

Saving teeth versus dental implant replacement: A concerning trend



I have observed a concerning trend in dental implant treatment planning. Many clinicians are abandoning saving teeth in favour of performing extractions for full-arch implant restorations. The All-on-X approach is being overutilised in my view, and in some cases it is an aggressive and irreversible decision. Although it may be justified in some instances, treatment plans should be individualised for each patient. It is critical to weigh up the risks versus benefits when making these types of treatment plan. Many patients have compromised teeth due to poor oral hygiene, erratic compliance with routine maintenance recall, smoking or active periodontitis. These are also risk factors for future peri-implantitis. We should carefully consider maintaining compromised teeth, and rather replace segments of missing or failing dentition with dental implants.

The erroneous opinion that dental implants provide a better long-term prognosis than natural teeth has been challenged by several comparative studies and systematic reviews.¹ Natural teeth compromised by periodontitis or endodontic problems may well have a longevity that exceeds that of the average implant.²⁻⁴ Several studies have found that in clinically well-maintained patients, the rate of tooth loss was lower than that of dental implants.^{5,6}

From an economic perspective, periodontal regeneration and rehabilitation of the dentition are often more cost-effective for the patient than replacement with dental implants.^{7,8} The cost of extractions, bone grafting, dental implant placement and full-arch implant prosthetic treatment can be significant. When deciding whether to preserve periodontally compromised teeth or perform extraction for implant placement, the cost of maintaining implants or treating complications may surpass that of maintaining periodontally compromised teeth.^{9,10} Although teeth with periodontitis or apical infections can be conserved successfully with high predictability, the same does not apply to dental implants with peri-implantitis. Disease resolution is generally unpredictable and infrequently achieved after peri-implantitis treatment.¹¹

Patients with severe periodontitis have compromised alveolar bone support to the degree that the dentition has a poor prognosis. This is particularly true for patients with poor oral hygiene or non-compliance with routine maintenance recall visits. Other factors, such as smoking and diabetes, increase the risk of progressive or refractory periodontitis.¹² When the majority of teeth in an arch are severely compromised with advanced periodontitis, full-arch extractions may well be justified; however, the clinician must consider whether the patient will be motivated to maintain their dental implants if they already displayed poor compliance with regard to maintaining their own teeth. The progression of peri-implantitis appears to be faster than that of periodontitis.¹³ In addition, peri-implantitis has a more extensive inflammatory infiltration and greater severity of bone loss. Due to the soft tissue anatomy, bone loss around implants tends to be circumferential versus isolated. Teeth become mobile with attachment loss, but implants remain immobile until failure. As such, many implant patients remain asymptomatic until their implants develop severe bone loss that is not treatable. Patients generally have a poor understanding of peri-implantitis and its impact. It is important to develop standardised information brochures to educate patients on risk factors for and indicators of the disease to assist in its prevention.¹⁴

Many adult patients are prescribed medications that cause xerostomia.¹⁵ Reduced salivary flow lowers the buffering of plaque acid, making the teeth more susceptible to caries formation. Many patients are not aware that their diet plays a more significant role than oral hygiene in the development of dental decay. Furthermore, if attachment loss and gingival recession have occurred, exposing the root surface, susceptibility to caries also increases. Educating such patients on their cariogenic diet, which contains nutrients such as refined carbohydrates and sugars, is critical to controlling tooth decay. The use of a prescription fluoride toothpaste as well as in-office fluoride treatments may help them to maintain

their teeth¹⁶; however, this may risk the development of decay and increase the likelihood of additional implants needing to be placed in the future. In the case of rampant caries with xerostomia, it may be prudent to more often consider a full-arch implant-supported prosthesis.

Extensive bone removal is frequently performed to obtain prosthetic space for the full-arch implant-supported prosthesis. This may have negative consequences if the patient develops progressive peri-implantitis and implant failure. In many cases, it may become necessary to reconstruct the maxilla or mandible if the patient prefers to receive new implants for another full-arch fixed prosthesis. This requires additional time and cost, and has lower predictability than placing implants in native bone. In the maxilla, the use of quad zygoma implants, basal implants or custom subperiosteal implants may be an alternative to bone augmentation.

Planning for a Fixed Prosthesis 1 (FP1) implant prosthesis that replaces the anatomical tooth form is a more conservative and less invasive approach; however, implant positioning is more critical, so use of a surgical guide is mandatory. Another advantage of the FP1 design is that the replacement of the dentition may be fabricated in two or three segments instead of a one-piece full-arch prosthesis.¹⁷ It may also provide a prosthesis that is easier for the patient to maintain than a bulkier Fixed Prosthesis 3 (FP3) prosthesis replacing the teeth, gingiva and alveolar bone.

