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Original article

Arthroscopic surgical treatment of recalcitrant lateral epicondylitis – A series of 47 cases☆

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ABSTRACT

Objective: To evaluate the results of patients undergoing arthroscopic surgical treatment of refractory lateral epicondylitis, identifying poor prognosis factors.

Methods: A retrospective study of 44 patients (47 elbows) who underwent arthroscopic debridement of the extensor carpi radialis brevis (ECRB) tendon to treat refractory lateral epicondylitis from February 2013 to February 2015, operated by a single surgeon at one center. Patients were assessed by DASH score, visual analog scale of pain (VAS), and ShortForm 36 (SF-36). The mean age at surgery was 44.4 years (32–60). The duration of symptoms prior to the surgery was approximately 2.02 years (range: 6 months to 10 years). Mean follow-up was 18.6 months (range of 6–31.9).

Results: The mean postoperative DASH score was 25.9 points; mean VAS, 1.0 point at rest (all the patients with mild pain) and 3.0 points at activity, of which 31 (66%) cases presented mild pain, 10 (21%) moderate pain, and six (13%) severe pain; mean SF-36 score was 62.5. A moderate correlation was observed between duration of pain before surgery and the DASH score with the final functional outcome. No significant complications with the arthroscopic procedure were observed.

Conclusions: Arthroscopic surgical treatment for recalcitrant lateral elbow epicondylitis presented good results, being effective and safe. The shorter the time of pain before surgery and the lower the preoperative DASH score, the better the prognosis.

☆ Study conducted at the Hospital Orthoservice, Grupo de Ombro e Cotovelo, São José dos Campos, SP, Brazil.

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Tratamento cirúrgico artroscópico da epicondilite lateral recalcitrante – Série de 47 casos

Palavras-chave:
Cotovelo de tenista/patologia
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RESUMO

Objetivo: Avaliar os resultados dos pacientes submetidos a tratamento cirúrgico artroscópico da epicondilite lateral refratária a tratamento conservador e identificar fatores de pior prognóstico.

Métodos: Estudo retrospectivo de 44 pacientes (47 cotovelos) submetidos a desbridamento cirúrgico artroscópico do tendão extensor radial curto do carpo (ERCC) para tratamento de epicondilite lateral refratária a tratamento conservador de fevereiro de 2013 a fevereiro de 2015, operados por um único cirurgião em um único centro. Os pacientes foram avaliados pelo escore de DASH, pela classificação visual analógica de dor (EVA) e pelo Short-Form 36 (SF-36). A média de idade na cirurgia foi de 44,4 anos (32 a 60). O tempo de sintomas antes da cirurgia foi de 2,02 anos (variação de seis meses a 10 anos). O seguimento médio foi de 18,6 meses (variação de seis a 31,9).

Resultados: A média dos escores pós-operatórios foi de 25,9 pontos no DASH; 1 ponto no EVA de repouso (todos os casos de dores leve) e 3 pontos na EVA em atividade, 31 (66%) casos de dores leves, 10 (21%) de moderadas e seis (13%) de intensas; SF-36 de 62,5. Observou-se uma correlação moderada entre o tempo de dor antes da cirurgia e a pontuação no escore de DASH com o resultado funcional final. Não foram observadas complicações significativas com o procedimento por via artroscópica.

Conclusões: O tratamento cirúrgico artroscópico para epicondilite lateral recalcitrante do cotovelo apresenta bons resultados, é eficaz e seguro. Quanto menor o tempo de dor antes da cirurgia e quanto menor o DASH pré-operatório, melhor o prognóstico.

Introduction

Lateral epicondylitis, or "tennis elbow" is the most common complaint related to the elbow, affecting 1–3% of the adult population annually.[1,2] Despite the classical description related to tennis practice, only 5–10% of patients with epicondylitis practice this sport; the condition is more related to work activities.[3] Although the name suggests an inflammatory process, epicondylitis is characterized as a non-inflammatory condition, a type of tendinosis with fibroblast and vascular response, called angiofibroblastic degeneration.[4] This is a self-limiting pathology, and the vast majority of patients improve with conservative treatment only. However, some factors such as duration of symptoms, previous infiltration, prior orthopedic surgery, and work-related compensation, are known to be related to poor prognosis, increasing the chance of a need for surgery.[5] The recurrence rate is 8.5%, and patients whose symptoms last over six months have a high risk of presenting them for long periods and will probably require surgical intervention[6]; these are estimated to represent 4–16% of cases.[5,7,8] Numerous surgical procedures to treat this condition have been described.[4,9–11] The vast majority have in common the release or debridement of the extensor carpi radialis brevis (ECRB) tendon. Some factors have been attributed to poor prognosis after surgical treatment, especially female gender and injury of the common extensor tendon greater than 6 mm in magnetic resonance imaging[12] (Fig. 1).

Arthroscopic surgical treatment of lateral epicondylitis has advantages over open surgery, including the ability to debride the inferior surface of the tendon without invading the aponeurosis of the common extensor (Fig. 2), the ability to assess the joint for intra-articular pathology, and a shorter rehabilitation period.[7,13]

Material and methods

Patients included in this study were operated from February 2013 to February 2015 by a single surgeon at a single center. The study included patients diagnosed with lateral epicondylitis who showed either no improvement or unsatisfactory improvement after conservative treatment, which consisted of six months of physical therapy associated with an orthosis for lateral epicondylitis, two infiltrations or two intramuscular steroid injections, and medications for pain relief.

Patients with lateral epicondylitis who had chondral lesions, incipient arthrosis, or cases with previous elbow surgery were excluded.

The DASH, VAS, and SF-36 scores were calculated for all patients preoperatively and at the postoperative follow-up.

Surgical technique

The surgical technique adopted was based on published reports,[1,9] with some adjustments.

Patient underwent general anesthesia and brachial plexus block and was then placed in lateral decubitus, opposite to the side to be operated. An elbow support attached to the operating table was positioned under the arm, allowing for the elbow

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