

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 John R. Radford.

ANTICARIES EFFECT

Restorative materials containing antimicrobial agents: is there evidence for their antimicrobial and anticaries effects? A systematic review

do Amaral GS, Negrini T *et al.* *Aust Dent J* 2016; **61**: 6–15

No study has examined if restorative materials that contain antimicrobials, exert an anticaries effect *in vivo*.

The aim of this systematic review was to determine whether or not the incorporation of antimicrobial agents into dental restorative materials, 1) exert an antimicrobial effect against cariogenic bacteria, and 2) prevent caries around restorations. Using the PRISMA guidelines (Preferred Reporting Items for Systematic Reviews and Meta-Analyses), MEDLINE (only) was searched. From the 1,126 papers that were identified, 147 were interrogated. Papers that examined the antimicrobial effect of fluoride contained within restorative materials were not included in this systematic review. Almost half the studies incorporated the putative antimicrobial agent MDPB, or chlorhexidine, or silver nanoparticles, but many other antimicrobials were tested including triclosan, furanone, glutaldehyde or sodium hypochlorite. Over three quarters of the studies reported that the materials exerted an antimicrobial effect. But the laboratory methods used to test for antimicrobial effects, although used commonly, may lack accuracy. In addition, only three *in vitro* studies examined the antimicrobial effect over a prolonged period. Of note, there were only four *in vivo* studies and one *in situ* study (under natural context, but not under natural conditions). And no studies examined as to whether or not these materials had an anticaries effect. In conclusion, although laboratory studies have shown restorative dental materials that contain an antimicrobial agent exert an antimicrobial effect, there is no evidence they can prevent caries *in vivo* or caries around a restoration.

DOI: 10.1038/sj.bdj.2016.407

FAILURE – IMPLANT SIDE

Influence of implantation side on the integration of dental implants. A study on miniature pigs

López-García M, González-Cantalapiedra A *et al.* *Int J Stomatol Occlusion Med* 2015; **8**: 41–46

'...significant differences in the bone-to-implant contact depending on the side of implantation.'

The observation made in this study, using a miniature pig animal model, confirms other reports that suggest implant failure can occur as a consequence of which side of the arch the fixture is placed. This was an incidental finding from a study examining the effect of different surface treatments for implants and loading protocols. Reasons for this observation could include surgical operating ergonomics, surgeon fatigue, or possibly patterns of animal behaviour.

DOI: 10.1038/sj.bdj.2016.409

'WEEKEND EFFECT'

Research suggests 'weekend effect' may be all in the coding. Available at:

<http://www.ox.ac.uk/news/2016-05-09-research-suggests-weekend-effect-may-be-all-coding> [Accessed 19 May 2016]

'Looking at where we are now, you could only describe it as a shambles' Peter Rothwell as reported online in the *Huffington Post* (http://www.huffingtonpost.co.uk/entry/weekend-deaths-nhs-effect-flawed_uk_57305112e4b0e6da49a677c7) [Accessed 2 June 2016]

Yet the Oxford University NEWS AND EVENTS posting, stated that this study 'has not yet been published...'. Rothwell, who was the lead investigator, reported to the media that the 'weekend effect' could be because the reasons for weekend admissions and the reasons for weekday admissions could be coded differently. An example, would be those admissions attributed to strokes. Another reason to explain the 'weekend effect', is that low risk pre-planned admissions are scheduled usually during the week.

DOI: 10.1038/sj.bdj.2016.408

IMMEDIATE LOADING

Marginal bone preservation in single-tooth replacement: a 5-year prospective clinical multicenter study

Donati M, La Scala V *et al.* *Clin Implant Dent Relat Res* 2015; **17**: 425–434

Although this study heralded that over half the implants gained bone, this was between 1 and 5 years after placement, the amounts were trivial, and this has to be balanced with loss of bone during the first year.

The principle aim of this study was to examine the success and survival of dental implants placed in the aesthetic zone when comparing immediate functional loading and those implants submerged for 3 months. The investigators used a randomised controlled clinical trial design carried out in eight different private practices in Italy. One hundred and fifty-one patients were recruited and most received a single implant, all in the aesthetic zone. The investigators conclude 'immediate functional loading protocol may be considered as a valid treatment'. Notwithstanding this, four implants in the immediate functional loading group only, failed during the first year. Although there were no differences in outcome 5 years after implant placement, almost one third of distal sites revealed 4–5 mm probing depth measurement with 3.6% of interdental sites ≤ 6 mm (see Fig. 1 in paper). Almost one fifth of interdental sites demonstrated bleeding on probing. Such has to be balanced with the observation that 52% sites showed marginal bone gain (ca. 0.1 mm) between 1 and 5 years after placement. The implant survival rate at 5 years was 95.6%. Almost one third of patients were smokers. Smoking was not associated with marginal bone loss at 5 years. Interestingly, there was an association between those implants that lost bone immediately after surgery, and those that gained bone 5 years later.

DOI: 10.1038/sj.bdj.2016.410