

# MSK Injections

CAFP Symposium

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SAINT FRANCIS *Care*



# Goals and Objectives

- Review the equipment needed, techniques and billing for injections.
- In small groups review the correct placement of the injection.
- Review some of the science that supports (or does not support) an injection.

# Outline

- Injection Materials
- Equipment
- Consent
- Procedures
- Documentation
- Billing & Coding

# Injection Materials

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- ❖ Anesthetics
- ❖ Corticosteroids
- ❖ Hyalauronic Acid

# Anesthetics

- Indications
  - Analgesia, Delivery confirmation, Volume
- Contraindications
  - Known sensitivity
- 1-2% Lidocaine
  - Fast onset, Short duration
- 0.25% Bupivacaine
  - Slow onset, Long duration
- Epinephrine, Single vs. Multi-Dose Vials, Max Doses

# Corticosteroids

- Short-acting
  - Cortisone
  - Hydrocortisone
- Intermediate-acting
  - Triamcinolone acetonide
  - Methylprednisolone acetate
- Long-acting
  - Dexamethasone
  - Betamethasone

# Hyalauronic Acid

- Sodium hyaluronate
  - Hyalgan: 5 injections qWeek
  - Supartz: 5 injections qWeek
  - Euflexxa: 3 injections qWeek
- Hylan G-F
  - Synvisc: 3 injections qWeek
  - Synvisc-One: 1 injection

# Equipment

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What do you need?

# Equipment

- ❖ Povidone-iodine & alcohol wipes
- ❖ Gloves
- ❖ ~25 guage, 1½" needle to inject
- ❖ ~18 guage, 1½" needle to aspirate
- ❖ 1-10cc syringe to inject
- ❖ 30-60cc syringe to aspirate
- ❖ Misc: meds to inject, culture tubes, hemostat, gauze
- ❖ Band-Aid

# Consent

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What are the dangers?

# Consent

- ❖ Planned Procedure
- ❖ Risks
  - ❖ Infection, Bleeding, No Benefit
  - ❖ Corticosteroids: Steroid Flare, Tendon Ruptures, Skin Atrophy, Altered Glucose Metabolism (DM)
- ❖ Benefits
  - ❖ Aspiration: Dx, Pain Relief, Increased Mobility
  - ❖ Injection: Pain Relief, Improved Function

