EDUCATIONAL TOPIC PRESENTATION:

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PURPOSE:

A critical review of the article:

Is the American Society of Shoulder and Elbow Therapists' rehabilitation guidelines better than standard care when applied to Bankart-operated patients? A controlled study.

Lars Damkjaer, Tom Petersen and Birgit Juul-Kristensen.
Clinical Rehabil published online 3 July 2014

DESCRIPTION:

This is a descriptive study with comparison between a retrospective and prospective cohort. The objective of the study was to determine whether there is a difference in shoulder-related physical function and quality of life between post-operative rehabilitation patients receiving standard care and those receiving care according to the American Society of Shoulder and Elbow Therapists' rehabilitation guideline for arthroscopic anterior capsulolabral repair of the shoulder.

Clinical Outcomes:
Primary → Western Ontario Shoulder Instability Index

Secondary →Patient-Specific Functional Scale, shoulder range of motion, return to work, return to sports and costs.

Inclusion Criteria: Patients who underwent an arthroscopic Bankart operation and were referred to "Bankart rehabilitation" by the same surgeon.

Exclusion Criteria: Patients who failed to appear for assessments, who did not receive an arthroscopic Bankart operation, returned to hospital before beginning rehabilitation secondary to complications from the surgery, difficulty understanding Danish or if there was a lack of baseline data.

Method: Data was generated from 96 arthroscopic Bankart-operated patients; retrospectively from 52 patients who received standard care and prospectively from 44 patients who received rehabilitation according to the American Society of Shoulder and Elbow Therapists' rehabilitation guideline. All patients were tested at both the initial and final treatments by the same therapist. Average time from baseline to follow up was 18 weeks. Patients who received standard care were treated at the hospital for the first five weeks of rehabilitation compared to being allowed to stay for the entire rehabilitation period for those patients who were treated via the American Society of Shoulder and Elbow Therapists' rehabilitation guideline. Both groups received initial post-operative information and were offered a minimum of four individual training sessions and 20 group training sessions. Data was collected from both groups over a period of one year.

SUMMARY OF KEY FINDINGS:

At baseline significant differences were seen between the groups in : (1) Gender →Standard group had a ratio of approximately 5:1 male to female vs approximately .6:1 in the guideline group. (2) Cause of first dislocation → non-contact sports was the main cause in both groups but a higher percentage was recorded in the standard care group 52% vs 43% in the guideline group. (3) Days between operation and the start of rehabilitation at the Rehabilitation Center was 70 in the standard care group vs 37 in the guideline group. (4) WOSI results with the total score percentage of 57.2 in the standard care group vs 41.6 in the guideline group and (5) ROM FF143 vs 103, ER 32 vs 12, ERAB 45 vs 9 in the standard care vs guideline group respectively.
There was no significant difference in adjusted mean change scores between groups in the primary or secondary outcome variables. The variables of gender, age and degree of participation in contact sport were found to have no effect on the results.

SUMMARY of USE:

According to the authors, in patients with arthroscopic anterior capsulolabral repair of the shoulder, there were no significant between-group differences in self-reported shoulder related physical function, quality of life or costs between the group using standard care and the group using ASSET's guideline.

IMPORTANCE:

Debatable Issues:

1. Were all the subjects selected or recruited from the same or similar populations (including the same time period)?
   No. Patients rehabilitated from November 2009 – November 2010 (standard care group) and those rehabilitated from November 2010-November 2011(guideline group).
   Importance: High risk of bias

2. Was a sample size justification, power description, or variance and effect estimates provided?
   No. There was no justification for the sample size *****I will need some help in answering this question. I am not sure what the adjusted mean score signifies and its implications.

3. Were the exposures of interest measured prior to the outcomes being measured?
   No. There were no pre-operative outcome measures reported.
   Importance: Specific pre-operative predictors for the current primary and secondary outcomes cannot be ruled out. High risk of bias

4. Were the outcome measures clearly defined, valid, reliable, and implemented consistently across all study participants?
   Yes. The outcome measures were clearly defined. However, although the primary outcome measure, the WOSI, was validated for use in the Swedish language, it was NOT for the Danish language. The author postulated similarity between the two languages justified validity between the two versions of the WOSI.
   NB: The participants were treated for a minimum of 4 individual sessions and 20 group sessions which implied that some participants were exposed to a longer treatment time than others.
   Importance:

5. Were the outcome assessors blinded to the exposure status of the participants?
   No. There was no blinding or masking of the assessors or the participants.
   Importance: Risk of investigator bias cannot be ruled out.

6. Was sufficient time allocated to determine an association between exposure and outcome if it existed?
   No. The data was collected over the period of one year.

Importance: Some of the long term effects of the Bankart Surgery are osteoarthritis, recurrent instability. Another study to look at long term effects using the same protocol is warranted.

7. Can the outcome be generalized?
   No.
   Importance: Since all participants were less than 40 years of age, these findings cannot be generalized to people older than 40 years of age.

8. Was loss to follow up after baseline 20% or less?
   Yes, it was somewhat high at 12.5%. However, this was addressed by an intention to treat in the analysis.

   Comments:

Looking at both protocols, the staged goals are exactly the same, almost word for word. There were no significant differences to the both groups in relation to the factors that are likely to increase the risks for post-operative instability, i.e. age, number of dislocations prior to surgery, surgical technique and participation in contact sports. It is, therefore, not surprising that in spite of some discrepancies in the methodology of the study, they arrived at the conclusion that in patients with arthroscopic anterior capsulolabral repair of the shoulder, there were no significant between-group differences in self-reported shoulder related physical function, quality of life or costs between the group using standard care and the group using ASSET's guideline.

References:

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U. S. Department of Health and Human Services. National Institute of Health. Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies.

Tool to Assess Risk of Bias in Cohort Studies - Cochrane *bmg.cochrane.org/.*