INPLASY

Surgical Versus conservative Treatment of Acute Rockwood III Acromioclavicular joint dislocation: a systematic review and meta-analysis of randomized controlled trials

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ADMINISTRATIVE INFORMATION

Review Stage at time of this submission - Formal screening of search results against eligibility criteria.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 30 May 2024 and was last updated on 30 May 2024.

INTRODUCTION

*R*eview question / Objective Comparison of function and radiographic outcomes of acute Rockwood III acromioclavicular joint dislocation with conservative treatment versus surgery. Our study was based on the PICO model, patient (P), patients were diagnosed with acute ACJ dislocation and was definitively identified as Rockwood type III; intervention (I), patients who received surgical treatment were named surgical group (SG); comparison (C),Patients who underwent surgical treatment were classified into the surgery group (SG); comparison (C),Divide patients receiving conservative treatment into a conservative group (CG); outcomes (O),The main result is a constant score.Secondary outcomes include: complications, delayed additional surgical treatment, and radiological results.

Condition being studied Acromioclavicular joint(ACJ) injuries are common shoulder injuries, This accounts for approximately 12% of all shoulder ligament injuries. Traffic accidents and confrontational sports are considered to be the main causes of ACJ dislocation. Rockwood classified ACJ dislocation into types I-VI according to the degree of ligament damage and the relative displacement of the acromion and clavicle. This classification system is widely used in clinical practice to guide the diagnosis and treatment of ACJ dislocation. It is generally accepted that Rockwood type I and II ACJ dislocations should be

treated conservatively, but the best treatment for Rockwood type III dislocation has not been determined yet.

METHODS

Participant or population Patients were diagnosed with acute Acromioclavicular joint dislocation and was definitively identified as Rockwood type III.

Intervention Surgical treatment.

Comparator Conservative treatment.

Study designs to be included Randomized controlled trials.

Eligibility criteria The criteria for inclusion is articles on patients with acute Rockwood type III ACJ dislocation treated with conservative or surgical treatment, written in English, studying human subjects, published before May 2022, with an average follow-up of 12 months or longer. Non-English articles, retrospective studies, case reports, meeting minutes, and systematic reviews were excluded.

Information sources Four databases(PubMed, Cochrane Library, Embase, Web of science).

Main outcome(s) Constant score.

Additional outcome(s) Complications, delayed additional surgical treatment, and radiological results.

Quality assessment / Risk of bias analysis Standard assessment based on Cochrane risk-of-bias tool for randomized trials.

Strategy of data synthesis Statistical analyses were performed with Review Manager 5.4 (Cochrane Collaboration, Oxford, UK) and STATA 16.0 (StataCorp LP, College Station, Texas). Odds ratio (OR) with 95% confidence interval (CI) were used to compare binary variables. The weighted mean difference (WMD) and 95% CI were calculated for continuous outcomes. Based on the method described by Wan et al, the medians and interquartile ranges of continuous data were converted to means and standard deviations. For all meta-analyses the Cochrane Q p value and I^2 statistic were applied to check heterogeneity. When p value 50%, there was asignificant heterogeneity, a random-effect model was used to merge the results. Otherwise, a fixed-effect model was used. A p value less than 0.05 was considered

statistically significant. We performed egger's test to assess publication bias (only for outcomes including ten or more studies).

Subgroup analysis None.

Sensitivity analysis 1. Identify potential sources of heterogeneity: Examine the studies included in the meta-analysis and identify potential factors that could contribute to heterogeneity in the results. These could include differences in study design, patient population, interventions, outcome measurements, or other variables. 2. Vary assumptions and parameters: Select one or more of these potential sources of heterogeneity and vary the assumptions or parameters related to them. 3. Repeat meta-analysis: With the varied assumptions or parameters, rerun the meta-analysis to obtain new estimates of the overall effect. 4. Compare results**: Compare the results of the sensitivity analysis with the original meta-analysis. Look for significant changes in the estimates of the overall effect or in the heterogeneity among studies.

Language restriction English only.

Country(ies) involved China.

Keywords Acromioclavicular joint; Rockwood III; Treatment.

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