



Dental implant complications as an increasing annoyance in prosthodontics: An overview

Sir,

Dental implant is one of the restorative methods to replace missing teeth. As implants are directly anchored and affixed into bones, they provide marked stability, a more esthetic appearance, as well as minimize the risk of alveolar bone resorption and atrophy. In today's time, dental implant surgery

has become increasingly popular treatment in dentistry and is generally considered to be a safe surgical procedure with a higher success rate.^[1,2] However, complications must be taken into consideration because they can severely affect the future clinical outcomes. Nonetheless, implant failure may be considered as the status of the implant performance that, when using some quantitative measurements, falls below an acceptable level. Consequently, this includes several clinical conditions, implant mobility, more than 0.2 mm periapical bone loss, probing depth more than 5 mm, etc. The term “failing implant” is used for an implant showing the above signs in a “slow and continuous” manner.^[1,3]

Literature has identified following major categories of complications associated with implant retained/supported prostheses: Surgical complications, implant loss, bone loss, peri-implant soft tissue complications, mechanical complications, and esthetic/phonetic complications. Implant failures associated with overloading comprise those conditions where the functional load applied to the implants exceeds the capacity of the bone to withstand it. Hsu and associates explored more than 2,087 publications and concluded occlusal overloading as primary etiological factor in biomechanical implant treatment complications, which commonly include marginal bone loss, fracture of resin/ceramic veneers and porcelain, retention device or denture base fracture of implant-supported overdentures, loosening or fracture of abutment screws, and even implant failure.^[2,4] Consequently, implant failures related to the implant and abutment interface is most likely caused by unfavorable and poor loading conditions or induced by the inadvertent prosthetic procedure. Healing phase or active osseointegration stage is most commonly assaulted by bacterial infections leading to hassle complications viz., swelling, fistulas, suppuration, and early/late mucosal dehiscence. Nevertheless, any signs of infection either early or late cannot be employed alone to determine the final fate of an implant, but should be carefully assessed using other parameters such as radiographic bony changes and mobility.^[5,6] One of the most frequently clinically noticeable sign of implant failure is mobility that can occasionally be present without any radiographic bony alteration. Initially, the concept of reverse-torque test was put forwarded to evaluate mobility at the time of primary stability; however, modern periotest instruments can better appraise the actual bony

conditions around implant. Undoubtedly, prevention is the best way to manage possible biomechanical complications and because there is only few clinical studies that simultaneously evaluate all or most of the categories of complications, authors expect some newer long-term studies to validate and set up certain clinical guidelines in this perspective.

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