Pengukuran Rerata Distorsi Vertikal Berdasarkan Panjang Gigi Klinis Dan Radiografis Pada Radiograf Periapikal Maksila dan Mandibula = Measurement of The Mean Vertical Distortion Based on Clinical and Radiographic Tooth length On Maxillary and Mandibular Periapical Radiographs

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Abstrak

Latar Belakang: Dalam talaksana kasus kedokteran gigi, seringkali dibutuhkan interpretasi gambaran radiograf dengan keakuratan yang tinggi. Meskipun gambaran radiograf diyakini sudah terinterpretasi dengan kualitas mutu yang baik, namun terdapat berbagai faktor yang menyebabkan tetap ada selisih ukuran objek pada gambaran radiograf dengan ukuran sebenarnya. Selisih ukuran ini dapat terjadi dalam arah vertikal, berupa distorsi vertikal. Distorsi vertikal penting untuk diperhatikan oleh klinisi untuk mencegah pengulangan pengambilan foto radiograf dan menghindari paparan radiasi berlebih pada pasien. Tujuan: Mengetahui nilai rata-rata distorsi vertikal pada radiograf periapikal gigi geligi maksila dan mandibula berdasarkan pengukuran selisih panjang gigi klinis dan radiografis. Metode: Penelitian ini menggunakan 120 sampel rekam medis klinis beserta dengan radiograf periapikal pasien endodontik di RSKGM FKG UI yang dikelompokkan menjadi 60 sampel gigi geligi maksila dan 60 sampel mandibula. Pengukuran estimasi panjang gigi klinis menggunakan rasio ukuran panjang kerja pada data rekam medis dan pengukuran panjang gigi radiograf diukur dari foto radiograf periapikal awal pasien. Ukuran distorsi vertikal didapat dari pengukuran selisih antara panjang gigi radiograf dengan estimasi panjang gigi klinis. Uji reliabilitas intraobserver dan interobserver dilakukan dengan uji ICC dan dilakukan analisa komparatif menggunakan uji mann whitney. Hasil: Hasil analisa menunjukkan nilai rerata distorsi vertikal pada kelompok gigi geligi maksila sebesar 1,58 mm, dengan maksimum 5,53 mm. Nilai rerata distorsi vertikal pada kelompok gigi geligi mandibula sebesar 1,48 mm, dengan nilai maksimum 3,96 mm. Sebanyak 52 (43.33%) sampel mengalami pemanjangan, sebanyak 55 (45.83%) mengalami pemendekan, dan 13 (10.83%) data tidak terdistorsi. Kesimpulan: Rerata pengukuran estimasi panjang gigi klinis dan panjang gigi pada gambaran radiograf tidak berbeda bermakna (p 0,451). Rerata distorsi vertikal pada gigi geligi maksila dan mandibula tidak berbeda bermakna (p 0,975).

.....Background: In the management of dental cases, it is often necessary to interpret radiographs with high accuracy. Although it is believed that the radiographic image has been interpreted with good quality, there are various factors that cause the difference in the size of the object on the radiographic image to the actual size. The size of this distortion can occur in the vertical direction, in the form of vertical distortion. Vertical distortion is important for clinicians to pay attention to prevent retaking the radiographs and avoid overexposure of radiation on the patient. Objective: To determine the mean value of vertical distortion on periapical radiographs of maxillary and mandibular teeth based on the measurement of the difference in radiographic and actual size of the tooth length. Methods: The study or research is carried out on 120 samples of medical records along with periapical radiographs of endodontic patients at RSKGM FKG UI, divided into 60 samples of maxillary teeth and 60 samples of mandibular teeth. Measurement of estimated clinical tooth length obtained by using the ratio of working length recorded in the medical record, and the

measurement of the radiographic tooth length obtained by using the patient's initial periapical radiograph. The measurement of vertical distortion was obtained by measuring the difference between the radiographic and the estimated clinical tooth length. Intraobserver and interobserver reliability tests were performed using the ICC test and comparative analysis was performed using the Mann Whitney test. Results: The results of the analysis showed that the mean of the vertical distortion in the maxillary teeth was 1.58 mm, with a maximum value of 5.53 mm. The mean value of vertical distortion in the mandibular teeth was 1.48 mm, with a maximum value of 3.96 mm. A total of 52 (43.33%) samples were elongated, 55 (45.83%) samples were shortened, and 13 (10.83%) samples were not distorted. Conclusion: The mean measurement of estimated clinical tooth length and tooth length on radiographs was not significantly different (p 0.451). The mean vertical distortion of the maxillary and mandibular teeth was not significantly different (p 0.975).