Relative contribution of the periimplant mucosa biotype on the prevalence of mucositis. A pilot study

Paulo Fermino da Costa Neto; Lélis Gustavo Nícoli; Guilherme José Pimentel Lopes de Oliveira; José Roberto Cury Saad; Rosemary Adriana Chiéríci Marcantonio; Elcio Marcantonio Junior.

Department of Restorative Dentistry of Araraquara, Univ. Est. Paulista, Araraquara, Brazil. Department of Diagnosis and Surgery, School of Dentistry of Araraquara, Univ. Est. Paulista, Araraquara, Brazil

BACKGROUND

The periimplant diseases require great attention in the dental clinic, since it can affect the periimplant tissues leading to the loss of the implant. Some risk factors may be related to the incidence of mucositis/peri-implantitis, such as the presence of bacterial biofilm, smoking, surface characteristics of prosthetic components, history of periodontitis and radiotherapy. The width and thickness of the keratinized mucosa surrounding dental implants appear to influence the mucositis prevalence.

AIM

The aim of this study was to evaluate the influence of the width and thickness of the keratinized mucosa on the prevalence of mucositis.

MATERIALS AND METHODS

This study evaluated 162 implants that were placed in XX patients. The implants were divided in 3 groups relating with the presence and quantity of keratinized mucosa: 61 implants had no keratinized mucosa, 52 implants had a keratinized mucosa range between 0 and 2 mm of width while 52 implants had a keratinized mucosa higher than 2 mm. All the implants were submitted to the clinical evaluation for mucositis diagnosis, while the implants with periimplant bone loss were excluded of this analysis. The width and thickness of the keratinized mucosa data was evaluated and then these results were related with the presence of mucositis by chi-square test at a level of significance of 5 %.

RESULTS

It was verified that of the 162 implants evaluated, 68 presented mucositis (41.97%) and 94 presented healthy. The prevalence of mucositis was 32.78% in implants without keratinized mucosa, 47.50% in implants with keratinized mucosa up to 2 mm of width and 56.86 % in implants with keratinized higher than 2 mm. The prevalence of mucositis was 38.98% in implants associated with keratinized mucosa with thick biotype and 50% in implants associated with keratinized mucosa with a thin biotype.

The presence of a thin biotype was related with the increase of the prevalence of mucositis only in implants with absence of keratinized mucosa ($p < 0.05$). The prevalence of mucositis was higher in implants that presented a keratinized mucosa higher than 2 mm compared to implants installed in areas without keratinized mucosa.

CONCLUSIONS

In conclusion, the thin biotype influenced the prevalence of peri-implantitis only in sites with absence of keratinized mucosal. The absence of keratinized mucosa is not related to the increased prevalence of mucositis.