Long-term clinical success in the management of compromised intertooth spaces utilizing small-diameter implants

By Paul S. Petrungaro, DDS, MS

Management of edentulous sites in the oral cavity with dental implants has been well documented in dental literature during the past 25 plus years. Patients seeking tooth replacement for partial or totally edentulous situations have been able to enjoy natural appearing and functioning prosthesis that are fixed, stable and, in some cases, so natural it’s difficult to ascertain a dental implant restoration from a tooth restoration. Using dental implants to replace the natural tooth system in the edentulous zone has also seen an increase in restorative treatment plans and, with the advent and perfection of immediate restoration protocols initially reported in the literature, achieving natural soft tissue esthetics around dental implants can be predictable and successful. However, certain clinical situations can complicate or negate the procedure altogether.

One of these complications is insufficient intertooth spacing between natural teeth and, most commonly, with congenitally missing lateral incisors following orthodontic treatment. Often as a solution to this, the dentist chooses a removable partial denture as the optimal interim approach. In these cases, support for partially edentulous sites is a must for the remainder of the implant team. These spaces have compromised intertooth spaces. The management of compromised intertooth spaces presents a challenge for the contemporary dental implant team. These spaces have limitations on how wide and require implants 5.0 mm wide or less, as was demonstrated in the text of this article. Availability of smaller-diameter implants allows patients who normally would have to proceed with a fixed bridge or resin-bonded bridge, the luxury of dental implants with no preparation and/or reduction to the adjacent natural dentition.

Proper placement procedures and restorative techniques can lead to very esthetic results, allowing for natural tissue contours and emergence profile formation, reminiscent of the natural tooth.

Conclusion

The management of compromised intertooth spaces presents a challenge for the contemporary dental implant team. These spaces have limitations on how wide and require implants 5.0 mm wide or less, as was demonstrated in the text of this article. Availability of smaller-diameter implants allows patients who normally would have to proceed with a fixed bridge or resin-bonded bridge, the luxury of dental implants with no preparation and/or reduction to the adjacent natural dentition.

References


Fig. 1. Preoperative clinical view. (Photos/Provided by Dr Paul S. Petrungaro)

Fig. 2. Preoperative periapical radiograph.

Fig. 3. Ovate pontic type defect created.

Fig. 4. Denatus ANEW implant seated minimally invasive protocol.

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