

MSK Injections

CAFP Symposium

Giselle Aerni, MD

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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

- ❖ Anesthetics
- ❖ Corticosteroids
- ❖ Hyaluronic 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

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

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

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%



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

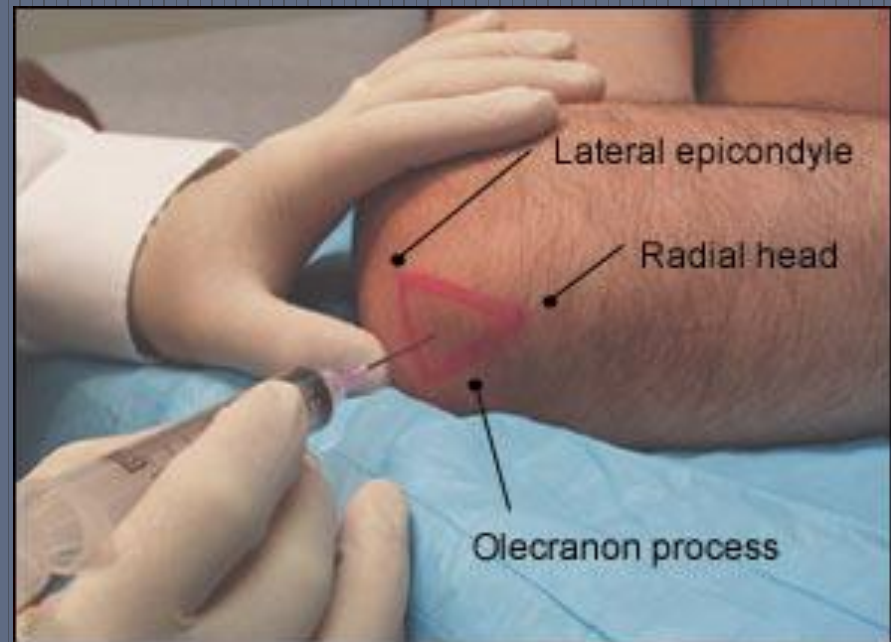
- Indication for lateral epicondylitis
 - evidence is mixed
 - Most research has risk of bias
- Approach
 - Palpate lateral epicondyle and find point of maximal tenderness
 - Insert needle perpendicular
 - Mini-tenotomy

