

Scientific release
from the European
Federation of
Periodontology

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Study:



Risk factors associated with the longevity of multi-rooted teeth. Long-term outcomes after active and supportive periodontal therapy

Salvi GE, Mischler DC, Schmidlin K, Matuliene G, Pjetursson BE, Brägger U, Lang NP.
J Clin Periodontol 2014; 41: 701-707.

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Relevant background to study:

The treatment of multi-rooted teeth with furcation involvement is challenging for clinicians. Usually the clinical response to non-surgical treatment is unpredictable and loss of attachment

may continue during periodontal maintenance. Evidence for the impact of the severity of furcation involvement and the associated risk factors, upon long-term tooth loss is limited.

Study Aims:

The aim of this study was to assess the influence of (i) the degree of furcation involvement, and (ii) the associated risk factors, upon the loss of multi-

rooted teeth in patients treated for periodontitis and included in a maintenance program.

Methods:

The reported study was a retrospective cohort study of 172 patients treated for chronic or aggressive periodontitis. A periodontal examination was performed at baseline, after periodontal therapy, and again following a maintenance program (mean duration = 11.5±5.2 years). Furcation involvement was assessed using the classification proposed by Hamp et al. (1975). Compliance, as determined by the criteria of

Demirel & Efeodlu (1995), was based upon attendance or failure to attend the scheduled appointments. Smoking status was recorded as smokers, former smokers and non-smokers. The tooth was treated as the unit of analysis. Univariate and multivariate regression analyses were conducted to determine the risk of loss of multi-rooted teeth throughout the duration of the study

Results:

- Class I furcation involvement was not a significant risk factor, compared to no furcation involvement.
- Risk factors for multi-rooted tooth loss in subjects treated for periodontitis and enrolled into a maintenance program were class II and III furcation involvement, smoking and a lack of

- compliance.
- Non-smokers and former smokers did not differ with respect to multi-rooted tooth loss.
- Tooth loss was less frequent in the mandible than the maxilla.

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Image courtesy of
Dr Aleksandar DARIC



**Conclusions,
impact and
limitations:**

Conclusions:

- Class II and III furcation involvement, current smoking and lack of compliance with maintenance program visits were all risk factors for multi-rooted tooth loss in patients treated for periodontitis.

Limitations:

- The principle limitations of the reported study were its retrospective design, the use of multiple subgroup analyses potentially leading to small subgroup sample

Impact:

- Compliance with a strict maintenance program may be essential to prevent multi-rooted tooth loss in furcation involved teeth.
- Smokers should be encouraged to adhere to a smoking cessation protocol.

sizes, and wide confidence intervals; and using the tooth as the statistical unit of analysis prevents the drawing of conclusions at the patient level.