

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.

Irrigants and irrigation methods

Boutsoukis C, Arias-Moliz M T. Present status and future directions – irrigants and irrigation methods. *Int Endod J* 2022; DOI: 10.1111/iej.13739. Online ahead of print.

Sodium hypochlorite remains the primary irrigant of choice.

This review aimed to set the framework for the obstacles that irrigation needs to overcome, to critically appraise currently used irrigants and irrigation methods, to highlight knowledge gaps and methodological limitations in the available studies and to provide directions for future developments. Organisation of bacteria in biofilms located in anatomic intricacies of the root canal system and the difficulty to eliminate them is the main challenge for irrigants. Sodium hypochlorite remains the primary irrigant of choice, but it needs to be supplemented by a chelator. Delivery of the irrigants using a syringe and needle and activation by an ultrasonic file are the most popular irrigation methods. There is no evidence that any adjunct irrigation method, including ultrasonic activation, can improve the long-term outcome of root canal treatment beyond what can be achieved by instrumentation and syringe irrigation. It is necessary to redefine the research priorities in this field and investigate in greater depth the penetration of the irrigants, their effect on the biofilm and the long-term treatment outcome. New studies must also focus on clinically-relevant comparisons, avoid methodological flaws and have sufficiently large sample sizes to reach reliable conclusions.

<https://doi.org/10.1038/s41415-022-4211-0>

Personalised musical intervention to improve care

Bertacco M, Soyeux O, Durand R *et al.* Effect of personalized musical intervention on burden of care in dental implant surgery: a pilot randomized controlled trial. *J Dent* 2022; DOI: 10.1016/j.jdent.2022.104091. Online ahead of print.

Personalised music intervention could be effective in decreasing patients' burden of care during dental implant surgery.

This randomised controlled trial explored the effect of a personalised musical intervention on the burden of care during dental implant placements. Twenty-four dental implant surgery patients were included. A personalised music intervention or an audiobook control condition was administered. Burden of care (a composite outcome including self-reported anxiety, pain, and dissatisfaction), expected pain prior to surgery, pre- and post-surgery effect, memory of pain felt during surgery, and participants' emotional judgments of the music and audiobook listening were assessed. The personalised music intervention significantly reduced the burden of care for dental implant surgery. Both groups reported a positive effect after surgery, but the music group felt significantly better. The pain remembered after seven post-operative days was also significantly lower in the music group. Participants judged the music listened to during surgery as more relaxing and pleasant than the audiobook.

<https://doi.org/10.1038/s41415-022-4213-y>

Periodontitis and omega-3 fatty acids

Heo H, Bae J-H, Amano A, Park T, Choi Y-H. Supplemental or dietary intake of omega-3 fatty acids for the treatment of periodontitis: a meta-analysis. *J Clin Periodontol* 2022; **49**: 362–377.

Supplemental or dietary intake of omega-3 fatty acids for the treatment of periodontitis may have a positive impact on the disease.

This meta-analysis aimed to evaluate the intervention effect of omega-3 fatty acids on changes in periodontal parameters. Studies published in English between 2010 and 2020 were extracted from the Cochrane Library, EMBASE and PubMed databases. The effects of omega-3 fatty acid intervention were investigated using the amount of omega-3 intake, periodontal pocket depth (PPD), clinical attachment loss (CAL) and bleeding on probing (BOP). All 13 studies included in the meta-analysis were interventional, randomised controlled trials. Two studies implemented omega-3 fatty acid-rich diets, while eleven studies used supplements. Risk of bias was low and publication bias was not shown. Meta-analysis showed a statistically significant PPD reduction, CAL gain and BOP reduction for the omega-3 fatty acid intervention overall.

<https://doi.org/10.1038/s41415-022-4212-z>

Peri-implant disease – outcome measures

Derks J, Ichioka Y, Dionigi C *et al.* Prevention and management of peri-implant mucositis and peri-implantitis: a systematic review of outcome measures used in clinical studies in the last 10 years. *J Clin Periodontol* 2022; DOI: 10.1111/jcpe.13608. Online ahead of print.

PPD and BOP were routinely reported, while composite outcomes, adverse events and patient-reported outcomes were infrequently described.

This systematic review evaluated the outcome measures, methods of assessment and analysis in clinical studies on the prevention and management of peri-implant mucositis and peri-implantitis. Systematic electronic searches up to April 2021 were conducted to identify longitudinal clinical studies with ≥ 10 patients on either the prevention or management of peri-implant diseases. Outcome measures of this analysis were the choice of outcome measures, methods of assessment and analytical methods. Risk of bias was evaluated. The analysis of the 159 selected studies revealed that probing pocket depth (PPD) and bleeding/suppuration on probing (BOP) were reported in 89% and 87% of all studies, respectively. Additional outcome measures included plaque scores (reported in 64% of studies), radiographic outcomes (49%), soft tissue dimensions (34%) and composite outcomes (26%). Adverse events (8%) and patient-reported outcomes (6%) were rarely mentioned. A total of 36% of studies clearly defined a primary outcome measure.

<https://doi.org/10.1038/s41415-022-4214-x>