

INTISARI

Maksila dan mandibula merupakan salah satu bagian dari sistem stomatognasi yang memiliki fungsi pengunyahan. Posisi maksila dan mandibula menentukan tekanan mekanis yang dikeluarkan saat proses pengunyahan. Semakin harmonis suatu oklusi maka tekanan yang dikirimkan akan semakin adekuat sehingga ukuran sinus frontalis semakin kecil. Orang Jawa termasuk ras Mongoloid yang memiliki ciri fisik berbeda dari ras Kaukasoid, salah satunya adalah profil yang cembung. Penelitian ini bertujuan untuk mempelajari hubungan posisi maksila dan mandibula dengan ukuran sinus frontalis pada maloklusi Klas I Angle orang Jawa.

Penelitian *cross-sectional* ini dilakukan dengan pengambilan foto rontgen sefalometri lateral pada 55 subjek orang Jawa dengan maloklusi Klas I Angle, umur 18-22 tahun, gigi geligi permanen lengkap, belum pernah menjalani perawatan ortodonti dan tidak memiliki kebiasaan buruk. Hasil *photo file* sefalogram lateral dilakukan pengukuran dengan aplikasi DBSWIN. Posisi maksila diukur melalui sudut S-N-A sedangkan posisi mandibula diukur melalui sudut S-N-B, *facial angle* dan *angle of convexity*. Ukuran sinus frontalis diukur berdasarkan tinggi dan lebar sinus. Data pengukuran dianalisis dengan uji parametrik korelasi *Product Moment Pearson*.

Hasil analisis antara posisi maksila dan mandibula terhadap ukuran sinus frontalis pada maloklusi Klas I Angle orang Jawa tidak bermakna ($p>0,05$). Berdasarkan penelitian ini dapat disimpulkan bahwa tidak adanya hubungan antara posisi maksila dan mandibula terhadap ukuran sinus frontalis pada maloklusi Klas I Angle orang Jawa.

Kata kunci: Lebar sinus frontalis, Maloklusi Klas I Angle, Orang Jawa, Posisi maksila, Posisi mandibula, Tinggi sinus frontalis.

ABSTRACT

Maxilla and mandible are part of stomatognathion system which is useful for mastication. Maxilla and mandible position determine mechanical stress produced during masticatory process. More harmonious occlusion would allow for more adequate force delivery of masticatory process, which would result in a smaller sinus size. Javanese people have different physical characteristics from caucasian race, one of them is convex profile. This research aimed to examine the relationship between maxilla and mandible position with frontal sinus size in class-I Angle malocclusions of Javanese people.

Cross-sectional study was performed on 55 Javanese people by taking X-ray of lateral cephalometry. The inclusion criteria are class-I Angle malocclusions, 18-22 years old, complete permanent teeth, no history of any orthodontic treatment and bad habit. Photo files of lateral cephalometry were measured using DBSWIN application. The Maxilla position was measured by S-N-A while mandibular position were measured by S-N-B, facial angle and angle of convexity. The frontal sinus size was measured by height and width of frontal sinus. The measurement data were analyzed by Pearson product moment correlation test.

As the results between maxilla and mandible position with frontal sinus size in class-I Angle malocclusions of Javanese people are insignificant ($p>0,05$). Based on this research, it can be concluded that the maxilla and mandible position do not relate to the frontal sinus size in class-I Angle malocclusions of Javanese people.

Keywords: *Class-I Angle malocclusions, height of frontal sinus, Javanese people, maxilla position, mandibular position, width of frontal sinus.*