

# Management of a Nontreatable Mandibular Anterior Tooth

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**Learning Objectives:** After reading this article, the individual will learn: (1) interdisciplinary management of a severe bony defect in the anterior mandible, and (2) specific treatment to re-establish function, aesthetics, and speech after removal of a nontreatable mandibular anterior tooth.

## About the Authors



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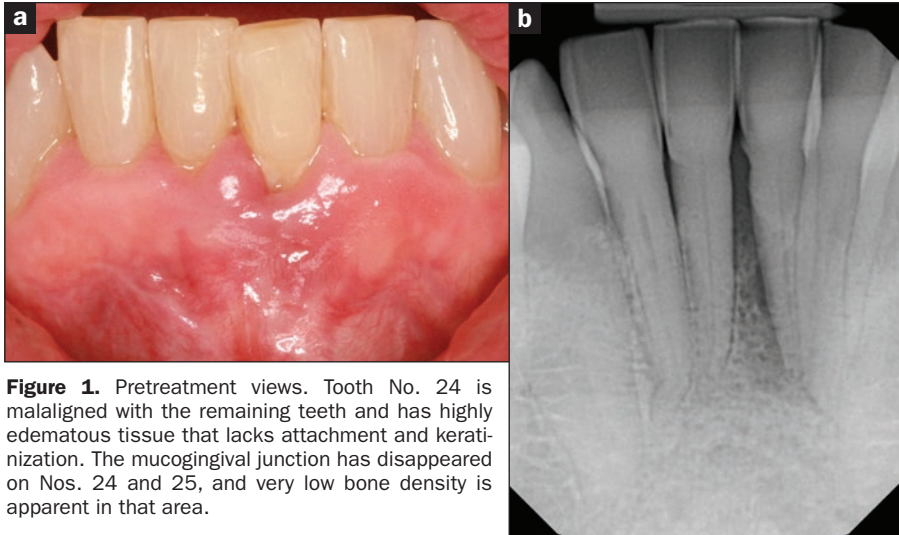
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Periodontal disease is an inflammatory condition affecting the supporting structure of teeth that leads to the formation of pockets, which promotes pathologic changes and, ultimately, bone resorption and tooth loss.<sup>1</sup> Many teeth are lost due to periodontal disease or caries, in addition to trauma or congenital absence.<sup>2</sup> Tooth loss caused by chronic periodontal disease creates challenges for clinicians, because sufficient bone volume may not be present to support an implant.<sup>3</sup> More challenges can be expected if the periodontal disease was severe and caused the involved tooth to become nontreatable; that is, bone loss greater than half of the root length, bleeding on probing, suppuration, deep probing, and even Class III mobility. If this takes place in the anterior mandible, the limited space for reconstruction presents an additional challenge. In the case report presented, the patient had severe periodontal disease in the anterior mandible; therefore, re-establishment of aesthetics, as well as function and speech, was important.

The etiology of periodontal disease is bacterial plaque in a susceptible host.<sup>4,5</sup> The presented patient had undergone multiple treatments, but the outcome was poor because conventional cleaning had been ineffective owing to the deep pockets.<sup>6</sup> Supragingival plaque management cannot control the subgingival environment<sup>7</sup> and leaves the area susceptible to breakdown of the supporting structures, although locations of further periodontal breakdown are not always predictable.<sup>8,9</sup> An 8-year follow-up study showed that patients require periodontal maintenance, even if they have excellent oral hygiene.<sup>10</sup>

Although periodontal disease is not life threatening, it needs to be detected and treated in a timely manner to reduce the rate of bone loss for involved and neighboring teeth. Dental implants have an excellent long-term survival rate, especially in the mandible, as a replacement for missing teeth.<sup>11</sup> Alveolar ridge augmentation is a viable means of reconstructing defects caused by periodontal disease prior to implant therapy.<sup>12</sup> Retrospective 5- and 7-year clinical studies of single-tooth mini implant restorations showed that this method was a successful solution for functional and aesthetic challenges where space problems limited the use of standard- or wide-diameter implants.<sup>13,14</sup> A reduced implant diameter (mini implant) did not compromise their performance; Hirata et al<sup>15</sup> concluded that mini implants are safe as single crowns in the anterior region. Another study<sup>16</sup> showed that narrow implants protect peri-implant crestal bone. Osseointegration and crestal bone loss were the same for narrow and mini implants, and implant diameter did not influence crestal bone loss. Mini implants have also been shown to be a viable means for long-term prosthodontic support. Gleiznys et al<sup>17</sup> concluded that mini

