Knee Injections

Indications

1. Diagnostic
    - Evaluation of effusion / monoarthritis
    - Evaluation of traumatic effusion (hemarthrosis)
    - Crystal-induced arthropathy
2. Therapeutic
    - Limit joint damage by removal of infected or inflamed fluid
    - Symptomatic relief of large effusion
    - Administration of agents to improve osteoarthritis

Contraindications

1. Bacteremia or overlying infections (cellulitis)
2. Coagulopathy
3. Pt uncooperative
4. Injection of steroid into potentially septic joint
5. Presence of prosthesis
6. Unfamiliarity w/procedure

Procedure

1. Approach and technique
    - Anterior medial or lateral
        - Theoretical risk of hitting meniscus when using this technique
    - Lateral or medial suprapatellar approach
        - Can be done w/pt supine
            - Leg either extended or flexed 20-30°, depending on preference
        - Superior, lateral aspect of patella is identified
        - Skin is marked 1 finger breadth above and 1 finger breadth lateral to site
        - Skin prepped
        - 1 1/2 inch 20 GA needle inserted at 45° angle distally and 45° into knee below patella
2. Knee shouldn't be aspirated from popliteal space
    - Although superficial Baker's cysts can be aspirated
3. Injection following aspiration can be performed by
    - Applying hemostat
    - Removing aspirating syringe
    - Attaching injection syringe
    - Steroid injection = 1 mL betamethasone or methylprednisolone mixed with 3-5 mL 1% lidocaine

Pitfalls

1. Needle tip should pass freely and easily into joint space and not touch nearby structures
    - Touching bone or cartilage will cause significant pain

2. When changing syringe
    - Avoid movement of needle while removing, reapplying or injecting into joint
3. When injecting steroid into knee joint
    - Warn pt of potential for steroid flare reaction that may occur 12-72 hr after injection
    - May mitigate w/use of NSAID

CPT Codes

1. 20610 Arthrocentesis, aspiration and/or injection; major joint or bursa (shoulder, hip, knee joint, subacromial bursa)
2. May need to use a HCPCS "J" code plus code for what is administered (coverage may vary by carrier, consider use of ABN prior to injection)
3. In all cases need to also use appropriate ICM-9 code for diagnosis

References

1. Hollander JL. In: McCarty DJ, ed. Arthritis 1979; 402.
2. Zuber TJ. Office procedures. The Academy collection quick reference guides for family physicians. Baltimore: Williams and Wilkins, 1999:187-194.
3. Zuber TJ. Knee joint aspiration and injection. Am Fam Physician 2002;66:1497-1500, 1503-1504, 1507, 1511-1512.
4. Pando JA, Kilppel JH. Arthrocentesis and corticosteroid injection: an illustrated guide to technique. Consultant 1996;36:2137-2148
5. Renner JB, Wilson FC. Diagnostic modalities: imaging, joint aspiration, and arthroscopy. In Wilson FC, LinPP, eds. General orthopedics. New York: McGraw-Hill, 1997:105-128.

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