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.

IMPLANTS – FLAPLESS SURGERY

Outcomes of implants placed with three different flapless surgical procedures: a systematic review

Voulgarakis A, Strub JR *et al. Int J Oral Maxillofac Surg* 2014; **43**: 476–486

No conclusions, because of heterogeneity of studies.

The traditional two-stage protocol for the placement of implants involves two surgical procedures with associated drawn-out treatment. The one-stage flapless approach would therefore appear to offer advantages. However, the flapless approach is a blind procedure although 'computer-assisted navigation' and 3D guided surgery may overcome this disadvantage. But what is the outcome for implants placed using a flapless approach? The PRISMA protocol was followed. Twenty-three studies were included in this review. However, ten studies had a follow-up of less than one year and in addition many of the studies examined different implant systems, different navigation systems and different loading regimens. Only one was a randomised controlled trial. Kaplan–Meier estimators were not given. Clearly, it was not possible to carry out a meta-analysis. Despite this lack of robust data, the authors argue that flapless techniques are associated with high implant survival rates. Many papers report however, surgical and technical complications such as bone perforation and fractures of the surgical guide.

DOI: 10.1038/sj.bdj.2014.676

NARROW IMPLANTS

The influence of implant diameter on its survival: a meta-analysis based on prospective clinical trials

Ortega-Oller I, Suárez F *et al. J Periodontol* 2014; **85**: 569–580

'The Poisson regression estimates of the 5-year failure rates were 0.51% and 1.64%, respectively, for standard and narrow implants.'

Indications for the use of narrow-diameter implants include small edentulous spans and paucity of bone. But do narrow-diameter implants have as predictable outcome as standard-diameter implants? The investigators used PRISMA methodology and, to assess the quality of the studies, the NOS scale. Implants with a diameter of <3.3 mm were categorised as a narrow-diameter. The preliminary search revealed 484 articles of which 16 studies were interrogated. The meta-analysis included only papers reporting: 1) prospective human clinical studies, 2) each study had to include at least 10 implants, and 3) there were follow-up periods of one year. Failure rates were calculated by dividing the number of failures by the time that the implant was in place (the total exposure time). Narrow implants failed significantly more than standard-dimension implants. 'Interestingly, implants placed in the maxilla failed almost five times less than those placed in the mandible.'

DOI: 10.1038/sj.bdj.2014.677

IMPLANTS – FOLLOWING RADIOTHERAPY

Oral rehabilitation with dental implants in irradiated patients: a meta-analysis on implant survival

Schiegnitz E, Al-Nawas B *et al. Clin Oral Invest* 2014; **18**: 687–698

More recent literature suggests there are no differences between the survival of implants placed for patients who have had, and those who have not, received radiotherapy.

Two implant approaches are described to rehabilitate patients with head and neck cancer. One is to place the implants during or immediately after the surgery, but before radiation. Alternatively, implants can be placed some 6 to 12 months after radiotherapy. In this study, the PRISMA statement was adopted, and the question 'Is implant survival in irradiated jaw different to the non-irradiated jaw?' was examined using the P I C O principle. Five hundred and fourteen studies were identified. Only studies with a follow-up of 5 years were included in the meta-analysis ($n = 9$). There were no prospective randomised studies. Generally, over 80% of implants survived, although one study found only a third of 'immediate placement' implants survived. Of concern, 'some studies address the problem of recurrence of malignancy next to dental implants, most often via presentation of a solitary or several implant-related carcinomas.'

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IMPLANTS – PLATFORM SWITCHING

Platform switch versus platform match in the posterior mandible – 1-year results of a multicentre randomized clinical trial

Guerra F, Wagner W, *et al. J Clin Periodontol* 2014; **41**: 521–529

Too early to draw conclusions.

Serendipity played its part in the discovery of platform switching; the implant manufacturer experienced a delay in producing the matching component. As a consequence, a standard diameter prosthetic component was used to restore a wide-diameter implant. Perceptive dentists then observed that crestal bone was preserved (*Int J Periodontics Restorative Dent* 2006; **26**: 9–17). However, the efficacy of such platform switching, has not been shown consistently in animal and human studies. This paper gives the one-year results for this study scheduled for a five-year follow-up, carried out in three European centres. All patients had at least two missing units in the posterior mandible. Sixty-eight patients were allocated randomly to the platform switching group and 72 patients had their implants restored with the prosthetic component having a matching dimension. Independent student's t-tests were performed on three different time intervals for four periodontal health measurements ($n = 12$). Apart from 'surgery to 12 months' (not for the 'loading to 12 month' interval) for mean crestal bone level (-0.40 mm *vs* -0.69 mm, $p = 0.004$), there were no other differences between the platform switch and platform match approaches.

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