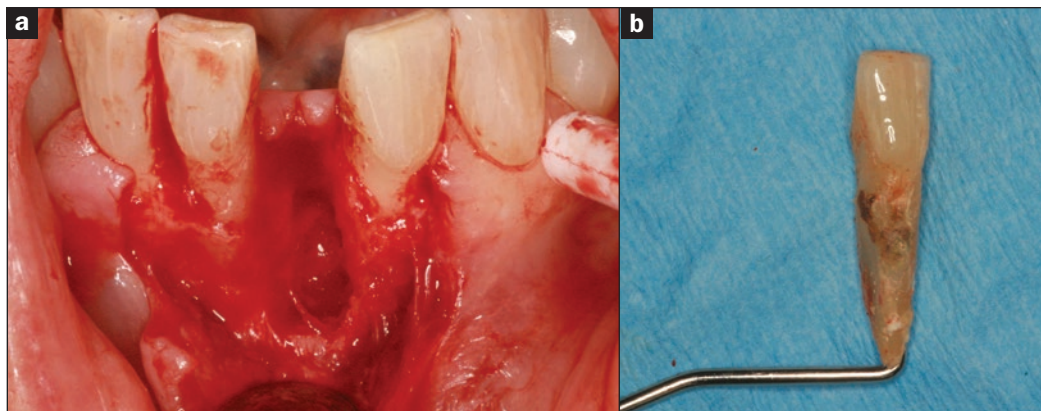
## Management of a Nontreatable Mandibular Anterior Tooth



**Figure 1.** Pretreatment views. Tooth No. 24 is malaligned with the remaining teeth and has highly edematous tissue that lacks attachment and keratinization. The mucogingival junction has disappeared on Nos. 24 and 25, and very low bone density is apparent in that area.



**Figure 2.** Flap elevation disclosed significant bone loss on No. 24 and moderate bone loss on Nos. 23 and 25. Heavy subgingival calculus was detected, which could not be seen on radiographs or removed prior to elevation of the flap.



**Figure 3.** A large bony defect was observed following removal of No. 24. The bony defect extended well beyond the apex of No. 24 vertically and measured 4 mm horizontally. Root discoloration with calculus can be seen on the extracted tooth.

implants can be used successfully in a variety of clinical situations. Their advantages include reduction in surgical time, less postoperative pain, capacity to withstand direct loading after surgery with no harm to bone, and lower cost.

The purpose of this article is to present a case report describing the interdisciplinary management of a severe bony defect that resulted from the removal of a nontreatable mandibular anterior tooth. Treatment to re-establish function, aesthetics, and speech involved placement of a dental implant. The presentation provides documentation of the clinical, photographic, radiographic, and 3-dimensional images of the case.

### CASE REPORT

A 65-year-old female was referred to our office for treatment of

*The patient had severe periodontal disease in the anterior mandible; therefore, re-establishment of aesthetics, as well as function and speech, was important.*

a periodontal abscess, which had formed in time while other types of nonsurgical treatment were accomplished. Scaling and root planing, laser therapy, Water Pik (Waterpik), systemic antibiotics, and local delivery of medication (Arestin [Valeant Pharmaceuticals]) had not resolved the deep pocket associated with tooth No. 24 (mandibular left central incisor). Clinical and radiographic evaluation of the tooth disclosed a missing facial plate, deep probing, bleeding on probing, purulent exudate, labial positioning, and Class II mobility (Figure 1). Therefore, tooth No. 24 was diagnosed as hopeless and tooth No. 25 (the mandibular right central incisor) as guarded.

