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.**

Perio treatment and systemic inflammation

Preshaw P M, Taylor J J, Jaedicke KM. Treatment of periodontitis reduces systemic inflammation in type 2 diabetes. *J Clin Periodontol* 2020; DOI: 10.1111/jcpe.13274. [Epub ahead of print].

Diabetes and periodontitis together to increase systemic inflammation, with evidence of reductions following periodontal treatment.
This study assessed the impact of periodontal treatment on systemic inflammation in type 2 diabetes. Adults with type 2 diabetes (n = 83) and without diabetes (controls, n = 75) were recruited, and participants with periodontitis received periodontal treatment and 12 months' follow-up. Biomarkers for periodontal inflammation and serum markers of inflammation and diabetes control were measured. Periodontal treatment resulted in significant improvements in clinical status and reductions in gingival crevicular fluid biomarkers from baseline to month 12. Individuals with diabetes and periodontitis had significantly higher systemic inflammation than non-diabetic controls with periodontitis with no significant differences between groups for oral inflammation. There was a greater reduction in systemic inflammation following periodontal treatment in individuals with diabetes and periodontitis compared to those with periodontitis but not diabetes.

https://doi.org/10.1038/s41415-020-1647-y

Effect of periodontal therapy on adipokine biomarkers

Matern J, Koch R, Petersmann A *et al.* Effect of periodontal therapy on adipokine biomarkers in overweight. *J Clin Periodontol* 2020DOI: 10.1111/jcpe.13288. [Epub ahead of print].

Non-surgical periodontal therapy reduced systemically elevated inflammation-associated biomarkers. These improvements were more pronounced in overweight than normal-weight patients.
This study evaluated the effect of non-surgical periodontal therapy on circulating levels of the systemic inflammation-associated biomarkers orosomucoid (ORM), high-sensitivity C-reactive protein (hsCRP), chemerin, and retinol-binding protein 4 (RBP4) in overweight or normal-weight patients with periodontitis at 27.5 months after therapy. Eighty patients were randomly stratified for BMI group, sex, and treatment group (antibiotics/placebo), resulting in 40 overweight and normal-weight patients. Patients received non-surgical periodontal therapy and maintenance at 3-month intervals. Plasma samples from baseline and 27.5 months following initial treatment were used to measure the concentrations of ORM, hsCRP, chemerin, and RBP4. At the 27.5-month examination, ORM and hsCRP decreased noticeably in the overweight group and normal-weight patients. Chemerin decreased in the overweight group, and RBP4 concentrations remained stable.

https://doi.org/10.1038/s41415-020-1676-6

Motivational interviewing to prevent caries

Jiang S, McGrath C, Lo E C M, Ho S M Y, Gao X. Motivational interviewing to prevent early childhood caries: A randomised controlled trial. *J Dent* 2020; DOI: 10.1016/j.jdent.2020.103349. [Epub ahead of print]

Motivational interviewing improves the effectiveness of prevailing health education in preventing early childhood caries, enhancing parental efficacy, and improving children's oral health behaviours.
Prevailing health education (PE) often fails to achieve sustained behavioural changes. This randomised controlled trial integrated motivational interviewing (MI) and a patient communication tool featuring interactive caries risk assessment (RA) into PE and investigated the effectiveness of PE, PE + MI, and PE + MI + RA in preventing early childhood caries. Six hundred and ninety two parent-child dyads with children aged 3–4 years with unfavourable oral health behaviours were included. A questionnaire was completed at baseline and after 6 and 12 months. Children's oral hygiene status and dental caries were recorded. Caries increment was significantly lower in PE + MI group and PE + MI + RA group than in PE group. There was greater reduction in plaque score in PE + MI group and PE + MI + RA group as compared with PE group. Greater improvements were found in parental efficacy and children's oral health behaviours in PE + MI and PE + MI + RA groups than in PE group.

https://doi.org/10.1038/s41415-020-1677-5

Topical fluoride to prevent root caries

Zhang J, Sardana D, Li K Y, Leung K C M, Lo E C M. Topical Fluoride to Prevent Root Caries: Systematic Review with Network Meta-analysis. *J Dent Res* 2020; **99:** 506-513.

Among self-applied topical fluoride methods, daily use of a 0.2% sodium fluoride mouth rinse is most effective in preventing root caries.
This systematic review and meta-analysis summarised the clinical evidence on the effectiveness of professionally and self-applied topical fluorides in preventing root caries. Nine controlled clinical trials involving 4,030 participants were included. Five professionally applied and seven self-applied topical fluoride agents were included. Compared to control group, 38% silver diamine fluoride solution, 5% sodium fluoride varnish, and 1.2% acidulated phosphate fluoride reduced root caries increment after 2 years. Fluoride mouth rinse and fluoride toothpaste, used alone or in combination, reduced root caries increment after 1 year. Among the professionally applied topical fluorides, an annually applied 38% silver diamine fluoride solution combined with oral health education is likely to be the most effective in preventing root caries. Among the reviewed self-applied topical fluoride methods, daily use of a 0.2% sodium fluoride mouth rinse was shown to be most effective, followed by 1100 ppm to 1500 ppm fluoride toothpaste plus 0.05% sodium fluoride mouth rinse, and 1100 ppm to 1500 ppm fluoride toothpaste.

https://doi.org/10.1038/s41415-020-1675-7