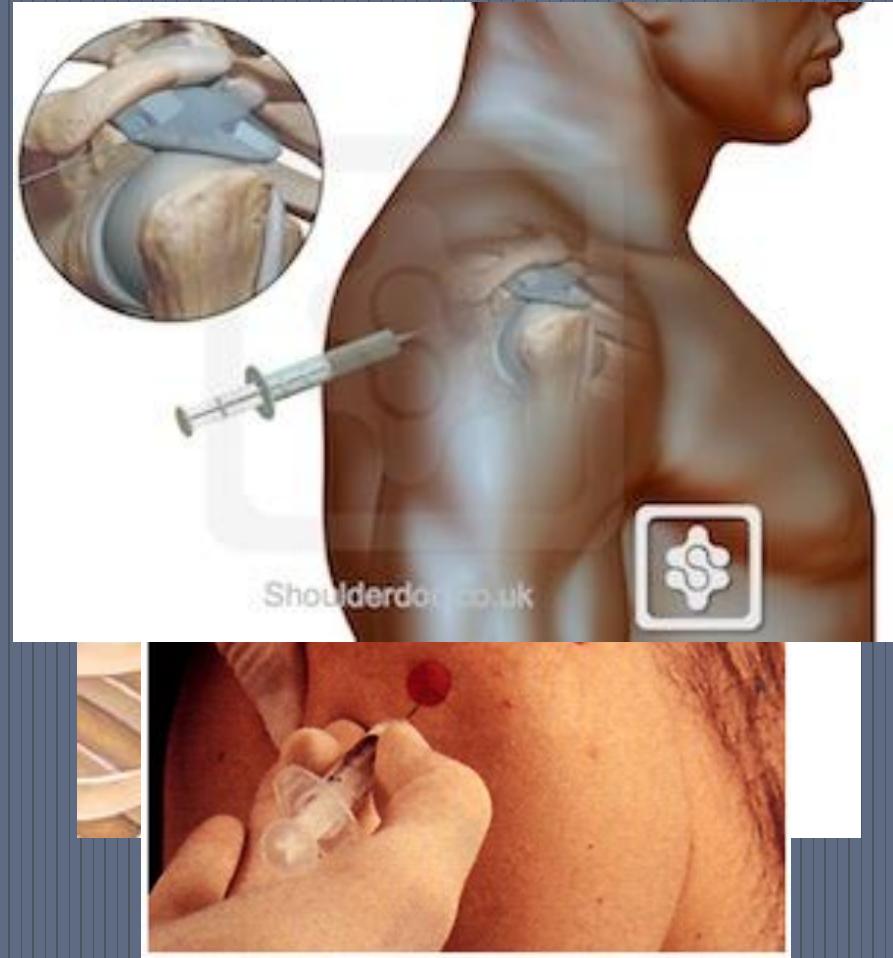
# Procedures: Injections

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How do we do them?

# Subacromial Space

- Indications
  - Bursitis – Short term relief
    - [Am J Phys Med Rehabil.](#) 2012 Aug;91(8):658-65.
  - RC impingement
  - RC tendinopathy
  - Adhesive capsulitis
    - Does it matter where for shoulder?
- Approach
  - Slide under acromion
    - Lateral
    - Posterior
    - Overall accuracy 70%



J Shoulder Elbow Surg. 2008 Jan-Feb;17(1 Suppl):61S-66S.

# AC Joint

- Indication
  - OA
  - Osteolysis
  - AC sprain
    - \*back in the game
- Approach
  - Palpate where clavicle meets acromion
  - Aim needle straight down +/or slightly medially
    - Accuracy 70% without imaging



- Injection
  - 1-2ccs of lidocaine or 1:1 lidocaine:steroid mix

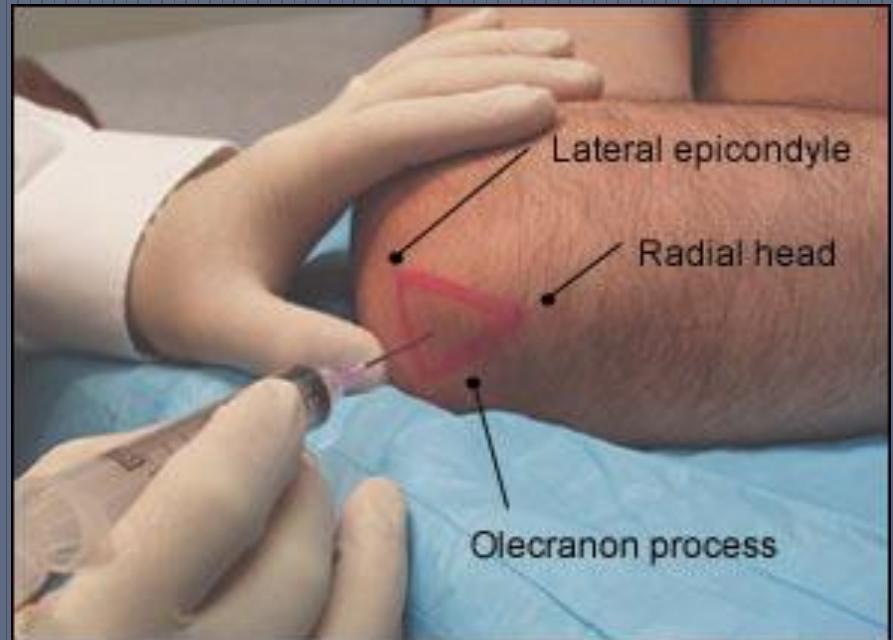
# Lateral Epicondyle

- Indication for lateral epicondylitis
  - evidence is mixed
    - Most research has risk of bias
- Approach
  - Palpate lateral epicondyle and find point of maximal tenderness
  - Insert needle perpendicular
  - Mini-tenotomy
- Injection
  - 25 guage 1½" needle
  - 1cc dex, 2ccs lidocaine