The patient was premedicated with amoxicillin (500 mg orally, 3 times daily), an analgesic (ibuprofen 600 mg, 3 times daily as needed), anti-inflammatory medication (Medrol

# Management of a Nontreatable Mandibular Anterior Tooth



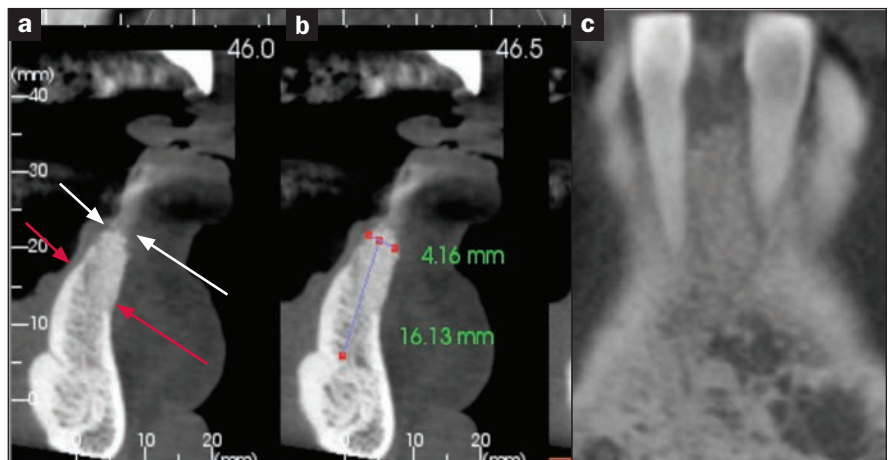
**Figure 4.** The defect was reconstructed with freeze-dried bone allograft and a titanium-reinforced Cytoplast Barrier Membrane (Osteogenics Biomedical). The site was secured with polytetrafluoroethylene sutures, and an Essex retainer was delivered for provisional replacement of the missing No. 24.



**Figure 5.** (a) Facial, (b) occlusal, and (c) surgical views 5 months after ridge augmentation. Significant faciolingual bone gain (4 to 5 mm) can be observed in the occlusal view.

Dosepak [methylprednisolone oral], and chlorhexidine rinse (Acclean 0.12% oral rinse USP [Henry Schein], twice daily). Vertical incisions were made from the distal aspect of tooth No. 23 and extended to the mesial aspect of tooth No. 26 to provide access to the bone and tooth root at No. 24. A No. 15 blade (Carbon Steel [Benco Dental]) was used for the intrasulcular incision and the 2 vertical incisions. Elevation of the flap extended beyond the mucogingival junction to enable proper debridement of the bony defect and to facilitate ridge augmentation, which requires coronal advancement of a flap (Figure 2). Reflection of the flap disclosed absence of the buccal plate at No. 24, a paper-thin buccal plate at No. 25, and moderate bone loss at No. 23. Heavy subgingival calculus was observed on the facial aspect of No. 24 approaching the apex of the tooth (Figure 2).

Tooth No. 24 was removed (Figure 3), disclosing a large (4- x 10-mm) bony defect. This was debrided to the extent that only bare bone could



**Figure 6.** Composite cross-sectional and anterior views of the grafted site (5 months post-augmentation). Significant gains are apparent. More height was gained on the facial than the lingual aspect. Replacement of No. 24 with a narrow-diameter (1.8-mm) implant of about 14 mm in length was planned. The red arrows indicate the clear demarcation between native cortical bone (high density) and grafted bone (low density). The white arrows show the gain in the vertical dimension from the red arrows.

## Management of a Nontreatable Mandibular Anterior Tooth

be seen, and no bleeding was apparent following degranulation of all necrotic soft tissue. The area was reconstructed with freeze-dried bone allograft (Maxxeus Dental Cortical Bone, Ref DN025), and a nonresorbable titanium-reinforced Cytoplast Barrier Membrane (Osteogenics Biomedical) was fitted over the graft from the lingual aspect of the interproximal area extending to 3 mm beyond the facial apex of No. 24 (Figure 4). The facial flap was advanced coronally to cover the membrane and secured into position with single interrupted 4.0 monofilament sutures (Cytoplast polytetrafluoroethylene [Osteogenics Biomedical]). This treatment helped stabilize and save the adjacent teeth, in addition to rebuilding the lost jawbone. An Essex retainer was used for provisional restoration (Figure 4).

