

Conclusions

Within the limitations of this pilot in vivo study, it was concluded that the palate provides limited support to overdenture bases.

Acknowledgments

The authors reported no conflicts of interest related to this study.

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Literature Abstract

The association of chronic apical periodontitis and endodontic therapy with atherosclerosis

The objective of this retrospective cross-sectional study was to provide an estimation of the extent of the association of chronic apical periodontitis (CAP) and endodontic treatment with atherosclerosis (ATS) in a large patient population. This study comprised 11,191 teeth in 531 patients, ages 8–89 years old, with a prior whole-body computed tomography (CT) scan. These 0.625 mm collimated source images, conducted on a 16- or 64-slice spiral CT scanner, were previously obtained for medical reasons. An objective calcium scoring method quantified the atherosclerotic burden of the abdominal aorta. Radiolucency associated with a root that was more than twice as wide as the adjacent periodontal gap on the crown side was assessed as a CAP lesion. Estimation of horizontal bone loss was quantified by measuring the height of the alveolar ridge and distance between crown and bone. Two investigators evaluated the jaws and teeth separately, without awareness of the aortic ATS burden. Results revealed that the volume of the aortic atherosclerotic burden for patients with at least one CAP lesion was 0.32 ± 0.92 mL, higher than for patients with no CAP (0.17 ± 0.51 mL; $P < .05$). The atherosclerotic burden increased with age and number of CAP lesions without root canal treatment, but not with number of CAP lesions with endodontic treatments ($P < .05$ each). In logistic regression models, age (Wald 90.8), CAP without endodontic treatment (Wald 39.9), male gender (Wald 9.8), and caries per tooth (Wald 9.0) correlated positively. In conclusion, a positive correlation, independent of the effect of marginal periodontitis and caries, is observed between CAP and the aortic atherosclerotic burden. Given the limitations of this study, the question of causality remained unanswered and could only be clarified by further research.

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