Abstract

Objective: To investigate the oral health (with regard to the periapical status, quality of root fillings and coronal restorations) in an urban adult Turkish subpopulation using digital panoramic radiographs. Materials and Methods: One thousand digital panoramic radiographs involving 28,000 teeth were selected from the archive of the Public Oral and Dental Health Center of Isparta. Coronal status (the type of restoration, signs of marginal leakage or decay), root filling quality (length and lateral seal) and periapical status (according to Periapical Index, PAI) were evaluated. Correlations between apical periodontitis (AP) and the quality of root fillings or coronal restorations were statistically analyzed using the $\chi^2$ test. Results: Of the 28,000 teeth evaluated, 22,380 (80.0%) were sound, 4,732 (16.9%) were missing, 753 (2.6%) were filled and 135 (0.5%) were decayed. Of the 753 coronal restorations, 400 (53.1%) were radiographically acceptable. Of the 23,268 teeth, 601 (2.6%) were root filled and 247 root fillings were adequate. Ninety-five (15.8%) root-filled teeth had AP (PAI 3–5). Out of the total, the AP prevalence was 0.4% in root-filled teeth and 0.8% in teeth without root fillings. The presence of AP was significantly correlated with inadequate coronal restorations and root canal fillings ($p = 0.000$). Conclusion: Tooth type, quality and type of coronal restorations, and length and homogeneity of root fillings significantly affected periapical status.