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Arthroscopic Subacromial Decompression is Not Necessarily Essential in Arthroscopic Rotator Cuff Repair

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Summary:
We compared the clinical outcomes of ARCR with and without ASD. The clinical outcome, impingement, and re-tear rate were not associated with ASD. Therefore, ASD is not necessarily essential in ARCR.

Abstract:

Introduction

Arthroscopic subacromial decompression (ASD) is a common procedure in arthroscopic rotator cuff repair (ARCR). However, it is known that the coracoacromial ligament plays an important role in the stability of the shoulder joint. Therefore, our procedures have avoided ASD in ARCR as much as possible since 2015. The purpose of this study was to compare the clinical outcomes of ARCR with and without ASD.

Methods

We retrospectively registered 75 patients with full-thickness rotator cuff tears that had been repaired arthroscopically. Till 2014, 34 were repaired with ASD (Group A). Since 2015, 41 were repaired without ASD (Group N) We evaluated the preoperative and postoperative clinical status (Japanese Orthopaedic Association [JOA] scores and Constant scores), the angle of active anterior elevation, the positive impingement test rates, and the re-tear rates. In addition, we classified the form of the acromial spur as Type A, L, or M. In Type A, the spur is confined to the anterior acromion. In Type L, the spur is present in the anterior to lateral acromion. In Type M, the spur extends to the medial acromion. We evaluated the associations between clinical outcomes and the types of acromial spurs. Wilcoxon signed-rank tests were used to compare pre- and postoperative JOA and Constant scores within each group. The Mann-Whitney U test was used to compare re-tear rates between the 2 groups. A hazard ratio <5% was considered significant.

Results

JOA scores improved significantly in group A and group N from preoperative mean values of 61.4 and 65.8 points, respectively, to postoperative mean values of 92.3 and 91.8 points. The differences between groups were not significant. Constant scores improved significantly in both groups and the differences between groups were not significant. Angles of active anterior elevation improved significantly in group A and group N from preoperative mean values of 96.3 and 116.9 degrees, respectively, to postoperative mean values of 142.6 and 138.8 degrees. The differences between groups were not significant. Positive impingement test rates improved significantly in group A and group N from preoperative mean values of 94.1% and 91.8%, respectively, to postoperative mean values of 5.9% and 14.3%. The differences between groups were not significant. The re-tear rate was 8.8% in group A and 4.8% in group N. The differences between groups were not significant. The type of acromial spur was not related to clinical

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outcomes, impingement, or angle of active anterior elevation. As acromial spurs enlarged, the re-tear rate tended to increase. However, as acromial spurs enlarged, the size of the cuff tear also tended to enlarge. Thus, the size of cuff tear, rather than the type of acromial spur, may influence the re-tear rate. Multivariate analysis is required for clarification.

Discussion

The clinical outcome, angle of active anterior elevation, impingement, re-tear rate, and type of acromial spur were not associated with ASD. Thus, we concluded that ASD is not necessarily essential in ARCR.