Musculoskeletal Injections

Chris Parfitt MD FRCS©

Disclosures

- none
- (I like giving injections)

Musculoskeletal Injections

- A bit like moose hunting

Moose Hunting

- Hunting licence
- Right animal (moose)
- Right caliber rifle
- Right type of bullet
- YOU HAVE TO HIT THE TARGET

Musculoskeletal Injections

- Medical licence
- Right diagnosis
- Right needle
- Right dose of medicine
- YOU HAVE TO HIT THE TARGET

MSK Injections General

- Informed consent
- Procedure
- Benefits
- Risks
- In writing or verbal
**Injection / Aspiration of Joints**

**MSK Injections General**
- The equipment
- Antiseptics
- Bandages

**Local Anesthetics and Chondrolysis**
- Lots of literature showing chondral problems with all steroids and local anesthetics
- No absolute recommendations for use or non-use of local anesthetics in joints, however:

**Bupivacaine and Chondrolysis**
- Bupivocaine infusion pumps caused high rates of chondrolysis
- Avoid intra-articular local anesthetics and cortisone in good joints

**Chondrolysis**
- No evidence of problems with soft tissue, i.e., tendonitis injections caused by these local anesthetics and steroids
- Be careful and thoughtful about what you do

**MSK Injections General**
- Assorted syringes
- Preneedled syringes are time saving
- Draw up solution with larger needle
**MSK Injections Needle size**

- 1.5 inch 25 gauge for fine injections
- 1.5 inch 21 gauge is optimal for larger joints (shoulder and knee)

**MSK Injections General**

- Triamcinolone
  - 40 mg mil
- Methyl prednisone
  - 40 mg mil

**MSK Viscosupplementation**

- Steroids 20$
- Hyaluronic acid usually 350 to 400 $

**MSK Injections Technique**

- One needle (mixed)
- Two needles (prefreezing)
- Less experienced should prefreeze

**TRIGGER FINGER INJECTIONS**

- Evidence based
- ANN RHEM DIS
  - 2008 sept; 7(9)
  - 1262-1266
Trigger Finger
- 1cc steroid
- 1 - 2 cc local anesthetic
- Don’t inject into the tendon
- Inject into or around synovial sheath

Basal Joint arthritis
- CMC joint arthritis

Basal Joint Arthritis
- Slight traction
- Prefreezing very helpful

De Quervains Disease
- Evidence based
- BMC MSK disorders 2009 Oct 27;10;131

De Quervain’s Disease
- Inject into or around the sheath

Tennis Elbow
- Evidence that cortisone is beneficial for at least short term relief
Tennis Elbow
- Use 5cc, marcaine with epi
- Inject the extensor origin
- Use single needle
- Patient leaves office pain free

Shoulder Injections
- Cochrane summary says no better injection success with clinical vs ultrasound guided injection
  
  (for now)

Shoulder Injections
- Rotator Cuff Tendinitis or tear in elderly
  - Evidence based
  - Duration of benefit variable in different studies

Shoulder Injections
- Subacromial injection
  - Use 2 cc of steroid (80) mg with 8 cc of long acting local anesthetic
  - Posterior, slide needle under acromion

Shoulder Injections
- Arthritis or frozen shoulder

Shoulder Injections
- Glenohumeral injection
  - Posterior, in soft spot
  - Arm internally rotated
Trochanteric Bursa injections
- Evidence based
- *Journal rheum.* 1996; Dec;23;(12) 2104-6

Trochanteric bursitis
- Large joint
- 2cc 80 mg steroid
- Lateral position, hip extended
- Long needle
- Marcaine with epi
- Single needle

Knee injections
- Evidence based
- Cochrane database
- Both steroids and viscosupplementation

Knee injections
- Large joint
- Use 2 cc steroid (80 mg)
- 8cc anesthetic
- Lateral subpatellar approach

Knee Injection
- Leg extended
- Relaxed
- Pull kneecap laterally
- Needle goes under the superior patella
- Great for aspiration

Hallux Rigidus Injection
Hallux Rigidus Injection

- Arthritis great toe
- No good studies on this
- Lots of personal positive experience

Hallux rigidus injection

- Better done with 2 needle (prefreeze)
- 25 guage needle
- Small joint

MSK Injections

Questions