

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.

Peri-implant MRONJ

Nisi M, Izzetti R, Gennai S, Bellini P, Graziani F, Gabriele M. Surgical management of medication-related osteonecrosis of the jaw patients related to dental implants. *J Craniofac Surg* 2020; DOI: 10.1097/SCS.00000000000006283. [Epub ahead of print].

Surgical treatment seems to have a positive impact on MRONJ treatment also in cases of peri-implant involvement. Monitoring and prevention are fundamental in patients under pharmacological treatment with anti-resorptive/antiangiogenic drugs.

This case series reported on patients with peri-implant medication-related osteonecrosis of the jaw (MRONJ) and described the onset of the condition and the treatment outcome. Fifteen consecutive patients with clinical diagnosis of peri-implant MRONJ were retrospectively included. The sample was stratified on the base of oral, pharmacological, and general health variables. The number of affected implants was recorded and MRONJ staging applied. Surgical treatment was performed with a standardised operative protocol, involving implant removal, sequestrectomy, debridement of soft tissue, and bone curettage. Follow-up evaluating surgical outcome was performed at 12 months after surgery. All MRONJ lesions were symptomatic, and in six patients bone exposure was detected. Forty implants were evaluated, with MRONJ being present around 29 implants. Twelve patients were diagnosed with Stage III MRONJ, and three patients with Stage II MRONJ. Surgical treatment lead to complete healing in 87% of cases, with 100% success for maxillary MRONJ.

<https://doi.org/10.1038/s41415-020-1430-0>

Periodontitis and peri-implantitis

Achanur M, Aldhuwayhi S, Parihar A S, Bhardwaj A, Das R, Anad K S. Assessment of correlation of periodontitis in teeth adjacent to implant and peri-implantitis. *J Family Med Prim Care* 2020; **9**: 243–246.

Maintenance of periodontal health is of paramount importance for successful implant therapy.

This study aimed to determine the correlation between peri-implantitis and periodontitis in adjacent teeth. Fifty-eight patients with 84 dental implants were included. They were divided into two groups, group I (50) was with peri-implantitis and group II (34) was without it. In all patients, probing depth (PD), gingival recession (GR), and clinical attachment loss (CAL) was calculated around the implant, adjacent to implant and on the contralateral side. CAL was 5.82 ± 0.52 in group I and 3.62 ± 0.63 in group II around implants. PD was 4.28 ± 1.26 in group I and 2.20 ± 0.52 in group II around adjacent teeth. PD around contralateral teeth was significant in group I and group II (2.71 ± 0.73). The authors concluded that periodontitis has a negative effect on implant success.

<https://doi.org/10.1038/s41415-020-1444-7>

Water-jet flossing: effect on composites

Alharbi M, Farah R. Effect of water-jet flossing on surface roughness and color stability of dental resin-based composites. *J Clin Exp Dent* 2020; **12**: e169-e177.

In terms of surface roughness and colour, water-jet flossing is safe to be used on composite restorations within the settings of this study.

This *in vitro* study investigated the effects of water-jet flossing on the colour stability and surface roughness of resin-based composites. Nine disc-shaped specimens were fabricated from five commercially available composites. The specimens were randomly allocated into three groups and three different treatments were performed on each: storage in water (control), water-jet flossing (50 Psi water pressure) and water-jet flossing (100 Psi). The water-jet flossing was performed using a Waterpik Aquarius water flosser. Colour and roughness were measured at baseline and at the end of 30 minutes of treatment, which is equivalent to five years of simulated water-jet flossing for one minute once a day. No significant colour change was found after five simulated years of water-jet flossing. None of the specimens showed any significant surface roughness changes except for the two composites with spherical filler specimens in the 100 Psi group. These composites exhibited a significant increase in surface roughness compared with the nano-filled composite. However, the differences were clinically acceptable.

<https://doi.org/10.1038/s41415-020-1443-8>

Dental bleaching: effect on composites

Fernandes R A, Strazzi-Sahyon H B, Suzuki T Y U, Briso A L F, Dos Santos P H. Effect of dental bleaching on the microhardness and surface roughness of sealed composite resins. *Restor Dent Endod* 2020; **45**: e12.

The microhardness and surface roughness of enamel and Opallis composite resin were influenced by bleaching procedures.

This *in vitro* study evaluated the microhardness and surface roughness of composite resins before and after tooth bleaching procedures. Sixty specimens were prepared of each composite resin (Filtek Supreme XT and Opallis), and BisCover LV surface sealant was applied to half. Thirty enamel samples were obtained from the buccal and lingual surfaces of human molars for use as the control group. The surface roughness and microhardness were measured before and after bleaching procedures with 35% hydrogen peroxide or 16% carbamide ($n = 10$). Neither hydrogen peroxide nor carbamide peroxide treatment significantly altered the hardness of the composite resins, regardless of surface sealant application; however, both treatments significantly decreased the hardness of the tooth samples. The bleaching did not cause any change in surface roughness, with the exception of the unsealed Opallis composite resin and dental enamel, both of which displayed an increase in surface roughness after bleaching with carbamide peroxide.

<https://doi.org/10.1038/s41415-020-1445-6>