

INPLASY

Growth factor analysis in children with non-syndromic cleft lip and palate: 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.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 20 May 2025 and was last updated on 20 May 2025.

INTRODUCTION

Review question / Objective To determine the relative number and location of growth factors and their receptors in tissues of children with non-syndromic cleft lip and palate.

Rationale The distribution and localization of growth factors in CLP-affected tissues remain unclear, necessitating a systematic review.

Condition being studied Non-syndromic cleft lip and palate (CLP) in children.

METHODS

Search strategy Databases like Scopus, PubMed, Web of Science searched using MeSH terms and free-text keywords.

Participant or population Children with non-syndromic CLP from diverse populations and unaffected controls.

Intervention Analysis of growth factors and their receptors in CLP-affected tissues.

Comparator Non-CLP children or healthy controls.

Study designs to be included Retrospective cross-sectional studies, case-control studies, original research, longitudinal observational studies, systematic reviews, and literature reviews.

Eligibility criteria Inclusion: Studies identifying growth factors/receptors in non-syndromic CLP tissues. Exclusion: Non-English articles, case reports, editorials, and book chapters.

Information sources Scopus, PubMed, Web of Science, and manual reference list searches.

Main outcome(s) Relative quantity and tissue localization of growth factors and receptors in CLP.

Additional outcome(s) Genetic polymorphisms, tissue remodelling markers, and angiogenesis markers.

Data management Data extracted from methodology/results sections; duplicates removed via Mendeley; two independent reviewers for screening.

Quality assessment / Risk of bias analysis

Newcastle-Ottawa Scale for cohort studies and ROBIS tool for systematic reviews.

Strategy of data synthesis Narrative synthesis due to heterogeneity; meta-analysis deemed inappropriate.

Subgroup analysis Implied by comparing populations.

Sensitivity analysis Not applicable.

Language restriction Only articles published in English.

Country(ies) involved Saudi Arabia, Malaysia, India.

Other relevant information Followed PRISMA 2020 guidelines.

Keywords Cleft lip and palate, growth factors, fibroblast growth factor (FGF), transforming growth factor (TGF), bone morphogenetic protein (BMP), systematic review.

Dissemination plans To be published in Peer reviewed journals.

Contributions of each author

Author 1 - Zahoor UI Haq Mohamed - Conceptualization, Methodology, Writing original draft, Visualization.

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