Abstract

Disagreement cases caused interobserver variations during evaluation of periapical status

Aim: The aim of this study is to determine the etiology and incidence of the disagreement and borderline cases selected for the radiographic evaluation of periapical status using the periapical index (PAI) scoring system. Material and Method: Borderline cases in the agreement study of evaluation of 405 teeth with 750 roots, which had been given different score at least by one observer were re-evaluated. The reasons of disagreement cases were classified as: a) anatomical landmarks b) periodontal ligament space c) trabecular pattern affecting the view of mineral loss d) bone marrow spaces. Results: Forty-five disagreement cases (%9.83) with 54 root (%6.89) were observed. The distribution of observer variations according to their reasons were as follows: 9 (15.52%) anatomical landmarks, 6 (10.34%) periodontal ligament space, 33 (56.90%) trabecular pattern affecting the view of mineral loss, 10 (17.24%) bone marrow spaces. Then, the joint discussion resulted in an agreement for all the cases. Conclusion: The varying morphology of apical areas and varying density of surrounding bone present a number of challenges. Difficult borderline cases illustrate the uncertainty involved in radiographical consensus. In such cases the decision can only be made after careful analysis of surrounding tissues of the apex.

Key words: interobserver variations, periapical, radiograph