Three months later, the nonresorbable membrane was removed because of premature exposure, and the area was allowed to heal to ensure complete soft-tissue remodeling and closure. Five months post-extraction, the bone available for implant insertion was evaluated clinically and radiographically (Figures 5 and 6). Conventional radiographs did not provide a comprehensive picture of the existing hard- and soft-tissue volume 5 months after ridge augmentation; thus, computed tomography was performed, which disclosed significant gains in both the horizontal and vertical dimensions (Figure 6). The gain in height was greater on the facial than on the lingual aspect. Clear demarcation of native cortical bone (high density) and grafted bone (low density) was apparent (Figure 6). The gain was 4 mm in the horizontal direction and 8 mm in the vertical dimension. The density of the bone at the time of implant placement was Type III.<sup>18</sup> Based on these images, replacement of tooth No. 24 was treatment planned for a narrow-diameter (1.8-mm) implant (Anew [Dentatus]) of about 14 mm in length (Figure 7).

The definitive crown was delivered one year after extraction and ridge augmentation (Figure 8). Both the patient and the treating clinicians are happy with the result.

### DISCUSSION

The interdisciplinary approach in this case involved delicate management of bone and soft tissue, followed by placement of an implant in a limited space and delivery of a crown, which was constructed by the restorative doctor. The significant vertical and horizontal augmentation achieved with allograft



**Figure 7.** Anew (Dentatus) implant in place at 6 months post-insertion. The site displays grafted bone that is continuous with the native bone. A 1.8- × 14-mm implant was placed in 4 mm of native bone and 10 mm of grafted bone. Primary stability was achieved in native bone.



**Figure 8.** The definitive implant-supported prosthesis in place at 18 months post-extraction and ridge augmentation.

enabled insertion of a 14-mm-long implant where minimal bone had been present at the time of extraction.

Periodontal patients are at a higher risk of failure or complications related to implant treatment, and periodontitis affects at least 50% of adults.<sup>7</sup> Therefore, it is important to take special care with the management of implants in these patients.<sup>19,20</sup> The type of bacteria found in the sulci of implants is influenced by the bacteria that are present on the surfaces of the remaining teeth. Periodontally compromised patients harbor more motile rods and spirochetes than healthy or edentulous individuals.<sup>21,22</sup> Tizzoni et al<sup>23</sup> strongly recommended that the disease process be brought under control *before* implant insertion in patients with severe chronic periodontitis. They also stressed, like Ramfjord et al,<sup>10</sup> that a regular maintenance program is essential to the health of periodontal and peri-implant tissues. According to Nowzari et al,<sup>24</sup> the facial alveolar bone in the area of the maxillary central incisors is very thin (less than 2 mm) in 97% of normal healthy patients. However, in periodontal patients, the buccal plate is even thinner or may be absent, and buccal

# Management of a Nontreatable Mandibular Anterior Tooth

wall defects must be managed properly before placement of an implant,<sup>3</sup> as was done in the current patient.

Although it is becoming common to place implants into fresh extraction sockets to reduce treatment time and preserve anatomical structures,<sup>25</sup> in this patient we did not carry this out because of the large post-extraction defect. The defect had to be augmented in both height and width to accommodate an implant and to improve the prognoses of the adjacent teeth. Machtei et al<sup>26</sup> observed that retained hopeless teeth with untreated periodontal disease displayed 10 times more bone loss on adjacent teeth than when the hopeless tooth was removed. Studies show that following extraction of anterior teeth, in the first 2 years alone, an average of 40% to 60% of the bony ridge may be lost because of resorption.<sup>27,28</sup>

Our patient had localized severe chronic periodontal disease, which resulted in a Seibert Class III ridge deficiency, because the tissue loss was both horizontal and vertical. Gita and Chandrasekaran<sup>29</sup> used a chin graft to repair a similar defect, but this approach involves additional operative time and morbidity at the donor site, in contrast to our use of allograft. Another group<sup>30</sup> treated a Seibert Class III defect with collagen-based material; they sutured this to the existing labial flap, advanced the whole flap, and replaced the missing tooth with a traditional fixed prosthesis. However, this was not an ideal solution aesthetically. Our patient sought to regain masticatory function, speech, and aesthetics with a personalized and predictable treatment plan.

