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Literature Abstract

Flapless versus conventional flapped dental implant surgery: A meta-analysis

This study analyzed implant failure rates, postoperative infection, and marginal bone loss in patients with dental implants inserted by a flapless surgical technique versus the open flap technique. An electronic search undertaken in March 2014 yielded 23 eligible publications for analysis, all of which included human studies. The estimates of relative effect for dichotomous outcomes were expressed in risk ratio (RR) and in mean difference (MD) in millimeters, with a 95% confidence interval (Cl). From these studies, a total of 1,648 implants were placed through flapless surgery, with 51 failures (3.09%), and 1,848 implants were placed through open flap surgery, with 32 failures (1.73%). The test for overall effect showed that the two techniques statistically affected implant failure rates with a RR of 1.75 (95% Cl: 1.07 to 2.86) for the use of flapless surgery. However, sensitivity analysis showed when studies with high risk and low risk bias were pooled separately, no significant effects of flapless surgery on the occurrence of postoperative infection (P = .96; RR: 0.96, 95% Cl: 0.23 to 4.03) or on marginal bone loss (P + .16; MD: -0.07 mm, 95% Cl: -0.16 to 0.03) were found. The authors concluded that though the different surgical techniques statistically affected implant failure, the results have to be interpreted with caution due to the limitations of this study. The lack of control of confounding factors, the presence of inherently flawed retrospective studies and the lack of data led them to believe that future double-blinded randomized controlled trials with larger patient samples will help determine the true outcome of flapless implant surgery on patient outcome variables.

Chrcanovic BR, Albrektsson T, Wennerberg A. *PLoS One* 2014; 20;9(6):e100624. doi: 10.1371/journal.pone.0100624. eCollection 2014. References: 43. Reprints: Bruno Ramos Chrcanovic, Department of Prosthodontics, Faculty of Odontology, Malmö University, Carl Gustafs väg 34, SE-205 06, Malmö, Sweden. Fax: +46 40 6658503. Email: bruno.chrcanovic@mah.se—*Teo Juin Wei, Singapore*

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