

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 & diabetes – how many appointments?

Graziani F, Gennai S, Marruganti C *et al.* Acute-phase response following one-stage full-mouth versus quadrant non-surgical periodontal treatment in subjects with comorbid type 2 diabetes: A randomized clinical trial. *J Clin Periodontol* 2023; DOI: 10.1111/jcpe.13760.

FM-SRP triggers a robust acute-phase response at 24 h, which may offset the beneficial systemic effects of periodontal treatment in terms of HbA1c reduction and improvement in endothelial function in diabetics.

This study compared the level of inflammatory markers and endothelial function 24 h (Day 1) and 90 days (Day 90) after conventional quadrant-wise scaling and root planing (Q-SRP) versus one-stage full-mouth SRP (FM-SRP) in patients affected by type 2 diabetes mellitus (T2DM). Patients affected by periodontitis and T2DM were randomly allocated to receive FM-SRP or Q-SRP and followed up at Day 1 and Day 90. Serum samples, vital signs, and flow-mediated dilation (FMD) parameters were collected at baseline, Day 1 and Day 90. Periodontal variables were collected at baseline and Day 90. The primary outcome was the C-reactive protein (CRP) concentration at Day 1 after periodontal treatment. Forty subjects were included. FM-SRP produced a significant increase in CRP and a significant reduction in FMD at Day 1 compared to Q-SRP. The absolute change in HbA1c from baseline to Day 90 was significantly improved in the Q-SRP compared to the FM-SRP group.

<https://doi.org/10.1038/s41415-023-5702-3>

Conservative instrumentation in root canal disinfection

Usta S N, Solana C, Ruiz-Linares M *et al.* Effectiveness of conservative instrumentation in root canal disinfection. *Clin Oral Investig* 2023; DOI: 10.1007/s00784-023-04929-z.

Conservative instrumentation of straight and curved canals using TN and Rotate files resulted in similar bacterial reduction compared to PTG.

This *ex vivo* study aimed to evaluate and compare the effect of conservative instrumentation with TruNatomy (TN) and Rotate and a conventional rotary system, ProTaper Gold (PTG), on root canal disinfection during chemomechanical preparation of straight and curved canals. Ninety mandibular molars with straight (n = 45) and curved (n = 45) mesiobuccal root canals were contaminated with polymicrobial clinical samples. Teeth were divided into three subgroups (n = 14) according to the file systems and the curvature. Canals were instrumented with TN, Rotate, and PTG, respectively. Sodium hypochlorite and EDTA were used as irrigants. Intracanal samples were taken before (S1) and after (S2) instrumentation. Six uninfected teeth were used as negative controls. The bacterial reduction between S1 and S2 was measured by ATP assay, flow cytometry, and culture methods. Bacterial reduction percentages were similar for the three file systems in straight canals. However, PTG showed a lower reduction percentage of intact membrane cells in flow cytometry than TN and Rotate. For the curved canals, no significant differences were obtained.

<https://doi.org/10.1038/s41415-023-5703-2>

Sedation: remimazolam vs midazolam

Li X, Tian M, Deng Y, She T, Li K. Advantages of Sedation With Remimazolam Compared to Midazolam for the Removal of Impacted Tooth in Patients With Dental Anxiety. *J Oral Maxillofac Surg* 2023; DOI: 10.1016/j.joms.2023.02.001.

The use of remimazolam results in faster onset, more rapid recovery, and lower incidence of post-operative side effects compared to midazolam.

Patients with dental anxiety and who were to undergo impacted tooth removal were randomised into remimazolam and midazolam groups. The primary variable was the type of sedative, while the primary outcome variables were the onset time, awakening time, recovery time, and post-operative side effects. A total of 83 patients were included, with 42 in the remimazolam group and 41 in the midazolam group. Patients in the remimazolam group had significantly shorter onset time, awakening time, and recovery time compared to those in the midazolam group. Post-operative side effects were more frequent in the midazolam group. Following surgery, the Modified Dental Anxiety Scale scores in both groups were significantly lower than prior to surgery. Satisfaction levels scores for the patients and doctor were higher in the remimazolam group than in the midazolam group.

<https://doi.org/10.1038/s41415-023-5704-1>

Smartwatches with electrocardiograms

Zenzen M, Seba P, Vivero-Fäh B P. The electrocardiogram on the wrist: a frightening experience to the untrained consumer: a case report. *J Med Case Rep* 2023; **17**: 79.

The case shows the potential side effects of pseudo-medical recommendations for the untrained consumer.

Smartwatches offering electrocardiogram recordings advertise the benefits of supporting an active and healthy lifestyle. Yet potential risks and adverse effects have been widely overlooked. This case report describes an emergency consultation of a 27-year-old man lacking known previous medical conditions who developed an episode of anxiety and panic due to pain in the left chest prompted by over-interpretation of unremarkable electrocardiogram readings of his smartwatch. Fearing acute coronary syndrome, he presented at the emergency department. His smartwatch electrocardiograms, as well as a 12-lead electrocardiogram, appeared normal. After extensive calming and reassuring, as well as symptomatic therapy with paracetamol and lorazepam, the patient was discharged with no indications for further treatment. This case demonstrates the potential risks of anxiety from nonprofessional electrocardiogram recordings by smartwatches. Medico-legal and practical aspects of electrocardiogram recordings by smartwatches need to be further considered.

<https://doi.org/10.1038/s41415-023-5705-0>