

# Current interpretations and scientific rationale of the implant-supported dental prostheses: A clinical perspective

Sir,

Partial or complete edentulous patients can have considerable difficulties using their conventional dentures due to a lack of retention, support, and stability and the related compromise in chewing ability. The treatment options to manage completely edentulous patients are either a complete denture or an implant-supported prosthesis. Implant-supported prostheses have undergone a slow but steady growth during the last 30 years. Moreover, as a result of continued research in dental implant designs, materials and techniques, predictable success is now a reality for the rehabilitation of many challenging clinical situations.<sup>[1]</sup>

The term osseointegration is defined as “an apparent direct connection of an implant surface to host bone without intervening connective tissue.” Simply using an implant that is manufactured by a specific company does not ensure that the implant becomes “osseointegrated”. The bone to implant connection is dependent upon diagnosis, treatment planning, sterilization techniques, a traumatic surgery, proper implant-surface preparation, undisturbed healing, and controlled force application. The previously documented success rates are dependent upon strict adherence to proper technique. When considering implant applications, the use of all appropriate diagnostic data is imperative. Medical consultations are used to determine any systemic problems that may interfere with healing or with the patient’s ability to accept the proposed treatment and maintain adequate oral hygiene.<sup>[2-4]</sup>

Radiographic evaluation must be thorough and appropriate; however, the routine use of sophisticated radiographic techniques, such as CT, is no better than the underuse of standard less elaborate techniques. Because implant placement is critical, every effort is made to ensure that the location and angulation of implants will provide for the favorable distribution of functional forces. Articulated diagnostic casts are invaluable in such a determination. Diagnostic casts mounted with an accurate record of centric jaw relationships and maxillo-mandibular occlusion on a semi-adjustable articulator provide a multitude of information related to treatment, all of which influences the final prosthodontic treatment plan.<sup>[5-7]</sup> Surgical guides to implant

placement will assist the surgeon to create biomechanically sound implant locations. It dictates to the surgeon the implant body placement that offers the best combination of support for the repetitive forces of occlusion, esthetics, and hygiene requirements. Patient expectations should be realistic.<sup>[8]</sup> There is no universal remedy for the treatment of all dental disease. Conversely, implant prostheses can be used to restore function and facial appearance, but they cannot be expected to turn back the hands of time. Appropriate patient counseling prior to surgery will avoid the possibility of annoying interpersonal conflicts at the time of insertion of the prosthesis.

**Prince Kumar**

*Department of Prosthodontics, Shree Bankey Bihari Dental College, Ghaziabad, Uttar Pradesh, India*

**Address for correspondence:**

*Dr. Prince Kumar,*

*Department of Prosthodontics, Shree Bankey Bihari Dental College, Ghaziabad - 201 302, Uttar Pradesh, India.*

*E-mail: princekumar@its.edu.in*

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