



Original Article

Percutaneous golfer's elbow release under local anesthesia: a prospective study[☆]

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ABSTRACT

Objectives: To evaluate the results of percutaneous golfer's elbow release under local anesthesia.

Methods: From December 2010 to December 2013, 34 elbows in 34 patients (10 males and 24 females) that presented golfer's elbow for over one year were recruited from the outpatient department. All patients were operated under local anesthesia and were followed-up for 12 months. The functional outcome was evaluated through the Mayo Elbow Performance Index (MEPI).

Results: Pain relief was achieved on average eight weeks after surgery. The results were excellent in 88.23% (30/34) cases and good in 11.76% (4/34) cases. Neither wound-related complications nor ulnar nerve complications were observed. On subjective evaluations, 88.23% (30/34) patients reported full satisfaction and 11.76% (4/34) patients reported partial satisfaction with the results of treatment.

Conclusion: Percutaneous golfer's elbow release under local anesthesia is a minimally invasive procedure that can be performed in an outpatient setting. This procedure is easy, quick, and economical, presenting a low complication rate with good results.

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Liberação percutânea do cotovelo de golfista sob anestesia local: um estudo prospectivo

RESUMO

Objetivo: Avaliar os resultados da liberação percutânea do cotovelo de golfista sob anestesia local.

Métodos: Entre dezembro de 2010 e dezembro de 2013, 34 cotovelos em 34 pacientes (10 homens e 24 mulheres) que apresentavam cotovelo de golfista há mais de um ano foram recrutados do ambulatório. Todos os pacientes foram operados sob anestesia local e foram acompanhados por 12 meses. O resultado funcional foi avaliado pelo Mayo Elbow Performance Index (MEPI).

Palavras-chave:

Cotovelo de golfista

Percutânea

Anestesia local

Procedimento minimamente

invasivo

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Resultados: O alívio da dor foi alcançado em média, oito semanas após a cirurgia. Os resultados foram excelentes em 88,23% (30/34) dos casos e bons em 11,76% (4/34) dos casos. Não se observaram complicações relacionadas à ferida nem complicações do nervo ulnar. Em avaliações subjetivas, 88,23% (30/34) dos pacientes relataram satisfação total e 11,76% (4/34) dos pacientes relataram satisfação parcial com os resultados do tratamento.

Conclusão: A liberação percutânea do cotovelo de golfista sob anestesia local é um procedimento minimamente invasivo que pode ser realizado em ambulatório. Este procedimento é fácil, rápido e econômico, apresentando um baixo índice de complicações e bons resultados.

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Introduction

Golfer's elbow or medial epicondylitis is considered the most common cause of elbow pain, affecting 1–2% of the population and resulting in significant activity restriction and economic burden.^{1,2} The chronic symptoms are typically associated with tendon degeneration resulting from repetitive micro-trauma, cellular apoptosis, and autophagic cell death.² More specifically, patients with chronic symptoms demonstrate a histologic pattern of angiofibroblastic hyperplasia, characterized by fibroblast proliferation, increased ground substance, disorganized collagen, and poorly functional neovascularity.³ Majority of the patients respond to activity modification, non-steroidal anti-inflammatory drugs, bracing, physical therapy, modalities (e.g., ice, electrical stimulation), and various injections, approximately 10–15% will be refractory and therefore considered surgical candidates.³ Multiple open, arthroscopic, and percutaneous surgical procedures have been described to treat elbow tendinopathy, all sharing the fundamental goals of removing the pathologic tendinotic tissue and stimulating a healing response.⁴ Sonographically guided percutaneous tenotomy using ultrasonic energy to remove diseased tissue has recently become available with the release of the TX1 device.⁵ These procedures have been effective in 75–90% of patients but expose patients to operative risks and a recovery that is often prolonged.⁴ The purpose of this study was to find out the outcome results of percutaneous golfer's elbow release under local anesthesia.

Methods

This prospective study was carried out at Orthopaedics department of SMS&R, Sharda University, Greater Noida, UP from December 2010 to December 2013. It was approved by institutional medical ethics committee. A total of 34 elbows in 34 patients (10 males and 24 females) with golfers-elbow admitted to our institute were included in the present study. Twenty-four patients (70.58%) were women and ten patients (29.41%) were male. All patients had unilateral golfers elbow. 26 cases of golfers elbow were found on the right side and eight cases were seen on the left side. The mean age of patients was 45 years (range: 30–60 years). A written informed consent was obtained from all the patients. All patients were followed for twelve months. The indications for surgery were as follows: more than six months of persistent symptoms

despite the aggressive conservative treatments, such as rest, drug therapy, splinting, physiotherapy, and a history of more than three steroid injections for treatment, and functional impairment at work and home. Cases were excluded if there had been previous surgery or other elbow pathology such as rheumatoid arthritis, osteoarthritis, or radial tunnel syndrome. Differential diagnosis of pain on the medial aspect of the elbow include Pronator Syndrome, referred pain from myofascial trigger points in the shoulder and cervical, any of which may mimic or coexist with golfer's elbow. Medial epicondylalgia and ulnar nerve neuropraxia are commonly associated. Furthermore, golfer's elbow and ulnar nerve neuropraxia are very commonly present when chronic medial ulnar collateral insufficiency exists.

Percutaneous technique

This percutaneous operative procedure was performed on an outpatient basis with use of local anesthesia and a pneumatic tourniquet. A gentle curved stab incision of 0.5 cm long was made directly over the medial epicondyle. The flexor origin was exposed and was completely divided transversely close to its attachment to the medial epicondyle. No removal of bone and debridement of tissue were performed. The skin is closed in routine fashion. Thereafter local pressure applied to create haemostasis when the tourniquet is released. A wool and crepe bandage was applied that was removed after seven days to allow the early commencement of an exercise programme.

Functional outcome was evaluated according to the MEPI (Mayo Elbow Performance index) as described by Turchin et al.⁶ MEPI is a four-part scale where clinical information is rated based on a 100-point scale, as follows:

- 90–100: excellent
 - 75–89: good
 - 60–74: fair
 - Below 60: poor
1. Pain: The therapist asks the patient how severe the pain is and how frequently the pain appears. 45 points are for patients who do not have pain, 30 points are given to patients who have mild pain, and moderate pain results in 15 points; patients with severe pain get 0 points.
 2. The arc of elbow motion: 20 points are given when the arm reaches more than 100° flexion; when the angle is between

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