

ABSTRAK

ANALISIS PERBEDAAN DERAJAT DAN LOKASI DILASERASI AKAR GIGI ANTERIOR DAN PREMOLAR MAKSILA PERMANEN PADA PEMERIKSAAN RADIOGRAFI PANORAMIK DI RSGMP UNSOED

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Latar Belakang. Dilaserasi akar merupakan variasi anatomis penting karena memengaruhi perencanaan dan keberhasilan terapi endodontik maupun tindakan bedah. **Tujuan.** Penelitian ini mengevaluasi perbedaan derajat dan lokasi dilaserasi akar pada insisivus lateral, kaninus, premolar pertama, dan premolar kedua maksila permanen berdasarkan radiografi panoramik di RSGMP Unsoed. **Metode.** Desain penelitian adalah observasional analitik potong lintang menggunakan 224 radiografi panoramik yang diperoleh melalui metode *purposive sampling*. Penilaian dilakukan oleh dua pengamat terlatih dengan uji reliabilitas *Cohen's Kappa* untuk memastikan konsistensi data. Derajat dilaserasi dikategorikan menjadi *mild*, *moderate*, dan *severe*, sedangkan lokasi kelengkungan ditentukan pada sepertiga koronal, tengah, dan apikal akar. Analisis derajat dilaserasi menggunakan uji *Kruskal–Wallis* dengan uji lanjut *Mann–Whitney U*, sedangkan distribusi lokasi kelengkungan dianalisis melalui uji *Chi-Square*. **Hasil.** Penelitian menunjukkan bahwa dilaserasi ringan merupakan temuan paling dominan (78,1%) dan kelengkungan paling sering terlokalisasi pada sepertiga apikal akar. Terdapat perbedaan bermakna baik dalam distribusi derajat kelengkungan ($p < 0,001$) maupun pola lokasi kelengkungan ($p < 0,001$) antar kelompok gigi. Insisivus lateral menunjukkan variasi morfologi tertinggi, diikuti kaninus dan premolar, yang menegaskan kompleksitas akar gigi anterior maksila dibandingkan kelompok gigi lain. **Simpulan.** Penelitian ini adalah variasi derajat dan lokasi dilaserasi akar berbeda antar gigi insisivus lateral, kaninus, premolar pertama, dan premolar kedua maksila permanen dengan dominasi kelengkungan ringan pada sepertiga apikal. Implikasi klinis dari temuan ini adalah perlunya evaluasi radiografik yang cermat sebelum tindakan kedokteran gigi untuk meminimalkan risiko komplikasi dan meningkatkan keberhasilan perawatan.

Kata kunci: analisis morfometri, dilaserasi akar, maksila permanen, radiografi panoramik, variasi morfologi

ABSTRACT

ANALYSIS OF DEGREE AND LOCATION DIFFERENCES IN ANTERIOR AND PREMOLAR MAXILLARY TOOTH ROOT DILACERATION ON PANORAMIC RADIOGRAPHIC EXAMINATIONS AT RSGMP UNSOED

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Background. Root dilaceration is an important anatomical variation as it influences treatment planning and the success of both endodontic therapy and surgical procedures. **Objective.** This study aimed to evaluate differences in the degree and location of root dilaceration in permanent maxillary lateral incisors, canines, first premolars, and second premolars based on panoramic radiographs at RSGMP Unsoed. **Methods.** The research design was an analytical cross-sectional study utilizing 224 panoramic radiographs obtained through purposive sampling. Assessments were conducted by two trained observers, and interobserver consistency was verified using Cohen's Kappa reliability test. The degree of dilaceration was classified as mild, moderate, or severe, while the curvature location was categorized within the coronal, middle, or apical third of the root. Differences in dilaceration degree were analyzed using the Kruskal–Wallis test followed by the Mann–Whitney U test, whereas the distribution of curvature location was evaluated using the Chi-Square test. **Results.** The findings demonstrated that mild dilaceration was the most dominant observation (78.1%), with curvature most frequently located in the apical third. Significant differences were identified in both dilaceration degree ($p < 0,001$) and curvature location patterns ($p < 0,001$) among the tooth groups. Lateral incisors exhibited the highest morphological variation, followed by canines and premolars, highlighting the complexity of anterior maxillary root anatomy compared to other tooth groups. **Conclusion.** The degree and location of root dilaceration vary among permanent maxillary lateral incisors, canines, first premolars, and second premolars, with a predominance of mild curvature in the apical third. The clinical implication of these findings underscores the need for careful radiographic evaluation prior to dental procedures to minimize complications and improve treatment outcomes.

Keywords: maxillary permanent teeth, morphological variation, morphometric analysis, root dilaceration, panoramic radiography