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INPLASY

The effect of applying anti-osteoporosis drugs on the rehabilitation for patients with rotator cuff tears after arthroscopic rotator cuff repair: a meta-analysis

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ADMINISTRATIVE INFORMATION

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Review Stage at time of this submission - Completed but not published.

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 1 March 2025 and was last updated on 1 March 2025.

INTRODUCTION

Review question / Objective This comprehensive meta-analysis aimed to elucidate the effects of anti-osteoporosis (OP) drugs among patients who experienced rotator cuff tears and underwent arthroscopic repair.

Condition being studied Rotator cuff tears and underwent arthroscopic repair.

METHODS

Participant or population Patients who experienced rotator cuff tears and underwent arthroscopic repair.

Intervention Arthroscopic rotator cuff repair, with one group using anti-OP drugs after surgery and the other group no using anti-OP drugs.

Comparator The primary outcome was retear rates; other outcomes evaluating shoulder function and other subjective or objective outcomes were also acceptable.

Study designs to be included Randomized controlled trials and retrospective controlled trials.

Eligibility criteria The inclusion criteria were as follows: (1) target population—individuals who suffered from rotator cuff tears; (2) intervention—arthroscopic rotator cuff repair, with one group using anti-OP drugs after surgery and the other group no using anti-OP drugs; (3) outcomes—the primary outcome was retear rates; other outcomes evaluating shoulder function and other subjective or objective outcomes were also acceptable; (4) type of study—although RCTs were desirable, other types of comparative studies are also accepted; and (5) language—English.

Information sources PubMed, Embase, Web of Science, and Cochrane Central databases.

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Main outcome(s) The primary outcome was retear rates; other outcomes evaluating shoulder function and other subjective or objective outcomes were also acceptable.

Quality assessment / Risk of bias analysis The quality of the RCTs was assessed via the Cochrane Risk of Bias Tool, whereas the quality of other types of comparative studies was assessed via the Newcastle–Ottawa Scale (NOS).

Strategy of data synthesis RevMan 5.3 software was used to conduct the statistical analyses. The odds ratio (OR) and 95% confidence interval (CI) were computed as summary statistics for the dichotomous variables, and pooled summary statistics were calculated via a random effects model. The mean difference (MD) and 95% CI were computed as summary statistics for continuous variables, and pooled summary statistics were calculated with the use of a fixed effects model if there was no significant heterogeneity; otherwise, a random effects model was applied. $P < 0.05$ was the threshold for statistical significance. Statistical heterogeneity was quantified using the chi-square ($\chi 2$) and I2 tests, and P 50% indicated significant heterogeneity. Sensitivity or subgroup analysis was used to reduce the degree of heterogeneity.

Subgroup analysis Sensitivity or subgroup analysis was used to reduce the degree of heterogeneity.

Sensitivity analysis Sensitivity or subgroup analysis was used to reduce the degree of heterogeneity.

Country(ies) involved China, South Korea.

Keywords osteoporosis; rotator cuff tears; retear; meta-analysis.

Contributions of each author
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Author 2 - Junqing Jia.
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