OBJECTIVES

An adequate zone of keratinized tissue and the gingival phenotype are both recognized as important factors for maintaining the health of implants and teeth.

The purpose of this study was:

1- to determine the influence of various combination of the width of keratinized tissue and gingival phenotype on maintaining the periodontal health of natural teeth as compared to the dental implants.

2- to determine if there is a similarity or not of the health and disease status between natural tooth and dental implant in the same patient.

MATERIALS AND METHODS

Sixty-eight patients with one implant were recruited for the study, which required an adjacent or contralateral natural tooth. Gingival phenotype is classified as thin (Tn, ≤ 1.0 mm) or thick (Tk, > 1.0 mm) and the width of the keratinized tissue as narrow (N, < 2 mm) or wide (W, ≥ 2 mm) around the implant and the contralateral natural tooth in 68 patients. Each implant and tooth was classified into one of four groups: Tn&N; Tn&W; Tk&N; Tk&W. Distribution of implant/tooth status by the four groups was determined by Fisher’s exact test. Agreement and ordered association of disease status between implants and teeth were examined by non-parametric correlation (Kendall’s tau-b test) and tests of marginal homogeneity.

RESULTS

The four combined groups are significantly associated with the health/disease status of implants (P=.023). However, the four combined groups are not statistically associated with the health/disease status of teeth (P=.436). A moderately weak, positive correlation between the status of implants and teeth was observed (Kendall’s tau-b correlation P<.001).

CONCLUSIONS

1- Wide zone of keratinized tissue (> 2.0 mm) may play a significant role for the maintenance of the health status of dental implants.

2- In presence of a narrow zone of keratinized tissue, the gingival phenotype may be critical for maintaining the health status of dental implants.

3- In the same patient, the periodontal status of natural tooth and dental implant are not necessarily the same.

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