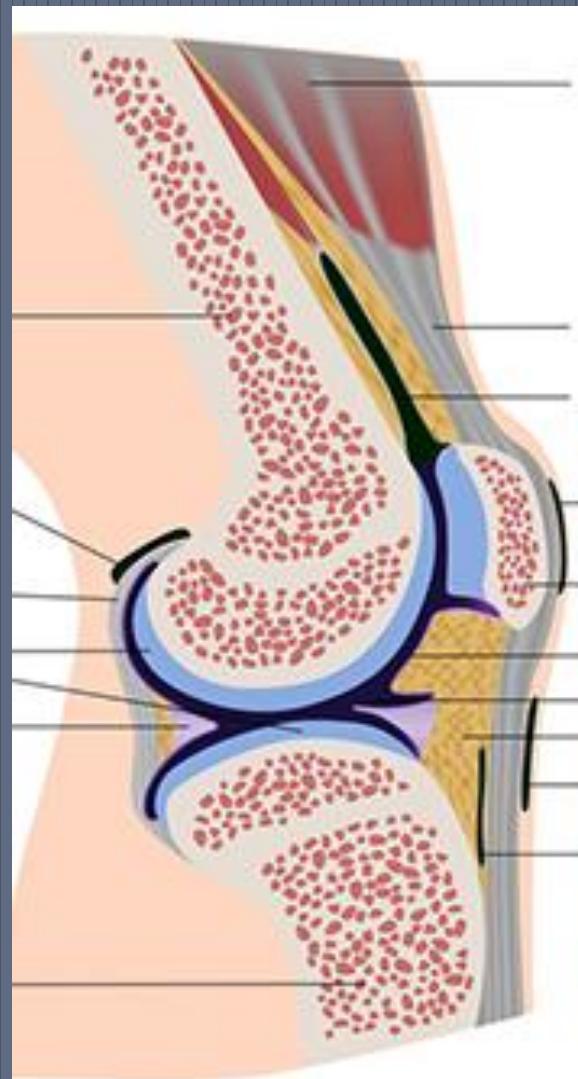
# Elbow – Olecranon Bursa

- Indication for OA
- Approach
  - Locate triangle
  - Insert needle perpendicularly
- Injection
  - 25 guage  $1\frac{1}{2}$ " needle
  - 1 cc dex, 2ccs lidocaine



# Knee

- Indications
  - Aspirate for diagnosis
  - OA
- Approach
  - Anterior
    - Anterolateral, Anteromedial 67% (95% CI 43-91%) and 72% (95% CI 65-78%)
  - Superolateral
    - highest pooled accuracy of 91% (95% CI 84-99%)
- Injection
  - 1-2ccs dexamethasone
  - 4-8ccs lidocaine



# Knee – Anterior

- Can be medial or lateral to patellar tendon, directly above the joint line
- Caution: infrapatellar fat pad
- Injection only



# Knee – Superolateral

- Use for aspiration
- Can anesthetize the tract
- Palpate superior-lateral border of patella
- Proximal 1cm, posterior 2cms, feel divot under quad tendon
- Leave the needle in place and change syringe to deliver medicine
- 18 guage, 1½" needle
- 30-60cc syringe for aspiration



# Greater Trochanteric Bursa

- Indication for bursitis
- Approach:
  - Pt lays on side
  - Palpate area of maximal tenderness
  - Insert needle straight down to bone
  - Pull back 2mm and inject
- Injection
  - 25 guage LONG needle
  - 1cc dex, 4ccs lidocaine



