Letter to Editor

Infectious risks for dental implants: An insight

Sir,

In this third millennium, dental implants have become an increasingly common and widely accepted treatment option for the rehabilitation of partially and fully edentulous patients even though failures do occur. Regardless of their placement in an infected surgical field, success rates are reported to be relatively higher. The possibility for implants to integrate with the bone can be endangered by the intra-oral presence of bacteria and associated inflammatory reactions. Moreover, the durability of such implants can be further compromised by occlusal overload, plaque-induced peri-implantitis, depending on the implant geometry and surface characteristics. Long-term studies indicate that peri-implantitis is characterized by the bacterial analogous to that of periodontitis (Gram-negative rods, motile organisms and spirochetes).[1,2] Maintenance of periodontal optimal health, use of a comparatively smooth abutment and implant surface are some of the basic factors necessary to check bacterial ingress into the peri-implant pockets. Smoking and other periodontitis-enhancing habits must also be thoroughly scrutinized and stopped to reduce implant failure.

Signs of infections during the healing period of submerged second-stage implant can also be restricted to the soft tissues. The most commonly accounted causes are suture remnants, loosely fitted cover screw, an overhanging implant or trauma from occlusion.[3] The geometrical configuration and surface texture of an implant have variable effects on the peri-implant microbial flora of the oral environment. Whether osseo-integration is at risk depends on the defense mechanism, the duration of the infection, the implant design and its surface characteristics. Indeed, some implants seem to be more at risk for occlusal overload, while other systems are more prone to plaque build-up.[4]

Implants in partially edentulous patients will easily be colonized by suspected periodontal pathogens. Therefore, it seems mandatory that every partially edentulous patient undergo suitable periodontal screening and treatment prior to placement of dental implants and is sustained on an individualized recall schedule for supportive periodontal therapy afterwards. Conversely, it is still a matter of debate whether a past history of periodontitis is an important risk factor for implant success. This letter is an attempt to enlightenclinicians about the role of micro-bacterial infection and its downbeat effect on long-term implant success. I hope it would encourage a more detailed analysis of the implant microbiology, treatment outcomes and assist in the establishment of clinical guidelines in implant placement and pharmacological and surgical management of implant-associated infections.

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