Primary arthroscopic stabilization for a first-time anterior dislocation of the shoulder: a randomized, double-blind trial

Robinson C M, Jenkins P J, White T O, Ker A, Will E

Record Status
This is a critical abstract of an economic evaluation that meets the criteria for inclusion on NHS EED. Each abstract contains a brief summary of the methods, the results and conclusions followed by a detailed critical assessment on the reliability of the study and the conclusions drawn.

CRD summary
This study evaluated the efficacy and costs of arthroscopic Bankart repair (ABR), for dislocation of the shoulder, compared with arthroscopy and lavage alone (ALO). The authors concluded that ABR was more effective and less expensive than ALO. The quality of the methodology was good. Overall, both the methods and results were reported appropriately. Given the scope of the analysis, the authors’ conclusions are appropriate.

Type of economic evaluation
Cost-effectiveness analysis

Study objective
This study evaluated the efficacy and costs of arthroscopic Bankart repair, for dislocation of the shoulder, compared with arthroscopy and lavage alone, in young adults (15 to 35 years old).

Interventions
The combination of arthroscopic lavage of the joint with repair of the detached anteroinferior aspect of the glenoid labrum or arthroscopic Bankart repair (ABR), was compared with the arthroscopic lavage of the joint only (ALO).

Location/setting
UK/Hospital.

Methods
Analytical approach:
: This economic evaluation was based on a prospective, randomised, double-blind clinical trial at the authors’ institution. The time horizon of the analysis was the two-year follow-up period. The authors did not report the perspective of the study.

Effectiveness data:
: Power calculations were conducted to determine the sample size. The 88 patients who underwent a first relocation of their first shoulder dislocation between September 2001 and January 2005 were randomised to either the ABR (45 patients) or the ALO (43 patients) group. Three patients in the ALO group and one in the ABR group were lost to follow-up either because they could not be contacted or because they declined to participate. The main clinical end point was the rate of recurrent instability (or the risk of further dislocation within the two-year period after the primary dislocation). Secondary outcome measures included functional outcome scores, the range of movement, and patient satisfaction.

Monetary benefit and utility valuations:
: None.

Measure of benefit:
: No summary measure of health benefit was used in the economic evaluation. In effect, a cost-consequences analysis was conducted. The clinical outcomes included the rate of recurrent instability and functional scores.

Cost data:
The cost analysis considered the direct health service costs, which included those of treatment, inpatient stay, outpatient visits, and the operating room. The data on care utilisation were prospectively recorded in the clinical trial. Statistical analyses were conducted to compare the differences between groups. The costs were in year 2005 UK pounds sterling (£).

Analysis of uncertainty:
: No analysis of uncertainty was performed.

Results
During the two years of follow-up, the risk of a further dislocation was reduced by 76% in the ABR group compared with the ALO group, and the risk of any instability was reduced by 82% in the ABR group compared with the ALO group. The functional scores were also significantly better (p<0.05) in the ABR group, over the two year period.

The total treatment costs were lower in ABR group than in the ALO group (£2,782.40 for ABR, £3,531.30 for ALO, p=0.012).

Authors' conclusions
The authors concluded that ABR was more effective and less expensive than ALO for dislocation of the shoulder.

CRD commentary
Interventions:
: The interventions were described in detail and ALO appears to have been the relevant comparator.

Effectiveness/benefits:
: The analysis was based on a randomised controlled trial. Power calculations were performed to ensure that the size of the study sample was adequate. The methods of randomisation, inclusion criteria, length of stay and loss to follow-up were all reported, suggesting that the internal validity of the study is likely to be good. The results of the analyses were reported in full and appropriate statistical analyses were conducted to test for any significant results.

Costs:
: The cost categories were reported and the sources of resource utilisation data were stated. The costs were presented as macro-categories. A breakdown of the unit prices and resources was not given, which limits the generalisability of the analysis. Discounting would be relevant given the long-term horizon of the analysis, but it was not performed.

Analysis and results:
A synthesis was not undertaken, probably because the intervention was the dominant strategy, that is, it was less costly and more effective. The issue of uncertainty was not addressed, which limits the assessment of whether the results were robust. Overall, the methods used in the study were well reported. The results were reported in detail and, in their discussion, the authors appropriately noted the limitations of their study.

Concluding remarks:
: The quality of the methodology was good. Overall, both the methods and results were reported appropriately. Given the scope of the analysis, the authors' conclusions are appropriate.

Funding
No outside funding received.

Bibliographic details

PubMedID

Other publications of related interest


Indexing Status
Subject indexing assigned by NLM

MeSH
Adult; Arthroscopy; Double-Blind Method; Humans; Logistic Models; Multivariate Analysis; Orthopedic Procedures /methods; Patient Satisfaction; Range of Motion, Articular; Recurrence; Shoulder Dislocation /physiopathology /surgery; Shoulder Joint /physiopathology; Treatment Outcome

AccessionNumber
22008100611

Date bibliographic record published
01/09/2008

Date abstract record published
20/05/2009