Chemical Ablation as an Alternative to Surgery for Treatment of Persistent Prepatellar Bursitis

To the Editor:

Swelling of the prepatellar bursa following trauma usually resolves with rest and protection. Aspiration is indicated to rule out infection and may need to be repeated, even when the fluid is not infected, when recurrent swelling is painful or restricts motion[1]. Injection of corticosteroids can be curative. Symptomatic bursitis that persists despite these measures is considered an indication for surgical removal of the bursa[2]. Methods to ablate the bursa by injections of other materials were described 25 or more years ago[3,4], but have not been adopted into current practice.

I successfully treated 2 patients with intrabursal injection of the sclerosing agent sodium morruhate, a method described more than 70 years ago[3]. I propose that this simple technique is worthy of wider application in treatment of persistent sterile prepatellar bursitis for which other conservative measures have failed and surgery is being considered.

Case 1. A 38-year-old woman with longstanding systemic lupus erythematosus developed swelling anterior to her left knee after a fall. Her main problem at the time was a deep non-healing buttock ulcer deemed secondary to lupus and treated with prednisone and intravenous cytoxan; hence, she did not mention her intermittent knee swelling and pain (with kneeling but not at rest) until 9 months after it developed. Examination disclosed a golf-ball sized tense fluid collection anterior to her knee. Aspiration obtained 8 ml of clear fluid (not further analyzed), following which 40 mg of methylprednisolone were injected. Swelling recurred within 2 days. Six weeks later, she inquired about alternate treatments and indicated she wished to avoid surgery. I proposed instillation of the sclerosing agent sodium morrhuate, an agent I had read about in reviewing non-surgical treatments for knee joint synovitis[5]. She verbally consented, and after retrieving 6 ml of clear fluid I instilled 2 ml of sodium morrhuate (NDC 0517-3065-01 50 mg/ml), 40 mg of methylprednisolone, and 1 ml of 1% lidocaine. Swelling resolved over the next week and has not recurred in 15 months of followup.

Case 2. An otherwise healthy 58-year-old woman developed swelling about her right knee after a fall. In the several weeks after the fall, generalized swelling subsided leaving a discrete collection anterior to the patella, associated with discomfort upon descending stairs or with kneeling. Swelling persisted despite compressive wraps, ice application, and oral nonsteroidal antiinflammatory drugs (NSAID). Upon referral to rheumatology, aspiration of the bursa obtained 12 ml of serosanguinous fluid, after which I instilled 40 mg of methylprednisolone. Swelling recurred over the next 2 days despite use of a compressive wrap. Upon her return 2 weeks later I offered options of repeat corticosteroid injection or addition of sodium morrhuate, about which I had mentioned the previous successful case. She chose the latter option, and verbally consented to the procedure. I instilled the same admixture as in the first case after removing 11 ml of fluid, for which synovioanalysis showed 44 white blood cells/ml, 66,800 red blood cells/ml, no crystals, and sterile culture. Swelling subsided completely over the next week and has not returned 2 months later.

Sodium morrhuate is a preparation of marine lipids with sclerosant properties, which has been used for many years to ablate venous varicosities of the esophagus, gonads, and legs[6]. Trials in which the agent was used as a chemical synovectomy agent produced mixed results and described frequent postinjection flares subsequently reduced by including a corticosteroid in the injections[5]. Ablation of otherwise refractory bursitis by injection of caustic compounds, including sodium morrhuate, was described in the 1930s[3]. Such measures were subsequently derided[7], and surgical resection became the standard treatment of persistent bursitis[2]. Other intrabursal surgical alternatives described were placement of a 16 gauge angiocath for several days[8] and injection of autologous blood ("blood patch")[4]; however, neither caught on.

Posttraumatic prepatellar bursitis is not uncommon. No data exist indicating how many cases become chronic. In the analogous situation of treating persistent nonseptic olecranon bursitis, injection of corticosteroids has been shown to be superior to NSAID[9]. Surgical management of refractory cases, while effective, can occasionally be complicated by wound healing problems or nerve damage[10]. Resolution of bursitis following instillation of sodium morrhuate as described in these 2 cases suggests the technique, although off-label and not U.S. Food and Drug Administration approved, is worthy of wider application. Such an intervention could serve as an alternative to surgery in cases of persistent posttraumatic bursitis that do not respond to medical management.

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