# Pes Anserine Bursa

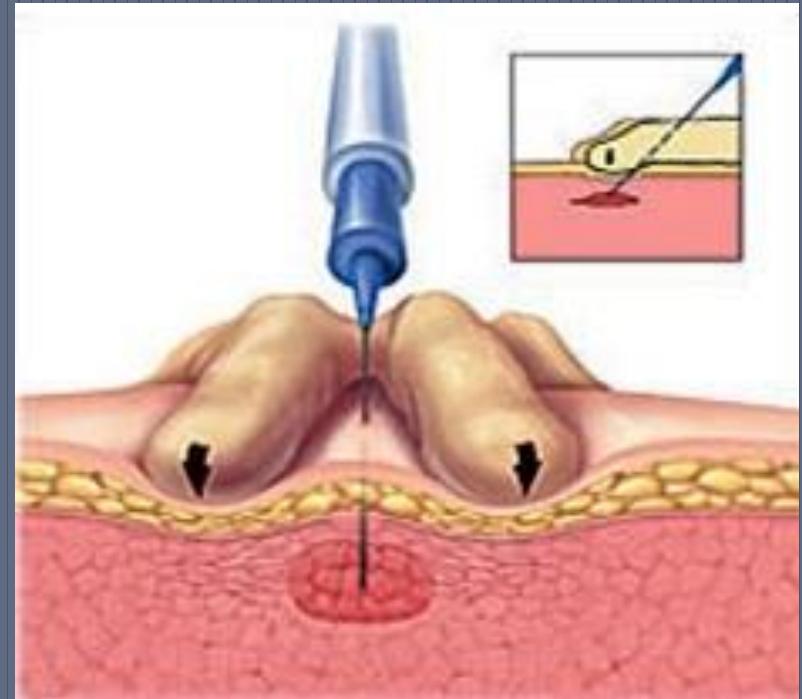
- Indication for bursitis
  - 2.5% of knee pain
- Approach:
  - Palpate medially to tibial tuberosity
  - Find point of maximal tenderness
  - Direct needle perpendicular down to bone
  - Draw back 2mm and inject
- Injection
  - 25 guage  $1\frac{1}{2}$ " needle
  - 1cc dex, 2ccs lidocaine



J Fam Pract. 2009 Sep;58(9):494-500.

# Trigger Point

- Approach
  - Palpate trigger or point of maximal tenderness
  - Insert needle perpendicular into area
  - Pt can usually tell you when you've hit the spot
- Injection
  - 25 guage  $1\frac{1}{2}$ " needle
  - ~1cc of 1:1 dex:lidocaine, or just lidocaine, or just saline



# Documentation

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What did you do?

# Documentation

- Procedure Note
  - Procedure
  - Indication
  - Consent
  - Cleaning
  - Anesthesia
  - What you did
    - Name/Dosage of Meds
    - What you found
    - How the pt did



# Sample Documentation

- Left Knee Corticosteroid Injection
- Indication: OA
- Pt was educated regarding the risks and benefits and provided verbal consent.
- Pt was placed in a comfortable supine position with his knee bent at  $\sim 30^\circ$ .
- The area was cleaned in the typical sterile fashion.
- 8mg of dexamethasone and 6ccs of 1% lidocaine were injected into the knee joint via the superior-lateral approach.
- Pt tolerated the procedure well.

# Billing

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How do you get paid?

# CPT/Billing Codes

- Arthrocentesis, aspiration and/or injection:
  - 20600: Small joint, bursa,- fingers, toes
  - 20605: Intermediate joint, bursa - AC joint, wrist, elbow, olecranon bursa
  - 20610: Major joint, bursa- Shoulder, knee, subacromial bursa
- Injection: single or multiple trigger points
  - 20552: one or two muscle groups
  - 20553: three or more muscle groups
- Injection Tendon or others
  - 20526 Injection, therapeutic - carpal tunnel
  - 20550 Injection(s); single tendon sheath, or ligament, aponeurosis (eg, plantar fascia)
  - 20551 Injection(s); single tendon origin/insertion
  - 20612 Aspiration and/or injection of ganglion cyst(s) any location
- Can charge office visit 992xx w/ modifier
- Can charge for injected meds w/ J code

# Procedural Modifiers

- -25: significant, separately identifiable E&M service
- -50: b/l procedures
- -51: multiple procedures

# J Codes

Steroid	J Code
Betamethasone	J0702
Dexamethasone sodium phosphate	J1100
Dexamethasone acetate	J1095
Methylprednisolone acetate	J1021
Triamcinolone acetonide	J3301

Hyalauronic Acid	J Code
Hyalgan	J7315
Supartz	J3490
Synvisc	J7320

# Pearls - Summary

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Anatomy is KEY

- ❖ Visualize your landmarks
- ❖ Then go find them

Know/stock limited supplies

Document and bill appropriately

# Thank you!

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- ❖ Pfenninger JL, Fowler GC. Pfenninger & Fowler's Procedures for Primary Care, 2<sup>nd</sup> edition. Elsevier Mosby. 2003.
- ❖ Google images