Clinicians should consider saving teeth as a viable option instead of performing extraction for full-arch implant replacement in many cases. Treatment decisions need to become more personalised to ensure that patients receive tailored solutions that address their unique oral health needs, concerns and desires.



Craig M Misch, DDS, MDS
Editor in Chief

References

1. Giannobile W, Lang N. Are dental implants a panacea or should we better strive to save teeth? *J Dent Res* 2016;95:5–6.
2. Lang NP, Zitzmann NU; Working Group 3 of the VIII European Workshop on Periodontology. Clinical research in implant dentistry: Evaluation of implant-supported restorations, aesthetic and patient-reported outcomes. *J Clin Periodontol* 2012;39(suppl 12):133–138.
3. Salvi GE, Mischler DC, Schmidlin K, et al. Risk factors associated with the longevity of multi-rooted teeth. Long-term outcomes after active and supportive periodontal therapy. *J Clin Periodontol* 2014;41:701–707.
4. Klinge B, Flemming T, Cosyn J, et al. The patient undergoing implant therapy: summary and consensus statements. The 4th EAO Consensus Conference 2015. *Clin Oral Implants Res* 2015;26(suppl 11):64–67.
5. Tomasi C, Wennström JL, Berglundh T. Longevity of teeth and implants – A systematic review. *J Oral Rehabil* 2008;35(suppl 1):23–32.
6. Guarnieri R, Di Nardo D, Di Giorgio G, Miccoli G, Testarelli L. Longevity of teeth and dental implants in patients treated for chronic periodontitis following periodontal maintenance therapy in a private specialist practice: A retrospective study with a 10-year follow-up. *Int J Periodontics Restorative Dent* 2021;41:89–98.
7. Cortellini P, Stalpers G, Mollo A, Tonetti MS. Periodontal regeneration versus extraction and dental implant or prosthetic replacement of teeth severely compromised by attachment loss to the apex: A randomized controlled clinical trial reporting 10-year outcomes, survival analysis and mean cumulative cost of recurrence. *J Clin Periodontol* 2020;47:768–776.
8. Sartoretto SC, Shibli JA, Javid K, et al. Comparing the long-term success rates of tooth preservation and dental implants: A critical review. *J Funct Biomater* 2023;14:142.
9. Nagpal D, Ibraimova L, Ohinmaa A, Levin L. The cost-effectiveness of tooth preservation vs implant placement in severe periodontal disease patients: A systematic review. *Quintessence Int* 2024;55:76–85.
10. Afrashtehfar KI, Assery NM, Alblooshi KAK, Schmidlin PR. Maintaining periodontally compromised teeth seems more cost-effective than replacing them with dental implants. *Evid Based Dent* 2024;25:129–130.
11. Garaicoa-Pazmino C, Couso-Queiruga E, Monje A, Avila-Ortiz G, Castilho RM, Amo FSLD. Disease resolution following the treatment of peri-implant diseases: A systematic review. *Int J Periodontics Restorative Dent* 2025;45:115–133.
12. Jepsen S, Caton JG, Albandar JM, et al. Periodontal manifestations of systemic diseases and developmental and acquired conditions: Consensus report of workgroup 3 of the 2017 World Workshop on the Classification of Periodontal and Peri-Implant Diseases and Conditions. *J Periodontol* 2018;89(suppl 1):S237–S248.
13. Schwarz F, Derks J, Monje A, Wang HL. Peri-implantitis. *J Clin Periodontol* 2018;45(suppl 20):S246–S266.
14. Insua A, Monje A, Wang HL, et al. Patient-centered perspectives and understanding of peri-implantitis. *J Periodontol* 2017;88:1153–1162.
15. Tan ECK, Lexomboon D, Sandborgh-Englund G, Haasum Y, Johnell K. Medications that cause dry mouth as an adverse effect in older people: A systematic review and meta-analysis. *J Am Geriatr Soc* 2018;66:76–84.
16. Ekstrand KR. High fluoride dentifrices for elderly and vulnerable adults: Does it work and if so, then why? *Caries Res* 2016;50(suppl 1):15–21.
17. Gallucci GO, Avrampou M, Taylor JC, Elpers J, Thalji G, Cooper LF. Maxillary implant-supported fixed prosthesis: A survey of reviews and key variables for treatment planning. *Int J Oral Maxillofac Implants* 2016;31(suppl):s192–s197.