Arthroscopic stabilization for first-time versus recurrent shoulder instability

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CRD summary
This review concluded that there were no differences in recurrence or complication rates in patients who underwent arthroscopic repair after first-time anterior shoulder instability compared with those who underwent arthroscopic repair after multiple recurrent anterior shoulder instability events. A lack of details on study quality and other concerns in the review methods mean these conclusions may be not reliable.

Authors' objectives
To compare arthroscopic repair for first-time anterior shoulder instability versus recurrent anterior shoulder instability.

Searching
MEDLINE, CINAHL and Cochrane Central Register of Controlled Trials (CENTRAL) were searched for peer-reviewed published studies from January 1966 to December 2008. Search terms were reported. Studies that could not be translated into English were excluded.

Study selection
Prospective cohort studies (Level I or II evidence) that evaluated arthroscopic labral repair in patients with shoulder instability were eligible for inclusion. Studies without a control group were excluded. The review outcomes included recurrence rate, complication rate and postoperative range of motion and strength.

Surgical techniques varied between included studies. Patients with first-time dislocation (where reported) all underwent arthroscopic repair at a mean of 5.5 to 10 days after the first traumatic episode of instability. For patients with recurrent anterior shoulder instability, the mean number of recurrent episodes ranged from three to six and mean duration of symptoms ranged from 22 to 58 months before surgical interventions. The postoperative rehabilitation protocol was similar between all included studies. Mean patient age ranged from 20.5 to 32 years. The proportion of male patients ranged from 70% to 100%.

The authors did not state how many reviewers assessed studies for inclusion.

Assessment of study quality
The authors did not state they assessed validity.

Data extraction
The data were extracted as event rates. The authors did not stated how many reviewers performed the data extraction.

Methods of synthesis
The studies were combined in a narrative synthesis supported by data tables.

Results of the review
Fifteen studies were included in the review, 10 of which were RCTs. The total number of included patients was not reported. For arthroscopic repair in included studies, the number of shoulders in each cohort ranged from 10 to 130. Follow-up rates ranged from 84% to 100%. Duration of mean follow-up ranged from 24 to 79 months.

For patients with first-time shoulder dislocation, the recurrence rate after arthroscopic repair ranged from 7% to 16% (five studies).

For patients with recurrent shoulder instability, the recurrence rate after arthroscopic repair ranged from 0% to 30% (10 studies).

There were few complications in either the first-time or the recurrent shoulder instability group. For the first-time
shoulder instability group, complications included adhesive capsulitis with severe restriction in external rotation (two patients), transient median nerve paraesthesias (two patients) and superficial infections (two patients). For the recurrent shoulder instability group, complications included adhesive capsulitis with severe restriction in range of motion (seven patients), anchor pullout (two patients) and superficial infections (three patients).

Results of postoperative range of motion and strength were reported.

Authors' conclusions
There were no differences in recurrence or complication rates in patients who underwent arthroscopic repair after first-time anterior shoulder instability compared with those who underwent arthroscopic repair after multiple recurrent anterior shoulder instability events.

CRD commentary
This review's inclusion criteria were clear. Relevant databases were searched. The decision to only include peer-reviewed published studies in the review may have increased the risk of publication bias. Studies were excluded if they could not be translated into English, which may have increased the possibility of language bias. It was unclear whether sufficient attempts were taken to minimise reviewer errors and biases in the study selection and data extraction. No formal validity assessment was performed, although the authors discussed some aspects of study quality. Given the diversity of included studies, a narrative synthesis was appropriately employed. However, a lack of details on study quality and other concerns in the review methods mean that the authors' conclusions may be not reliable.

Implications of the review for practice and research
Practice: The authors did not state any implications for practice.

Research: The authors stated that further RCTs were required to compare the functional outcome, quality of life and ability to return to pre-injury activity for patients who underwent early versus delayed arthroscopic repair for anterior shoulder instability.

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This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.