ABSTRACT

Purpose. To evaluate surgical outcomes of disinsertion of the common extensor tendon for lateral elbow tendinopathy.

Methods. Records of 277 men and 128 women who underwent surgery for lateral elbow tendinopathy were reviewed. The indication for surgery was insufficient improvement of pain and inability to return to work after 3 weeks of physiotherapy (stretching, ultrasound) and local corticosteroid injections. According to the Tavernier technique, the origin of the tendons of the extensor carpi radialis brevis and extensor digitorum communis was located, and proximal disinsertion of the common extensor tendon was performed.

Results. Outcome was excellent in 344 (85%) of the patients, good in 46 (11.5%), regular in 9 (2%), and poor in 2 (0.5%). The mean time to return to work was 29 (range, 5–93) days. Immediate complications included infection (n=1), seroma (n=1), cicatrical fibrosis (n=10), radial neuritis (sensory) [n=4], and reactive dermatitis (n=2). Late complications included Frohse's arcade syndrome (n=1) and carpal tunnel syndrome (n=2).

Conclusion. Disinsertion of the proximal common tendon is a good option for treating lateral elbow tendinopathy.

Key words: tendinopathy; tennis elbow

INTRODUCTION

The prevalence of lateral elbow tendinopathy (also known as epicondylitis and tennis elbow) in the general population is 1 to 3%. It is characterised by pain at the lateral epicondyle and surrounding structures secondary to repetitive movements and activities that require strength. Conservative treatment (rehabilitation, physical therapy, steroid injections, and platelet-rich plasma injections) is effective for 80 to 85% of patients with epicondylitis. When conservative treatments fail, surgical treatment is opted for, which occurs in 3 to 5% of athletes.

Open surgery involves release, excision or repair...
of the common extensor tendon. Percutaneous or endoscopic techniques are also used. We evaluated surgical outcome of disinsertion of the common extensor tendon for lateral elbow tendinopathy.

**MATERIALS AND METHODS**

Between 1984 and March 2008, 1840 patients underwent conservative treatment for lateral elbow tendinopathy. Among these, 22% (277 men and 128 women) opted for surgery and their records were reviewed. The indication for surgery was insufficient improvement of pain and inability to return to work after 3 weeks of physiotherapy (stretching, ultrasound treatment) and local corticosteroid injections. Patients with lateral elbow pain caused by cervical disease or any other causes were excluded. All patients were covered by the same workers’ health insurance system.

Of these patients, 20% were basketball players and 80% were job holders. 22% were aged 20 to 35 years, 66% were aged 36 and 50 years, and 12% were aged 51 to 65 years. 77% were treated for their right elbow.

Patients were under regional anaesthesia with tourniquet placement. According to the Tavernier technique, the anconeus muscle, skin, and subcutaneous tissue down to fascia were approached. The origin of the tendons of the extensor carpi radialis brevis and extensor digitorum communis was located. Proximal disinsertion of the common extensor tendon was performed, as was extraction of a tendinous band to prevent recurrence secondary to fibrosis (Fig.).

Additional procedures were performed for associated pathologies that included epitrochlear algias (n=7), Frohse’s arcade syndrome (n=4), ulnar nerve compression at the elbow (cubital tunnel syndrome) [n=3], lipomas-granulomas (n=2), mucoid cyst (n=1), trigger finger (n=1), and ulnar or median nerve compression in the forearm (n=4).

A compression bandage was placed for 3 to 4 days. Stitches were removed on days 6 or 7. Rehabilitation (kinesitherapy, ultrasound treatment, and tonification with isometric exercises) was provided for a minimum of 8 weeks. Outcome was evaluated at months 3 and 6, according to the Roles and Maudsley scoring system (Table).

**RESULTS**

Outcome was excellent in 344 (85%) of the patients, good in 46 (11.5%), regular in 9 (2%), and poor in 2 (0.5%). The mean time to return to work was 29 (range, 5–93) days. Immediate complications included infection (n=1), seroma (n=1), cicatricial fibrosis (n=10), radial neuritis (sensory) [n=4], and reactive dermatitis (n=2). Late complications included Frohse’s arcade syndrome (n=1) and carpal tunnel syndrome (n=2).

**DISCUSSION**

Differential diagnosis of lateral elbow tendinopathy includes epicondylalgia originating from irritation of the 6th or 7th cervical root, entrapment neuropathy of the posterior interosseous nerve (Frohse’s arcade syndrome), and tennis elbow (epicondylgia).
syndrome), pathology of the radiohumeral joint, radiohumeral osteochondral lesions (Panner’s disease), and pathology of the serous bursa. Physical therapy includes hydrotherapy, use of microwave, laser and ultrasound, transcutaneous electrical nerve stimulation, and stretching exercises (supinated flexion to extension followed by supinated flexion to pronated extension). Cortico-anaesthetics are also used. Platelet-rich plasma injections and radiofrequency-based electromagnetic currents are used to restructure collagen, as they may increase circulation, help to form new collagen, and promote fibroblast migration. These forms of treatment are painless and result in only redness of the skin; each of a total of 10 treatment sessions lasts only a few minutes.

In the current study, the relatively high proportion of patients opting for surgery was due to the need to return to work early. Open surgery enables broader visualisation and treatment of concomitant diseases.

Percutaneous or endoscopic techniques achieve a higher percentage of favourable results, lower complications rates, and earlier return to work. The most used techniques in open surgery for the common extensor tendon are disinsertion, elongation, and excision or repair of damaged tissue. Results of different types of surgery have been compared. All our patients received economic compensation during the period they were unable to work. The high rate of excellent and good results (97%) achieved in our patients indicated the efficacy of the surgery. Only 21 (5.2%) of the 405 patients developed complications, which mostly resolved after conservative management; only 9 patients underwent revision surgery.

DISCLOSURE

No conflicts of interest were declared by the authors.

REFERENCES