

# INPLASY

## Analyzing the Effectiveness of Pharmacological Approaches for TMJ Ankylosis: A Systematic Review

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### ADMINISTRATIVE INFORMATION

**Support** - King Khalid University.

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

**Conflicts of interest** - None declared.

**INPLASY registration number:** INPLASY2023110117

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 29 November 2023 and was last updated on 29 November 2023.

### INTRODUCTION

**Review question / Objective** To evaluate the relative efficacy of pharmaceutical interventions in the management of temporomandibular joint (TMJ) ankylosis.

**Rationale** The use of pain medications in patients with TMJ disorders presents a significant challenge for healthcare professionals owing to the limited availability of controlled clinical trials specific to this population. Consequently, decisions regarding pain management in patients with TMJ disorders are often extrapolated from trials conducted in different pain populations, leading to a lack of an evidence-based approach.

**Condition being studied** TMJ Ankylosis.

### METHODS

**Search strategy** The search was performed using a set of relevant keywords and medical terms

according to our prespecified PICOS framework, as indicated below. The search terms included ("temporomandibular joint" OR TMJ) AND osteoarthritis\* AND (pharmacological drugs) AND (placebo OR control).

**Participant or population** The analysis incorporated a selection of two observational studies and two randomised controlled trials, encompassing a combined sample size of 298 patients.

**Intervention** TMJ Ankylosis.

**Comparator** Drugs.

**Study designs to be included** We took into account both descriptive (case control and cohort) and interventional (trials) based research that was written in English for this review.

**Eligibility criteria** Studies were included if they fulfilled our PECOS criteria and had relevant forms of data that could be analyzed.

**Information sources** Taken from several reliable sources, including Google Scholar, Pub-Med via MEDLINE, Springer, and Scopus, EBSCO host (Dentistry & Oral Sciences Source database), Science Direct, and Web of Science (All databases: WOS, KJD, MEDLINE, RSCI, SCIELO). T.

**Main outcome(s)** Superiority of hyaluronic acid in pain management.

**Quality assessment / Risk of bias analysis** Two researchers independently assessed the risk of bias of the included articles using —JBI critical appraisal tools. The potential risk of bias was categorized as low if a study provided detailed information pertaining to 70% or more of the applicable parameters. Moderate risk was considered if a study provided information corresponding to less than 70% to 50% of the applicable parameters, whereas if a study showed missing information regarding more than 50% of the applicable parameters, the study was categorized as exhibiting a high risk of bias.

**Strategy of data synthesis** Two review authors (RS and AK) used the studies to help select studies and document their decisions. This was done in two stages, with the first stage consisting of a title and abstract screening of all studies against the inclusion criteria, and the second stage being a full text assessment of papers that were deemed potentially relevant based on the initial screening.

**Subgroup analysis** The data was compiled from a variety of articles:

- Author(s), year of publication, country, study design.
- Total number of patients/datasets.
- Training/validation datasets
- Test datasets
- Aim of the study.

**Sensitivity analysis** NA.

**Language restriction** Articles only in English were Selected.

**Country(ies) involved** Saudi Arabia, India, Armenia.

**Keywords** Temporomandibular joint ankylosis; Medications; Efficacy.

### Contributions of each author

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