

Risk assessment of apical periodontitis in endodontically treated teeth: a cross-sectional study

EL OUARTI IMANE

Mohammed V University Rabat, Morocco



Abstract

Introduction

Apical periodontitis represents inflammation and destruction of the periradicular tissues occurring in response to the presence of microorganisms and their irritants within the root canal system. The ultimate goal of endodontic treatment is then to eliminate or at least reduce the microbial load within the root canal system. Even though, apical periodontitis may persist following root canal treatment. The present study aimed at investigating risk factors associated to apical periodontitis in endodontically treated teeth.

Methods

A total of 358 endodontically treated teeth were evaluated after a 1-year period in a Moroccan population according to predetermined criteria. Studied parameters were assessed clinically and radiographically. The association between coronal restoration quality, cavity design, periodontal status, root canal filling quality, coronal restoration related features, presence or absence of the opposing dentition and the periapical status was determined. Data were analyzed using chi-square test, odds ratio and logistic regression.

Results

The present study revealed that gingival health, coronal restoration with CL II cavity design, and root canal filling quality influenced periapical status of endodontically treated teeth. This association was statistically significant for gingival disease (95% IC: 1.08-3.91, OR: 2.05, $p=0.02$), inadequate coronal restoration (95%IC: 1.16-4.04, OR: 2.16, $p: 0.01$), and inadequate root canal filling (95%IC: 4.86-27.99, OR: 11.6, $P<0.001$) respectively. Prevalence of apical periodontitis in the studied endodontically treated teeth was 72.1%.

Conclusions

The present study revealed that inadequate coronal restorations especially with large proximal margins (CL II cavity design) and gingival disease increased the risk of AP in endodontically treated teeth. Under filled or over filled root canals, canal fillings with low density and inadequate conicity were more associated with AP than inadequate coronal restorations, and when the root canal filling was inadequate the coronal seal did not prevent AP

in endodontically treated teeth.



Biography:

EL OUARTI IMANE: Assistant professor achieved post-doctoral studies and obtained specialist grade in conservative dentistry, Certificate of Higher education in Biomaterials from Bordeaux University, and Certificate of Higher education in Conservative dentistry from Bordeaux University.

Speaker Publications:

1. EL OUARTI IMANE, The aetiology of malocclusion: can the Tropic Premise assist our understanding". *British Dental Journal*. 1981;151; :296-302.
2. EL OUARTI IMANE, Facial Changes in Identical Twins Treated by Different Orthodontic Techniques. *The World Journal of Orthodontics*. 2007; 8: 174-188.
3. EL OUARTI IMANE, Growth Direction Following Fixed and Postural Techniques: a Prospective Consecutive Study of Matched Cases. *Journal of Gnathologic Orthopedics and Facial Orthototics*. 2015; 12-16.

[5th International Conference on Dental and Clinical Dentistry](#); June 24-25, 2020.

Abstract Citation:

EL OUARTI IMANE, Risk assessment of apical periodontitis in endodontically treated teeth: a cross-sectional study, *Clinical Dentistry 2020*, 5th International Conference on Dental and Clinical Dentistry; June 24-25, 2020.

(<https://clinicaldentistry.dentistryconferences.com/scientific-program.php?day=1&sid=6898&date=2020-06-24>)