A Case Against the Implant

It is incumbent upon our profession to reevaluate our preference for routinely replacing a missing single maxillary incisor, especially a maxillary lateral incisor, with a dental implant in a young adult. The dental literature is replete with beautiful restorative results using implants in this area, but there is minimal discussion regarding the long-term consequences of this treatment. The maxillary lateral incisor is one of the most commonly missing teeth due to agenesis, and it is also one of the most common teeth to be lost due to trauma in the developing child.[1] Therefore, the decision for replacement must be made with the long-term in mind, as these restorations are commonly placed between ages 18 and 21 and must serve the patient for many decades.

There are several reasons that implants can be associated with complications or even fail, including the following: *(1)* Continued craniofacial growth, which has a predominant anterior and vertical component and has been shown to occur in the maxilla, resulting in the apparent submersion of the implant crown as the natural teeth move incisally in relation to the implant[2,3]—there is no evidence that this can be predicted, let alone how far into the future it may happen; *(2)* peri-implantitis, which has a patient-level prevalence estimate of nearly 25% according to the findings of a recent systematic review[4]; *(3)* thinning and recession of the peri-implant mucosa due to poor implant placement, inadequate prosthetic management, and/or poor case selection, often resulting in compromised esthetics and a predisposition for the onset and progression of peri-implant diseases; and *(4)* mechanical failure of the implant, abutment screw, transmucosal abutment, and/or crown. Clinicians should also keep in mind that, once an implant is placed in the anterior maxilla, it precludes the possibility for palatal expansion in the adult patient because the space created by the expansion cannot be redistributed orthodontically.

Canine substitution is one traditional method for replacement of the missing maxillary lateral incisor. It is still a viable option when the canine tooth has an acceptable shape and color, and the occlusion will not be compromised by the substitution.[5] Additionally, the bonded single-wing zirconia bridge has become a primary treatment option.[6] Zirconia has the strength of metal and beauty of porcelain, which makes it an ideal substrate for a bonded bridge. The literature has demonstrated the long-term success of this replacement option for the missing maxillary incisor.[7]

There are clearly many potential long-term disadvantages associated with replacing a single missing maxillary incisor with an implant in young adults. We should be

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prescribing the least-invasive treatment option for the replacement of these teeth. Therefore, when treatment-planning for a missing maxillary incisor in a young adult, alternatives to implant therapy—such as the bonded single-wing zirconia bridge and canine substitution—should be the primary treatment options. The implant should only be considered as a secondary treatment option when the other options are not viable or have previously failed.

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