

The role of intra-implant microbial flora in development of early implant exposure during osseointegration.

Topalo Elvira, Mostovei Andrei, Nicolau Gheorghe, USMF „Nicolae Testemițanu,”

Introduction

The peri-implant bone loss as well as early implants exposure are widely discussed themes in the literature. Different causes of dehiscences are described, like: gingival phenotype, surgical trauma, platform level bone loss, food pressure.

Keywords

dental implants, early exposure, complications.

Purpose

Evaluation of early implant exposure frequency, around implants with antibiotic treated and non-treated platforms. The comparison of obtained data and determination of intra-implant space bacteria upon dehiscence appearance.

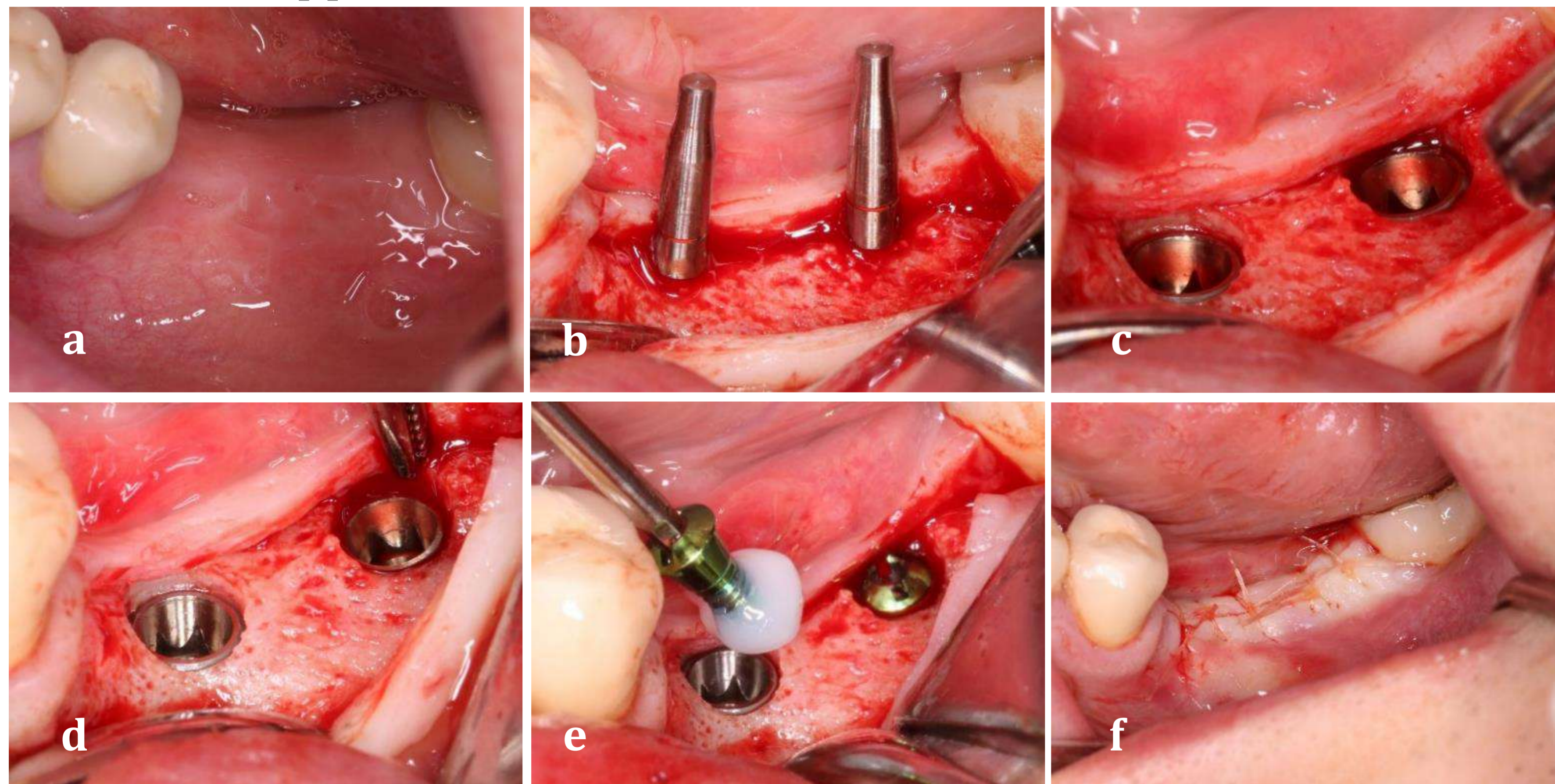


Fig.1. The method of platform sealing during implants insertion: preoperative view (a); control of drilling sites (b); platforms of implants with blood rests after insertion (c); cleaning of platform with saline solution (d); placement of cover screws with antibiotic gel (e); view after suturing (f).

Material and methods

From 491 implants conventionally installed in 214 patients, 254 were installed with saline solution platform wash (control group). In other 237, beside saline solution wash, an ointment „Levomekol”(with chloramphenicol as main active substance) was introduced into the intra-implant space (study group, **Figure 1**), before the cover screw threading.

Results

When evaluating the frequency of exposure for the number of implants, it was found that in the study group out of the total number of 237 implants exposures (according to Tal H. classification) were found in the 23 (9.7% 95%CI [5.9-13.5%]) implants, 18 of them (7.6%; 95%CI [4.2-11.0%]) – in the form of a fistula, and 5 (2.1%; 95%CI [0.3-3.9%]) – in the form of a dehiscence (**Figure 2**). In the control group out of the total number of 254 implants exposures were found at 81 implants (31.9%; 95%CI [26.2-37.6%]; of which in the form of a fistula – 58 (22.8%; 95%CI [17.7- 28.0%]), in the form of a dehiscence – 23 (9.1%; 95%CI [5.5-12.6%]).

Conclusions

The cause of early implants exposure is the inflammatory process that develops as a result of the microbial contamination of the intra-implantation space at the first surgical step. The application of antimicrobial drugs may significantly decrease the frequency of dehiscence as well as bone loss.



Fig. 2. Different types of early implants exposure, met in the Control Group.