tendon
- Infraspinatus tendon
- Teres minor tendon

Shoulder Joint Injection

- Insert needle 1 cm below coracoid process
- Medial to humeral head
Subdeltoid Bursa Injection
- Localize lateral midpoint of acromion
- Insert 1 cm distal
- Angle needle upward

Subdeltoid Bursa Injection

Elbow Exam
- Lateral epicondyle at insertion of common extensor tendon
- Olecranon bursa
- Lateral joint line between humerus and proximal ulna for synovial swelling or effusion

Elbow Exam

Elbow Joint Injection
- Midpoint of line between lateral epicondyle and tip of the olecranon
- Angle needle toward middle of antecubital fossa
- Keep elbow at 90 degrees

Elbow Joint Injection
Olecranon Bursa

- Palpate over proximal ulna

Elbow Injections

- Lateral epicondyle
- Elbow joint

Wrist Exam

- Support wrist in 15-degree flexion
- Palpate radiocarpal joint and ulnocarpal joint
- Keep extensor tendons relaxed
**Wrist Injection**

- Wrist in 15-degree flexion
- Insert needle next to extensor tendon of the thumb
- Angle slightly toward distal ulna

**Metacarpophalangeal Joints**

- Support palm of hand
- Palpate both sides of the joint line with thumbs

**Finger Exam**

- Palpate both lateral joint lines with thumb and index finger while palpating volar and palmar sides with opposite thumb and finger
Finger Joint Injection

- 15-degree flexion
- Insert needle at “2 o’clock” just into the capsule

High Impact Rheumatology

Joint Examination and Injection Techniques Part 2: Lower Extremities

American College of Rheumatology

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Hip Region Exam

- Trochanteric bursa
- Femoral-acetabular joint
Hip Joint Injection

- Direct injection
- Lateral approach to hip

Knee Joint Exam

- Palpate synovial reflection at inferomedial and inferolateral margins of patella

Prepatellar Bursa

- Palpate anterior surface of patella
Knee Injection

- Knee fully extended
- Junction upper third and lower two thirds of the patella
- Insert needle under patella and aim superiority

Ankle Exam

- For tibiotalar joint, palpate 1 cm anterior to distal medial malleolus just medial to extensor tendon and palpate anterior to distal fibula

Ankle Joint Injection

- Insert needle 1 cm anterior to distal medial malleolus, just medial to dorsalis pedis pulse and extensor tendon of great toe
Lateral Foot Exam

- Calcaneocuboid joint is 2 cm distal to fibula and 1 cm anterior

Medial Foot Exam

- Palpate talonavicular joint 2 cm anterior to distal medial malleolus

Metatarsophalangeal Exam

- Palpate MTP joint with second and third fingers on plantar surface while stabilizing joint with thumb on anterior surface
Interpharyngeal Joints of Toes

- Palpate lateral sides of joint line with thumb and index finger
- Palpate anterior and plantar surfaces with thumb and index finger of opposite hand