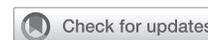


IMPLANTS

Use of prophylactic antibiotics



BACKGROUND

The prophylactic use of antibiotics for patients having implant surgery is controversial. No evidence has clearly delineated the effect of antibiotic use on early implant failure rate. In addition, the dental community is committed to reducing the use of antibiotics because of the risk of developing resistant bacterial strains. A randomized clinical trial was undertaken to determine early implant failure rates between a group of patients who received a single dose of preoperative antibiotic and a group of patients who received no antibiotic prophylaxis preoperatively.

METHODS

A total of 447 patients receiving 963 implants were randomly assigned to receive either a single dose of antibiotic 1 hour before surgery (AB group) or no antibiotic before surgery (noAB group). A total of 223 patients (535 implants) were in the AB group, and they ranged in age from 15 to 91 years (mean age 56.0 years). A total of 224 patients (428 implants) were in the noAB group, and they ranged in age from 16 to 89 years (mean age 50.8 years). The implants represented 4 commercial brands. Outcomes were evaluated 4 months after either a 1-stage or 2-stage implant procedure, all of which were performed by experienced implant surgeons. Standard protocols for implant placement were followed. Failure was defined as the removal of an implant for any reason. The failure rates of the 2 groups were compared statistically at both a patient and an implant level.

RESULTS

Failure occurred in 40 patients, with 11 in the AB group (4.9%) and 29 in the noAB group (12.9%). The implant failure rate for

the AB group was significantly lower than that for the noAB group, with rates of 2.2% versus 7.5%, respectively. Forty-four implants failed overall, with 12 in the AB group and 32 in the noAB group.

DISCUSSION

Prophylactic antibiotic use markedly improved early implant survival rate in this study. The difference between using a single antibiotic dose preoperatively and using no antibiotic was statistically significant, favoring the use of antibiotics.

Clinical Significance

Giving a single dose of antibiotic 1 hour before implant placement proved to have a significant positive effect on the outcome of implant surgery compared to not having any antibiotic. The effect was seen both at a patient level and at an implant level.

Kashani H, Hilon J, Rasoul MH, et al: Influence of a single preoperative dose of antibiotics on the early implant failure rate. A randomized clinical trial. *Clin Implant Dent Relat Res* 21:278-283, 2019

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