

Osseointegration - and how to maintain it - a clinical concept to prevent periimplantitis -

Abstract

Optimal osseointegration of dental fixtures was a major focus in early dental implant development and research. Although there are still further improvements to be expected, especially in surface modalities, apparently accelerating osseointegration, the essential mechanisms of osseointegration seem to be understood.

The challenge in today's implant therapy is pre-therapeutical planning as well as achieving post-therapeutical long-time stability of the clinical result.

A central risk factor of losing formerly established osseointegration on dental fixtures seems to be bacteria-related inflammation around the mucosa-implant interface.

Based on the knowledge of inflammation-processes and their correlations with patient-dependent risk-factors, a clinically feasible concept of reducing potential risk factors during the planning period as well as avoiding inflammation-contributing factors during the long-time maintenance will be described.

The focus will be on technical specifications of fixtures, pre-planning individual risk assessment and maintenance phase individual risk control.

A literature reviewed and evidence based maintenance concept for dental fixtures in non-risk as well as high risk patients and its application in a periodontal specialist practice will be presented.

A summary take-home-message for practicing dentists aimed at transferring the substance of this short-lecture into the future of daily dental practice will be presented.