

## عنوان مقاله:

Assessment of Frontal Sinus Morphology and Cervical Vertebral Maturation for Evaluation of Skeletal Maturity

## محل انتشار:

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## نویسندگان:

Sanjay Parsad Gupta - *Department of Orthodontics and Dentofacial Orthopedics, Tribhuvan University Teaching Hospital, MMC, Institute of Medicine, Tribhuvan University, Kathmandu, Nepal*

Samarika Dahal - *Department of Oral Pathology and Forensic Dentistry, Tribhuvan University Teaching Hospital, MMC, Institute of Medicine, Tribhuvan University, Kathmandu, Nepal*

Shristi Rauniyar - *Dental Villa-Orthodontic Center and Speciality Dental Clinic, Kathmandu, Nepal*

## خلاصه مقاله:

Background: The growth prediction using reliable growth assessment methods is an invaluable tool during orthodontic treatment planning. This study aimed to examine the relationship between frontal sinus (FS) morphology and cervical vertebral maturation (CVM) to predict the skeletal maturity of an individual. Methods: The present study consisted of ۲۵۲ lateral cephalograms of orthodontic patients. CVM stages and FS parameters such as FS height, FS width, and FS index were assessed using the same lateral cephalogram. Statistical methods including t test, analysis of variance (ANOVA), and Pearson correlation (r) were used for the statistical analysis. Results: FS height and width were greater in males ( $۲۴.۳۳ \pm ۴.۲۱$ ;  $۱۰.۰۸ \pm ۳.۲۰$ ) compared to females ( $۲۱.۴۳ \pm ۵.۳۴$ ;  $۸.۱۲ \pm ۲.۱۹$ ), indicating a statistical difference ( $P < ۰.۰۵$ ). However, FS index did not show a statistically significant difference ( $P = ۰.۳۲$ ) between males ( $۲.۵۹ \pm ۰.۷۴$ ) and females ( $۲.۶۹ \pm ۰.۴۴$ ). FS height and width increased significantly in a linear fashion from CVM stage ۱ to stage ۶. FS index, on the other hand, did not exhibit any statistically significant differences among CVM stages in both males and females. FS height and width showed a significant weak to moderate correlation with CVM stages in both males and females. However, FS index exhibited a mild and weak negative correlation with the CVM stages in both males and females. Conclusions: FS height and width had a significant weak to moderate correlation with CVM stages in both the males and females, while FS index had a weak negative correlation with CVM stages in both males and females. Unlike the CVM method, the FS morphology cannot be reliably utilized to assess the skeletal maturity

## کلمات کلیدی:

Cervical vertebral maturation, Frontal sinus morphology, Growth assessment, Skeletal maturity

## لینک ثابت مقاله در پایگاه سیویلیکا:

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