

Treating nonseptic olecranon bursitis

A 3-step technique

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Olecranon bursitis is a relatively common condition characterized by pain, swelling, and inflammation of the olecranon bursa (located in the elbow). Although the overall incidence is not known, it typically affects men between the ages of 30 and 60 years.¹ Two-thirds of cases are nonseptic (ie, without infection) and usually occur when trauma or repeated small injuries lead to bleeding into the bursa or release of inflammatory mediators.¹

Little information is available regarding the effective treatment of nonseptic olecranon bursitis.² In the following paper I will describe a 3-step technique I developed to treat nonseptic olecranon bursitis in clinical practice.

Literature search

PubMed, PubMed Central, and EMBASE were searched from 1966 to 2009 using the terms *lidocaine* or *Xylocaine*, *methylprednisolone*, *glucocorticoids*, *corticosteroids*, *olecranon*, and *bursitis*. None of the articles generated made reference to this technique.

Technique

Step 1 involves aspiration of the bursa with an 18-gauge needle. In step 2, a mixture of 80-mg methylprednisolone and 2% lidocaine (specifically 1 mL of methylprednisolone and 1.5 mL of lidocaine without adrenaline) is injected into the elbow joint from a lateral approach. Step 3 involves the application of a dry gauze dressing, followed by the application of a tensor bandage or elbow brace for a period of 3 to 6 months. A list of materials required to perform this procedure is presented in **Box 1**.

The technique was discovered over 3 to 4 years, with 4 or 5 cases being treated per month. Follow-up with each patient occurred at 2 weeks, 3 months, and 6 months. At each follow-up visit, side effects, pain assessment, and limitation of function (including warmth, degree of swelling, and tenderness) were assessed and recorded. The typical

Box 1. Materials required to treat nonseptic olecranon bursitis using the 3-step technique

1. Alcohol swabs
2. 1 mL of 80 mg/mL methylprednisolone*
3. 2 mL of 2% lidocaine (without epinephrine)
4. 18-gauge (3 mL) needle for aspiration
5. 25-gauge (3 mL) three-quarter-inch needle for injection
6. 4 × 4-inch gauze swabs
7. Tensor bandage or elbow brace
8. Cotton swabs
9. Kidney-shaped sterile basin for aspiration

*The 1-mL vial of methylprednisolone represents the only cost to the patient.

pain, skin atrophy, and corticosteroid-induced side effects mentioned by some authors¹⁻⁵ were not observed in any of these cases. In addition, none of my patients who used this technique developed septic bursitis or tendon rupture. My experience with this technique has been rewarding—efficiency rates range from approximately 95% to 100%.

Indications


Indications for this technique include the following⁶:

- diagnostic aspiration in cases of suspected septic arthritis, crystal-induced synovitis, and hemarthrosis;
- therapeutic aspirations for tense effusions;
- therapeutic injections of corticosteroids for persistent local synovitis or soft tissue lesions;
- introduction of contrast media for diagnostic arthrography; and
- chronic pain and disability.

Contraindications include the frequent use of steroids, septic arthritis, and iatrogenic infection.

Alternative treatments

Other treatments that have been suggested in the past for nonseptic olecranon bursitis include the following¹⁻⁵:

- bursal aspiration alone, with or without compressive dressings;
 - conservative approach;
 - nonsteroidal anti-inflammatory drugs for 10 to 14 days;
 - corticosteroid injections alone, after aspiration;
 - a “blood patch” injection;
 - the temporary 3-day use of a percutaneous-intrabursal drainage catheter;
 - holding a needle in place with a hemostat, if aspirating and injecting;
 - surgery for recalcitrant, recurrent episodes; and
 - intrabursal injections of tetracycline and talcum powder.
- However, from my clinical experience, these treatments are not as effective as the 3-step technique I have described above. 

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Competing interests

None declared

References

1. Stell JM. Septic and non-septic olecranon bursitis in the accident and emergency department—an approach to management. *J Accid Emerg Med* 1996;13(6):351-3.
2. McAfee JH, Smith DL. Olecranon and prepatellar bursitis. Diagnosis and treatment. *West J Med* 1988;149(5):607-10.
3. Buckingham RB. Bursitis and tendonitis. *Compr Ther* 1981;7(2):52-7.
4. Smith DL, McAfee JH, Lucas LM, Kumar KL, Romney DM. Treatment of nonseptic olecranon bursitis. A controlled, blinded prospective trial. *Arch Intern Med* 1989;149:2527-30.
5. MacQuillan A, Josty IC, Murison MS. Deepithelialized double-breasted flap with synovectomy of the elbow: new technique for the management of refractory olecranon bursitis. *Ann Plast Surg* 2002;48(4):451-2.
6. Williams P, Gumpel M. Aspiration and injection of joints. *Br Med J* 1980;281(6246):990-2.