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Original article

Functional evaluation of arthroscopic treatment of SLAP lesions through the O'Brien portal☆

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ABSTRACT

Objective: To evaluate the functional results from arthroscopic repair of SLAP lesions through the portal described by O'Brien.
Methods: A retrospective evaluation was conducted on 19 shoulders in 18 patients who underwent arthroscopic repair of SLAP lesions through the O'Brien portal between November 2007 and January 2012.
Results: Nineteen shoulders in 18 patients were evaluated: 16 male patients (84.2%) and three female patients (15.7%). The patients' ages ranged from 27 to 40 years (mean of 34.3 years). There were 12 patients (63.1%) with injuries on the right shoulder, six (31.5%) with injuries on the left shoulder and one (5.2%) with bilateral injury. In relation to dominance, 13 patients (68.4%) presented the injury on the dominant limb and five (26.3%) were affected on the non-dominant limb. We observed that nine cases (47.3%) had SLAP lesions alone and 10 cases (52.6%) were related to glenohumeral instability. There was one case (5.2%) of recurrence of glenohumeral dislocation, but this patient chose not to undergo a new surgical intervention. According to the UCLA and ASES scales translated and adapted to the Portuguese language, 96% of the results were good or excellent.
Conclusion: The approach for treating SLAP lesions through the portal described by O'Brien et al. is easy to reproduce, with a high rate of good and excellent results and a low complication rate.

Avaliação funcional do tratamento artroscópico da lesão SLAP pelo portal O'Brien

Palavras-chave:
Articulação do ombro

RESUMO

Objetivo: Avaliar os resultados funcionais do reparo artroscópico da lesão SLAP pelo portal descrito por O'Brien.

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Métodos: Foi feita avaliação retrospectiva de 19 ombros de 18 pacientes submetidos ao reparo artroscópico da lesão SLAP pelo portal de O'Brien, de novembro de 2007 a janeiro de 2012.
Resultados: Foram avaliados 19 ombros de 18 pacientes, 16 (84,2%) do sexo masculino e três (15,7%) do feminino. A idade variou de 27 a 40 anos (média de 34,3). No estudo, 12 (63,1%) pacientes tiveram lesão no ombro direito, seis (31,5%) no ombro esquerdo e houve um (5,2%) caso de lesão bilateral. Em relação à dominância, 13 (68,4%) pacientes apresentaram a lesão no membro dominante e cinco (26,3%) tiveram o membro não dominante acometido. Observamos que nove (47,3%) casos tiveram lesão SLAP isolada, 10 (52,6%) casos foram relacionados a instabilidade glenoumeral e apenas um (5,2%) caso teve recidiva da luxação glenoumeral. Esse paciente optou por não fazer nova intervenção cirúrgica. De acordo com as escalas ULCA e ASES traduzida e adaptada para a língua portuguesa, obteve-se 96% de excelentes e bons resultados.
Conclusão: A abordagem da lesão SLAP pelo portal descrito por O'Brien et al. é de fácil reprodutibilidade, com alto índice de excelentes e bons resultados e baixo índice de complicações.

Introduction

With the advent of arthroscopy of the shoulder, it is now possible to diagnose types of labral lesion that was not diagnosed by means of radiographic methods. One type of lesion involving the upper area of the glenoid labrum, which begins posteriorly and extends anteriorly to the glenoid cavity, is named the SLAP lesion (superior labrum anterior and posterior). This area of the glenoid labrum is functionally important for the upper stability of the shoulder and also serves as an "anchor" for the insertion of the long head of the tendon of the biceps brachii muscle.[1,2]

SLAP lesions were first described by Andrews et al.[3] in 1985 and were subsequently classified into four subtypes by Snyder et al.[1] in 1990. In 1995, Maffet et al.[4] added type V to the classification of Snyder et al.[1] This comprises lesions of the upper glenoid labrum that extends to the anteroinferior region. In 1998, Morgan et al.[5] subdivided type II into three subtypes according to the location of the lesion in the upper glenoid labrum: anterior, posterior or combined.

The exact etiology of SLAP lesions remains a matter of controversy. However, two possible causes have been described in the literature: compression forces applied to the glenohumeral joint consequent to a fall with the shoulder in a position of abduction and flexion; or tension forces applied to the arm, caused by a traction mechanism applied to the upper limb as a result of a throwing movement, which is particularly observed among baseball players.[6–8]

The objective of the present study was to evaluate the functional results from arthroscopic repair of SLAP lesions through the portal described by O'Brien.[9,10]

Materials and methods

A retrospective evaluation was performed on 19 shoulders of 18 patients who underwent arthroscopic repair of SLAP lesions through the O'Brien portal between November 2007 and January 2012. The inclusion criterion was that the patients undergoing arthroscopic surgical treatment of SLAP lesions had not responded clinically to conservative treatment. Patients with histories of previous surgery or extra-articular diseases in the shoulder that was to be evaluated were excluded.

SLAP lesions were diagnosed when there was a positive O'Brien test in association with magnetic resonance imaging of the knee suggestive of a lesion in the upper glenoid labrum and arthroscopic observation of the lesion.

The following were recorded: the time that elapsed between the start of symptoms of the lesion and the surgical treatment; and the patient's age, sex, occupation and return to sport (activity level). Postoperative function was assessed using the UCLA and ASES scales in the versions translated and adapted to the Portuguese language.[2,11–13] Data were gathered by means of physical examination (O'Brien, Jobe and Patte tests) and a questionnaire that was applied to all the patients.

The surgical procedures were performed by the same surgical team, with the patient under general anesthesia, without blockage of the brachial plexus. The patient was placed in the "deckchair" position. A posterior portal was used to introduce the arthroscopic optical device, and this was located 2 cm distally and 2 cm medially to the posterolateral angle of the acromion. The joint was investigated using the reference point of the tendon of the long head of the biceps brachii muscle and its upper labral origin. Following this, the anterior, inferior and posterior labra, joint surfaces, glenohumeral ligaments, rotator cuff, capsule and joint recesses were evaluated.

The following intraoperative diagnostic criteria for SLAP lesions were then used: a positive drive-through test (easy passage of the arthroscopic optical device through the glenohumeral space); positive peel-back test (glenoid labrum opening greater than 1 cm during abduction and external rotation of the shoulder); and direct viewing of the degenerated and fibrillated labral tissue with signs of avulsion[14] (Fig. 1).

A portal was constructed in the anterior region in order to place the first 8.5 mm cannula (portal 1), while keeping to the side of the coracoid process in order to minimize the risk