RBO REVISTA BRASILEIRA DE ORTOPEDIA
www.rbo.org.br

Original Article

Evaluation of the results from non-arthroplastic treatment (arthroscopy) for shoulder arthrosis☆

Alberto Naoki Miyazaki, Marcelo Fregoneze, Luciana Andrade da Silva, Guilherme do Val Sella, José Eduardo Rosseto Garotti, Sergio Luiz Checchia*

Department of Orthopedics and Traumatology, Faculdade de Ciências Médicas, Santa Casa de São Paulo, São Paulo, SP, Brazil

ARTICLE INFO

Article history:
Received 31 March 2014
Accepted 19 June 2014
Available online 6 July 2015

Keywords:
Shoulder
Arthroscopy
Osteoarthritis

ABSTRACT

Objectives: To evaluate the functional results from patients with arthrosis who underwent an arthroscopic procedure, in an attempt to correlate these results with the patients' epidemiological profile, surgical technique used, possible complications and postoperative protocol.
Methods: Between 1998 and 2011, 31 patients (32 shoulders) with shoulder arthrosis underwent arthroscopic treatment performed by the Shoulder and Elbow Group of the Department of Orthopedics and Traumatology of Santa Casa de São Paulo. Primary or secondary cases of shoulder arthrosis under the age of 70 years, in which the rotator cuff was intact, were included. Furthermore, cases in which, despite an indication for an arthroplastic procedure, an attempt to perform an alternative procedure had been chosen, were also included. The following were evaluated: sex, age, dominance, comorbidities, length of time with complaint, associated lesions, etiology, previous treatment, operation performed, postoperative protocol and pre and postoperative active ranges of motion. The functional evaluation was conducted using the UCLA criteria, before and after the operation. The joint cartilage alterations were classified in accordance with Outerbridge and the arthrosis by means of Walch.
Results: There were statistically significant mean differences in the values for elevation, lateral rotation and medial rotation from before to after the operation ($p < 0.001$) and there was a tendency ($p = 0.057$) toward poor results with greater length of time with complaints before the surgery. The total gain in UCLA score did not have any statistically significant relationship with any of the other variables analyzed.
Conclusion: Arthroscopic treatment of glenohumeral arthrosis provided functional improvement of the glenohumeral joint, with significant gains in elevation and lateral and medial rotation, and improvements in function and pain. Greater length of time with complaints was a factor strongly suggestive of worse results.

☆ Work developed in the Shoulder and Elbow Group, Department of Orthopedics and Traumatology, Faculdade de Ciências Médicas da Santa Casa de São Paulo, Fernandinho Simonsen Wing (DOT – FCMSCSP), São Paulo, SP, Brazil.

* *Corresponding author.*
E-mail: lucalu01@me.com (L.A. da Silva).

http://dx.doi.org/10.1016/j.rboe.2015.06.008

Avaliação dos resultados do tratamento não artroplástico (artroscópico) da artrose do ombro

Palavras-chave:
Ombro
Artroscopia
Osteoartrite

RESUMO

Objetivos: Avaliar os resultados funcionais obtidos dos pacientes com artrose submetidos ao procedimento artroscópico e tentar correlacioná-los com o perfil epidemiológico do doente, a técnica cirúrgica usada, as eventuais complicações e o protocolo pós-operatório.
Métodos: Entre 1998 e 2011, 31 pacientes (32 ombros) com artrose do ombro foram submetidos ao tratamento artroscópico pelo Grupo de Ombro e Cotovelo do Departamento de Ortopedia e Traumatologia da Santa Casa de São Paulo. Foram incluídos os casos de artrose de ombro primária ou secundária, abaixo dos 70 anos, com manguito rotador íntegro, e ainda aqueles que, apesar de indicado o procedimento artroplástico, decidiram tentar uma opção. Foram avaliados: sexo, idade, dominância, comorbidades, tempo de queixa, lesões associadas, etiologia, tratamento prévio, operação feita, protocolo pós-operatório e arco de movimento ativo, pré e pós-operatório. A avaliação funcional foi feita pelos critérios da UCLA pré e pós-operatoriamente. As alterações da cartilagem articular foram classificadas por Outerbridge e a artrose por Walch.
Resultados: Houve diferença média estatisticamente significativa entre os valores para elevação, rotação lateral e medial pré e pós-operatória ($p < 0{,}001$) e uma tendência ($p = 0{,}057$) de maus resultados com o maior tempo de queixa pré-cirúrgica. O ganho total da UCLA não tem relação estatisticamente significativa com todas as outras variáveis analisadas.
Conclusão: O tratamento artroscópico da artrose glenoumeral propicia melhoria funcional da articulação glenoumeral, com ganhos significativos de elevação, rotação lateral e medial e melhoria da função e da dor, e o maior tempo de queixa é fator fortemente sugestivo para piores resultados.

Introduction

Shoulder arthrosis affects around 20% of the population, with greatest frequency in the sixth and seventh decades of life, and it may occasionally affect younger patients. This disease may follow a course with painful conditions that are generally accompanied by diminished range of motion, especially regarding lateral rotation. Loss of this rotation is associated with contracture of the anterior joint capsule and of the tendon of the subscapularis, which causes a force directed from anterior to posterior and leads to progressive eccentric joint incongruence[1] (Fig. 1A–C).

In advanced cases of arthrosis, or in situations of failure of conservative treatment, surgery is indicated. This consists of arthroplasty to make a partial or total replacement and is considered to be the treatment of choice for elderly patients (over the age of 65 years) and/or individuals with states of disease that are more advanced.[2] Among patients who are younger and more active, with high functional demands on the shoulder joint, this option has not been found to be satisfactory, because of the wear on the components of the prosthesis and because of the need for surgical revision.[2] Among younger patients, the literature cites various complications of this procedure, such as loosening of the implant, dislocation of the prosthesis, periprosthetic fractures and persistent pain.[3–5] Levy et al.[6] observed early appearance of radiolucent areas on radiographic examinations performed on young patients who had been treated using total shoulder prostheses. Sperling et al.[7] reported that 65% of the prostheses implanted in patients under the age of 50 years produced poor results after 15 years of follow-up, and noted high incidence of erosion of the glenoid in hemiarthroplasty. Thus, at the same time that recent studies have affirmed that the long-term results from treating shoulder arthrosis by means of arthroplasty are encouraging among patients of more advanced age, treatment of younger patients is still considered by many authors to be a challenge.[5,8,9]

The literature shows that surgical procedures that involve shoulder arthroscopy, such as joint debridement, capsulotomy, microfracturing of the glenoid, removal of free bodies and resection of osteophytes, have been shown to be useful for postponing prosthetic replacement of the joint.[8,10] Some authors have obtained satisfactory results over the short term through these procedures, in around 70–88% of the patients.[8,10,11] Simpson and Kelly[12] stated that the association between synovectomy and subacromial decompression and debridement gave rise to a satisfaction rate of 82% among their patients. Richards and Burkhart,[13] and also Millet and Gaskill,[14] concluded that capsulotomy did not prevent the natural evolution of joint degeneration, but it enabled improvement of function and symptoms to the point at which the joint deterioration justified larger-scale surgery. Bishop and Flatow[15] reported that synovectomy is a valuable tool when the initial symptoms of both pain and loss of function do not respond well to conservative treatment. However, they