Other journals in brief

A selection of abstracts of clinically relevant papers from other journals.
The abstracts on this page have been chosen and edited by Reena Wadia.

Stress and periodontitis

Pitzurra L, Loos B G. Stress and periodontitis. *Ned Tijdschr Tandheelkd* 2020; **127**: 358–364.

Stress should be considered as a risk factor for periodontitis.

Gingivitis and periodontitis can worsen with reduced immune fitness. Various causes can reduce immune fitness in a host, as a result of which the balance between the host and the microbiome is disturbed. Lifestyle factors, such as stress and smoking, can have a negative influence on immune fitness. An association has been demonstrated between stress and periodontitis and also acute necrotising ulcerative gingivitis or periodontitis. In terms of the pathogenesis, there are indications that neurons are able to secrete pro-inflammatory cytokines and chemokines that worsen chronic inflammatory reactions in the periodontium and compromise immune fitness. *In vitro* studies show high cortisol levels may contribute to the increased growth of *P. gingivalis*. Stress as a risk factor for periodontitis and the role of stress as a negative influence on the results of periodontal treatment are difficult to estimate clinically. However, the authors emphasise consideration to and awareness of stress as part of the comprehensive set of risk factors for periodontitis.

<https://doi.org/10.1038/s41415-020-2450-5>

EMD for non-surgical periodontal therapy

Schallhorn R A, McClain P K, Benhamou V, Doobrow J H, Grandin H M, Kasaj A.

Application of enamel matrix derivative in conjunction with non-surgical therapy for treatment of moderate to severe periodontitis: A 12-month, randomized prospective, multicenter study. *J Periodontol* 2020; DOI: 10.1002/JPER.19-0579. Online ahead of print.

The adjunct use of EMD with non-surgical periodontal therapy resulted in less frequent bleeding on probing and a higher number of healthy probing depths.

This prospective, split-mouth, multi-centre study explored the effect of using an enamel matrix derivative (EMD) as an adjunct to non-surgical periodontal therapy (test) versus non-surgical therapy alone (control). Fifty-one patients presenting with moderate to severe periodontitis (PPD = 5 to 8 mm) in at least two pockets per contralateral quadrants within the same arch were evaluated. The primary outcome variable was change in clinical attachment level (CAL) after 12 months. Secondary variables included probing pocket depth (PPD), bleeding on probing (BoP) and percent of pockets converted to sites no longer requiring surgical treatment. CAL changed significantly from baseline to 12 months for both treatment modalities and similarly for PPD; the difference between groups was not significant. A significant difference, favouring test conditions, was observed in percentage of both healthy PPDs (< 5 mm) and converted pockets (no longer requiring surgery); 80% of test versus 66% of control sites. BoP decreased significantly more in test sites (18% test versus 23% control).

<https://doi.org/10.1038/s41415-020-2410-0>

COVID-19 – oral manifestations

Dos Santos J A, Normando A G C, Carvalho da Silva R L *et al*. Oral manifestations in patients with COVID-19: a living systematic review. *J Dent Res* 2020; DOI: 10.1177/0022034520957289. Online ahead of print.

Taste disorders should be considered in the scope of the disease's onset and progression.

This systematic review summarises the evidence on the prevalence of oral signs and symptoms in patients with COVID-19. A literature search was conducted in six databases and 40 studies were included: 33 cross-sectional and seven case reports. Overall, 10,228 patients from 19 countries were assessed. Gustatory impairment was the most common oral manifestation, with a prevalence of 45%. The pooled eligible data for different taste disorders were 38% for dysgeusia and 35% for hypogeusia, while ageusia had a prevalence of 24%. Oral mucosal lesions presented multiple clinical aspects, including white and erythematous plaques, irregular ulcers, small blisters, petechiae, and desquamative gingivitis. Tongue, palate, lips, gingiva, and buccal mucosa were affected. In mild cases, oral mucosal lesions developed before or at the same time as the initial respiratory symptoms; however, in those who required medication and hospitalisation, the lesions developed approximately seven to 24 days after onset symptoms. Oral mucosal lesions are more likely to present as coinfections and secondary manifestations with multiple clinical aspects.

<https://doi.org/10.1038/s41415-020-2411-z>

Vertical root fractures after apical surgery

Von Arx T, Moldonado P, Bornstein M M *et al*. Occurrence of vertical root fractures after apical surgery: A retrospective analysis. *J Endod* 2020; DOI: 10.1016/j.joen.2020.10.012. Online ahead of print.

The vertical root fracture rate was 4%. These commonly occurred in maxillary premolars and mandibular molars, with the mesial root of mandibular first molars affected most frequently.

Vertical root fractures (VRFs) are among the most frequent causes of tooth loss, mainly of endodontically-treated teeth. However, very few data are available about the occurrence of VRFs following apical surgery. Patient charts from 864 patients with 1058 teeth treated with apical surgery (1999–2018) were retrospectively evaluated. Possible influencing factors were analysed: sex and age, type of tooth, primary versus re-surgery, technique of root-end preparation, and timepoint of VRF diagnosis. Endpoints were either tooth extraction or the last follow-up. The overall rate of VRFs after apical surgery was 4%. Among these 42 teeth, 33% were mandibular first molars and 26% were maxillary second premolars. The most frequently affected root was the mesial root of mandibular first molars. Significant differences of VRF rates were only observed for the type of tooth treated.

<https://doi.org/10.1038/s41415-020-2409-6>