

INTISARI

Inklinasi dan relasi rahang berperan dalam proses mastikasi, semakin harmonis hubungan maksila dan mandibula, semakin adekuat tekanan mastikasi. Tekanan mastikasi berjalan dari lengkung gigi menuju nasal pillar dan berakhir di sinus frontalis, sehingga tekanan mastikasi dapat mempengaruhi ukuran sinus frontalis. Orang Jawa termasuk ras Mongoloid memiliki ciri fisik yang berbeda dari ras Kaukasoid, seperti profil muka yang lebih cembung. Penelitian ini bertujuan untuk menganalisis hubungan antara inklinasi dan relasi rahang terhadap ukuran sinus frontalis ada maloklusi Angle Klas I orang Jawa.

Penelitian *cross sectional* ini dilakukan pengambilan sefalogram lateral dan pencetakan gigi geligi pada 55 subjek orang Jawa dengan maloklusi Angle Klas I, tidak memiliki kebiasaan buruk, umur 18-22 tahun, gigi geligi permanen lengkap, dan belum atau tidak sedang perawatan ortodonti. Pengukuran inklinasi dan relasi rahang dilakukan menggunakan aplikasi DBSWIN dan model studi. Inklinasi rahang terdiri atas inklinasi maksila dan mandibula. Inklinasi maksila diukur melalui sudut SN-PP, dan OCC-PP, inklinasi mandibula diukur melalui sudut SN-MP, dan OCC-MP, sedangkan relasi rahang diukur melalui sudut Y-axis, OCC-SN, *overjet*, dan *overbite*. Ukuran sinus frontalis diukur berdasarkan tinggi dan lebarnya. Data pengamatan dianalisis dengan uji parametrik korelasi *Product Moment Pearson*.

Hasil korelasi *Product Moment Pearson* antara inklinasi dan relasi rahang terhadap ukuran sinus frontalis pada maloklusi Angle Klas I orang Jawa tidak bermakna ($p > 0.05$). Berdasarkan penelitian ini dapat disimpulkan bahwa tidak ada hubungan antara inklinasi dan relasi rahang terhadap ukuran sinus frontalis pada maloklusi Angle Klas I orang Jawa.

Kata kunci : Inklinasi maksila, Inklinasi mandibula, Relasi rahang, Maloklusi Angle Klas I, Orang Jawa, Tinggi Sinus Frontalis, Lebar Sinus Frontalis

ABSTRACT

Inclination and relation of jaw have role in masticatory process, more harmonious maxillomandibular relationship, leading to more adequate masticatory force. Masticatory force flow from dental arches along to nasal pillar and terminates in frontal sinus, it means that masticatory force affects to frontal sinus size. Javanese people have different physical characteristic from Caucasian race, such as facial profile. This research aimed to analyze the relationship between inclination and relation of jaw to frontal sinus size in class I Angle malocclusion of Javanese people.

Cross-sectional study was performed by taking lateral cephalogram and making study model on 55 subjects of Javanese people with class I Angle malocclusion, without bad habit, 18-22 years of age, complete permanent teeth, never doing orthodontic treatment. Inclination and relation of jaw were measured by using DBSWIN software and study model. Inclination of jaw consist of inclination maxilla and mandible. Inclination of maxilla was measured by SN-PP and OCC-PP angle, inclination of mandible was measured by SN-MP and OCC-MP angle, while relation of jaw was measured by Y-axis, OCC-SN angle, overjet, and overbite. Frontal sinus size was measured by its height and width. Observational data were analyzed by Pearson product moment correlation test.

The result of Pearson product moment correlation analysis between inclination and relation of jaw to frontal sinus size with class I Angle malocclusion of Javanese people are insignificant ($p > 0.05$), based on this research it can be concluded that there is no relation between inclination and relation of jaw to frontal sinus size in class I Angle malocclusion of Javanese people.

Keywords : *Inclination maxilla, Inclination mandible, Relation of jaw, Class I Angle malocclusion, Javanese people, Height of Frontal Sinus, Width of Frontal Sinus*