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Topic: Rotator Cuff Repair (+/- Acromioplasty?)

Wrightington Upper Limb Unit Journal Club

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Arthroscopic rotator cuff repair with and without acromioplasty in the treatment of full-thickness rotator cuff tears

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Summary

Purpose

The study aims to determine whether a difference exists in functional and quality-of-life indices and rates of revision surgery between patients undergoing arthroscopic rotator cuff repair with or without associated acromioplasty.

Methods

The study was a prospective, multicenter, double-blind, balanced randomisation (1:1), parallel group study, lasting for 24 months post-surgery. The groups were randomised to either rotator cuff repair alone or in combination with acromioplasty.

Ethical approval was given and funding obtained from a body that did not play a role in the investigation.

Clear inclusion and exclusion criteria were given.

A validated disease-specific quality-of-life measurement for rotator cuff disease (WORC) and the American Shoulder and Elbow Surgeons (ASES) Score were used to assess the patients pre- and post-operatively.

A power calculation was performed based on the findings of a pilot study, and extra patients were recruited to account for inevitable losses to follow-up.

Results

A higher number of patients were lost to follow-up than were initially expected and accounted for. Although most patients received the allocated treatment, 3 patients did not do so. It is not clear from the text what happened to these patients, and we are left to assume that they were analysed in the study along intention-to-treat criteria.

Both WORC and ASES scores improved significantly in each group over time ($p < 0.001$), but the main statistical difference was in the rate of reoperation in those patients who have undergone

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rotator cuff repair without an acromioplasty ($p=0.05$). 3 of 12 patients with a Type 3 acromion had to undergo further surgery for persistent pain and dysfunction of the shoulder.

Conclusions

The authors conclude that their hypothesis has been accepted, but note that the re-operation rate in those patients not undergoing an acromioplasty was substantially higher than that in the study group in which no re-operations occurred. They accept that there may have been fundamental differences in operative technique and rehabilitation between the two sites.

Critique

Strengths

- Well designed prospective, double-blind, randomised trial
- Use of appropriate, validated scoring systems
- Pilot study to facilitate power calculation
- Clear inclusion and exclusion criteria
- Inclusion of all acromial types at surgical intervention

Weaknesses

- Higher than expected numbers of patients lost to follow-up
- Not entirely clear what happened to the patients who did not receive the allocated treatment at time of surgery
- Medium-term follow up only up to 24 months post surgical intervention.

The paper set out to determine whether acromioplasty improves function and quality of life when performed in conjunction with a rotator cuff tear. This topic is both relevant and important to our own surgical practise in this unit.

The thoughtful design of the study and reasonable numbers of patients follow-up concluded that there was no functional difference between the two techniques.

However, with a significant number of patients requiring revision surgery having had no concomitant acromioplasty, this paper is unlikely to change the practise of our own surgeons.