

ABSTRAK

ANALISIS ASIMETRISITAS KETINGGIAN KONDILUS DAN NILAI *LINEAR MEASUREMENT OF JOINT SPACE* PADA KONDISI EDENTULOUS BERDASARKAN KLASIFIKASI KENNEDY MELALUI RADIOGRAF PANORAMIK

(Studi pada Pasien di Instalasi Radiologi RSGMP

Universitas Jenderal Soedirman)

Aida Zakiya

Latar Belakang. Prevalensi kehilangan gigi (edentulous) di Indonesia mencapai 21,2%. Pola edentulous umumnya dikelompokkan menjadi empat kelas berdasarkan klasifikasi Kennedy. Kondisi edentulous dapat menyebabkan perubahan struktural pada sendi TMJ, termasuk asimetrisitas ketinggian kondilus dan nilai *linear measurement of joint space*. **Tujuan.** Penelitian ini bertujuan untuk mengetahui perbedaan asimetrisitas ketinggian kondilus dan nilai *linear measurement of joint space* pada kondisi edentulous berdasarkan klasifikasi Kennedy kelas I, II, III, dan IV. **Metode.** yang digunakan adalah observasional analitik dengan desain *cross-sectional study*. Sampel sebanyak 120 radiograf panoramik dipilih melalui teknik *purposive sampling*, masing-masing kelompok terdiri dari 30 radiograf berdasarkan klasifikasi Kennedy. Pengukuran dilakukan menggunakan *software ImageJ* dengan kalibrasi *CliniView*. Asimetrisitas ketinggian kondilus dihitung menggunakan indeks Habets, sedangkan nilai *linear measurement of joint space* diukur dari jarak antara kondilus dan fossa glenoidalis. Analisis statistik menggunakan uji *Chi-Square* untuk asimetrisitas ketinggian kondilus, dan *One-Way ANOVA* diikuti uji *post-hoc LSD* untuk nilai *linear measurement of joint space*. **Hasil.** uji *Chi-Square* menunjukkan terdapat perbedaan signifikan antar kelompok klasifikasi Kennedy dengan asimetrisitas ketinggian kondilus ($p < 0,05$). Hasil *One-Way ANOVA* menunjukkan perbedaan signifikan nilai AJS, SJS, dan PJS antar kelompok klasifikasi Kennedy ($p < 0,05$). Kelas I menunjukkan jumlah asimetri dan AJS tertinggi, serta PJS terendah. Kelas II menunjukkan PJS tertinggi, kelas III menunjukkan SJS tertinggi. Kelas IV menunjukkan jumlah asimetri, AJS, dan SJS terendah. **Simpulan.** penelitian ini adalah terdapat perbedaan asimetrisitas ketinggian kondilus dan nilai *linear measurement of joint space* pada kondisi edentulous berdasarkan klasifikasi Kennedy kelas I, II, III, dan IV.

Kata kunci: Asimetrisitas kondilus, Edentulous, *Joint space*, Klasifikasi Kennedy, Radiograf panoramik

ABSTRACT

ASYMMETRY ANALYSIS OF CONDYLAR HEIGHT AND LINEAR MEASUREMENT VALUES OF JOINT SPACE IN EDENTULOUS CONDITIONS BASED ON KENNEDY CLASSIFICATION USING PANORAMIC RADIOGRAPHS

**(A Study on Patients at the Radiology Department of RSGMP
Jenderal Soedirman University)**

Aida Zakiya

Background. The prevalence of tooth loss (edentulous) in Indonesia reaches 21.2%. Edentulous patterns are generally classified into four classes based on the Kennedy classification. Edentulous conditions can cause structural changes in the TMJ, including asymmetry in condylar height and linear measurement of joint space. **Purpose.** This study aims to determine the differences in condylar height asymmetry and linear joint space measurements in edentulous conditions based on Kennedy classifications I, II, III, and IV. **Methods.** An observational analytical cross-sectional study design was used. A sample of 120 panoramic radiographs was selected using purposive sampling, with each group consisting of 30 radiographs based on Kennedy classifications. Measurements were performed using ImageJ software with CliniView calibration. Condylar height asymmetry was calculated using the Habets index, while the linear measurement of joint space was measured from the distance between the condyle and the glenoid fossa. **Result.** Statistical analysis used the Chi-Square test for condylar height asymmetry and One-Way ANOVA followed by the LSD post-hoc test for the linear measurement of joint space. The Chi-Square test results showed significant differences between Kennedy classification groups in terms of condylar height asymmetry ($p < 0.05$). The One-Way ANOVA results showed significant differences in AJS, SJS, and PJS values between Kennedy classification groups ($p < 0.05$). Class I showed the highest asymmetry and AJS values, as well as the lowest PJS values. Class II showed the highest PJS values, while Class III showed the highest SJS values. Class IV showed the lowest asymmetry, AJS, and SJS values. **Conclusion.** This study found differences in condylar height asymmetry and linear joint space measurement values in edentulous conditions based on Kennedy classifications I, II, III, and IV.

Keywords: Condylar asymmetry, Edentulous, Joint space, Kennedy classification, Panoramic radiograph