Pasquinelli<sup>31</sup> recommended that proper diagnosis and multidisciplinary treatment are essential if a predictable result is expected. Faiella<sup>32</sup> stated that consultations with professionals in other disciplines will prevent treatment failure and unhappy patients. The multidisciplinary approach used in our patient is just one example of true commitment by dental professionals to the best outcomes for their patients.

## CONCLUSION

One year after implant insertion, radiographs showed that periodontal-prosthetic therapy enabled successful restoration of function in this patient, who is very happy with the outcome. Site No. 24 showed preservation of the grafted alveolar ridge, with no signs of inflammation. The implant was inserted in almost 4 mm of native bone, which provided adequate primary stability.

This case is a good example of team dentistry where close cooperation among professionals enables delivery of outstanding results. Patients expect personalized, preventive, and predictable care. Just like natural teeth, implants need maintenance; therefore, every patient's recall schedule should be individualized. This includes the length of maintenance appointments. Variable factors include but are not limited to the level and efficacy of

home care, systemic disease, compliance with the recommended 3-month recalls, patient cooperation, history of periodontitis or occlusal trauma, and access to instrumentation. In general, patients who will lose their front teeth are concerned about the predictability, alternatives, pain, and costs involved with tooth replacement. Close collaboration among professionals during diagnosis, planning, treatment, and follow-up is essential in order to achieve the desired outcome. ♦