- Injection
 - 25 guage 1½” needle
 - 1cc dex, 2ccs lidocaine



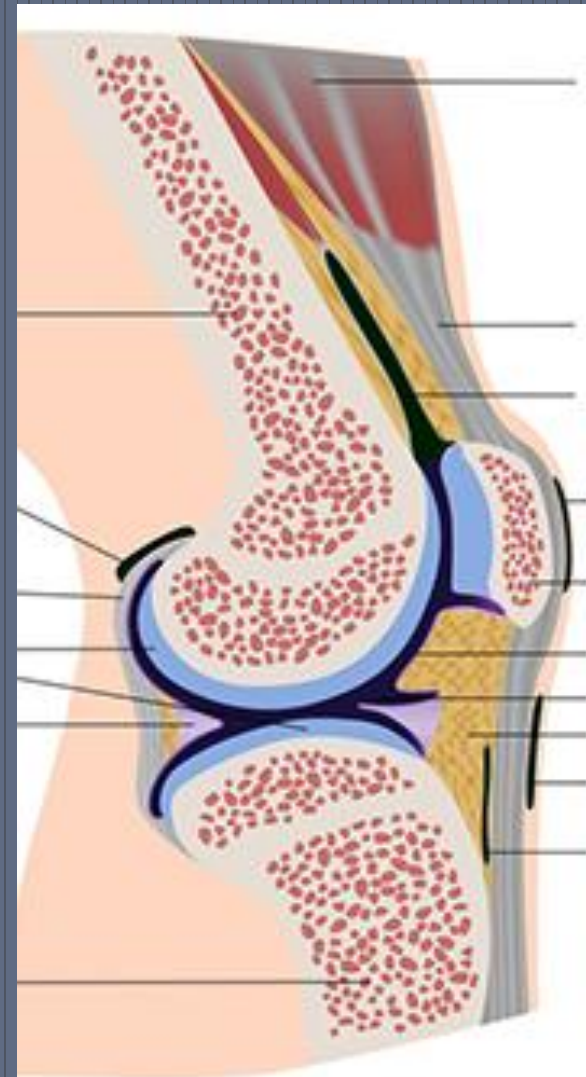
Elbow –Olecranon Bursa

- Indication for OA
- Approach
 - Locate triangle
 - Insert needle perpendicularly
- Injection
 - 25 guage 1½” needle
 - 1cc 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 gauge LONG needle
 - 1cc dex, 4ccs lidocaine



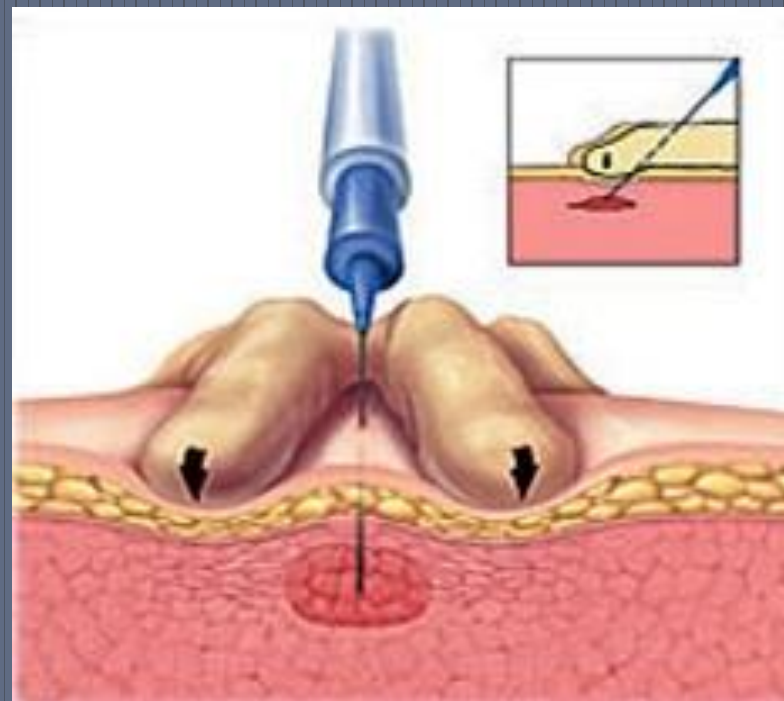
Pes Anserine Bursa

- 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 1½” needle
 - 1cc dex, 2ccs lidocaine



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 1½" needle
 - ~1cc of 1:1 dex:lidocaine, or just lidocaine, or just saline

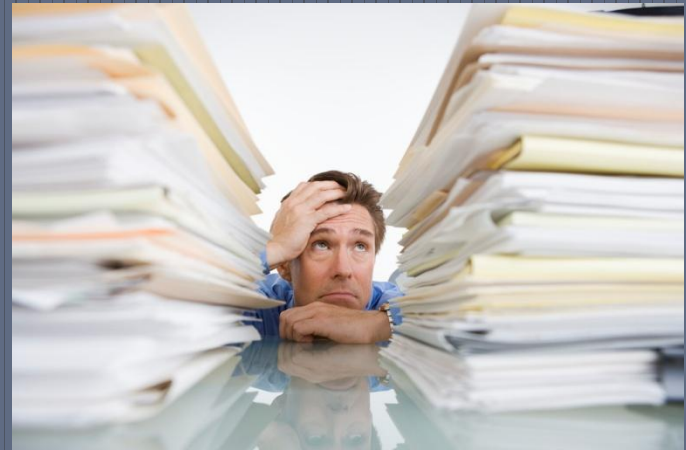


Documentation

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

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

Anatomy is KEY

- ❖ Visualize your landmarks
- ❖ Then go find them

Know/stock limited supplies

Document and bill appropriately

Thank you!

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