REG. NO: RJ17D0105798 ISSN NO:252-0362

HEB JOPD

Journal of Prosthodontics Dentistry
An Official Publication of Bureau for Health & Education Status Upliftment
(Constitutionally Entitled As Health-Education, Bureau)

Microbial Leakage along Implant- Abutment interface- A Review

[1]Dr. Chetan Modgi, [2]Dr. Nitai Debnath, [3]Dr. Renu Gupta & [4]Dr. Chandan Sengupta*

[1*]Reader, Government Dental College & Hospital, Silchar, Assam – 788014
[2]Associate Professor Department of Prosthodontics Dental College, RIMS, Imphal
[3]Associate Professor Department of Periodontics Dental College, JNIMS, Imphal
[4]Assistant Professor, Yogita Dental College & Hospital, Khed, Maharashtra

Email Id: serviceheb@gmail.com

Introduction

Implant dentistry has become one of the most successful rehabilitation techniques among medical and dental specialties. Over the last 30 years, clinical evidence has shown excellent long-term results for Osseointegrated implants with success rate above 90% [1,2]. The continued success of osseointegration depends on a biologic barrier separate ng the internal from the external environment, thereby preventing the spread of organisms from the external environment to the critical implant/bone interface.

With the two-stage implant system, the abutment is retained in the implant by using a mechanical attachment method. Typically, an implant supported restoration is comprised by an endosseous implant that connects to a transmucosal abutment (2-piece), which receives the single or multiple unit prosthetic restoration. This results in gaps and cavities at the Implant Abutment Interface (IAI) acting as a bacteriological reservoir [3,4]. This may cause an inflammatory process in peri-implant tissues associated with the connective gap located near the level of the alveolar bone crest for most implant systems. Hence, microbial colonization of the gap may result in periimplantitis and bone resorption [5, 6].

The degree of bacterial penetration in a specific implant system presumably is a multifactorial condition depending on the precision of fit between implant and abutment and type of connection, type of abutment, and type of prosthesis i.e. whether screws retained or cement retained, repeated tightening of the abutment screw, use of certain devices to reduce the microbial leakage.

Bacterial leakage along implant abutment interface will be discussed under following subheadings-

1. Comparative evaluation of different implant systems in terms of bacterial leakage along the IAI.

2. Impact of method of manufacture of the implant abutment on bacterial leakage along the IAI.
3. Effect of Morse taper and locking taper system on bacterial leakage along the IAI.
4. Influence of repeated screw tightening on bacterial leakage along the IAI.
5. Comparison of the different methods of detection of bacterial leakage along the IAI.
6. Methods for the prevention of bacterial leakage along the IAI.

Access this Article Online	Quick Response Code:
Website:http://heb-nic.in/jopd	
Received on 23/04/2021	
Accepted on 06/05/2021 © HEB All rights reserved	