## References

1. Pradeep AR, Karvekar S, Nagpal K, et al. Efficacy of locally delivered 1.2% rosuvastatin gel to non-surgical treatment of patients with chronic periodontitis: a randomized, placebo-controlled clinical trial. *J Periodontol*. 2015;86:738-745.
2. Adell R, Eriksson B, Lekholm U, et al. Long-term follow-up study of osseointegrated implants in the treatment of totally edentulous jaws. *Int J Oral Maxillofac Implants*. 1990;5:347-359.
3. Snyder MB. Treatment of a large postextraction buccal wall defect with mineralized allograft,  $\beta$ -TCP and rhPDGF-BB: a growth factor-mediated bone regenerative approach. *Int J Periodontics Restorative Dent*. 2012;32:705-711.
4. Page RC, Offenbacher S, Schroeder HE, et al. Advances in the pathogenesis of periodontitis: summary of developments, clinical implications and future directions. *Periodontol* 2000. 1997;14:216-248.
5. Michalowicz BS, Diehl SR, Gunsolley JC, et al. Evidence of a substantial genetic basis for risk of adult periodontitis. *J Periodontol*. 2000;71:1699-1707.
6. Axelsson P, Nyström B, Lindhe J. The long-term effect of a plaque control program on tooth mortality, caries and periodontal disease in adults. Results after 30 years of maintenance. *J Clin Periodontol*. 2004;31:749-757.
7. Artese HP, Longo PL, Gomes GH, et al. Supragingival biofilm control and systemic inflammation in patients with type 2 diabetes mellitus. *Braz Oral Res*. 2015 Jun 2. [Epub ahead of print]
8. Kho P, Smales FC, Hardie JM. The effect of supragingival plaque control on the subgingival microflora. *J Clin Periodontol*. 1985;12:676-686.
9. Becker W, Becker BE, Berg LE. Periodontal treatment without maintenance. A retrospective study in 44 patients. *J Periodontol*. 1984;55:505-509.
10. Ramfjord SP, Morrison EC, Burgett FG, et al. Oral hygiene and maintenance of periodontal support. *J Periodontol*. 1982;53:26-30.
11. Mangano F, Shibli JA, Sammons RL, et al. Clinical outcome of narrow-diameter (3.3-mm) locking-taper implants: a prospective study with 1 to 10 years of follow-up. *Int J Oral Maxillofac Implants*. 2014;29:448-455.
12. Tamimi F, Torres J, Al-Abedalla K, et al. Osseointegration of dental implants in 3D-printed synthetic onlay grafts customized according to bone metabolic activity in recipient site. *Biomaterials*. 2014;35:5436-5445.
13. Vigolo P, Givani A. Clinical evaluation of single-tooth mini implant restorations: a five-year retrospective study. *J Prosthet Dent*. 2000;84:50-54.
14. Vigolo P, Givani A, Majzoub Z, et al. Clinical evaluation of small-diameter implants in single-tooth and multiple-implant restorations: a 7-year retrospective study. *Int J Oral Maxillofac Implants*. 2004;19:703-709.
15. Hirata R, Bonfante EA, Anchieta RB, et al. Reliability and failure modes of narrow implant systems. *Clin Oral Investig*. 2015 Nov 3. [Epub ahead of print]
16. Calvo-Guirado JL, Pérez-Albacete C, Aguilar-Salvatierra A, et al. Narrow- versus mini implants at crestal and subcrestal bone levels. Experimental study in beagle dogs at three months. *Clin Oral Investig*. 2015;19:1363-1369.
17. Gleiznys A, Skirbutis G, Harb A, et al. New approach towards mini dental implants and small-diameter implants: an option for long-term prostheses. *Stomatologija*. 2012;14:39-45.
18. Lekholm U, Zarb G. Patient selection and preparation. In: Brånemark PI, Zarb G, Albrektsson T, eds. *Tissue-Integrated Prostheses: Osseointegration in Clinical Dentistry*. Chicago, IL: Quintessence Publishing; 1985:199-209.
19. Greenstein G, Cavallaro J Jr, Tarnow D. Dental implants in the periodontal patient. *Dent Clin North Am*. 2010;54:113-128.
20. Lindhe J, Meyle J; Group D of European Workshop on Periodontology. Peri-implant diseases: consensus report of the Sixth European Workshop on Periodontology. *J Clin Periodontol*. 2008;35(suppl 8):282-285.
21. Leonhardt A, Adolphsson B, Lekholm U, et al. A longitudinal microbiological study on osseointegrated titanium implants in partially edentulous patients. *Clin Oral Implants Res*. 1993;4:113-120.
22. Apse P, Ellen RP, Overall CM, et al. Microbiota and crevicular fluid collagenase activity in the osseointegrated dental implant sulcus: a comparison of sites in edentulous and

## Management of a Nontreatable Mandibular Anterior Tooth

- partially edentulous patients. *J Periodontol Res.* 1989;24:96-105.
23. Tizzoni R, Veneroni L, Clerici CA. A patient with meningeal melanomatosis treated for periodontal disease with a bone regeneration procedure and dental implants: clinical and behavioral management to support medical compliance. *Oral Implantol (Rome).* 2014;6:75-81.
  24. Nowzari H, Molayem S, Chiu CH, et al. Cone beam computed tomographic measurement of maxillary central incisors to determine prevalence of facial alveolar bone width  $\geq 2$  mm. *Clin Implant Dent Relat Res.* 2012;14:595-602.
  25. Jofre J, Valenzuela D, Quintana P, et al. Protocol for immediate implant replacement of infected teeth. *Implant Dent.* 2012;21:287-294.
  26. Machtei EE, Zubrey Y, Ben Yehuda A, et al. Proximal bone loss adjacent to periodontally "hopeless" teeth with and without extraction. *J Periodontol.* 1989;60:512-515.
  27. Werbitz MJ, Goldberg PV. Immediate implantation. Preservation of bone volume and osseous regeneration [in French]. *J Parodontol.* 1991;10:157-166.
  28. Polizzi G, Grunder U, Goené R, et al. Immediate and delayed implant placement into extraction sockets: a 5-year report. *Clin Implant Dent Relat Res.* 2000;2:93-99.
  29. Gita VB, Chandrasekaran SC. Hard and soft tissue augmentation to enhance implant predictability and esthetics: 'The perio-esthetic approach.' *J Indian Soc Periodontol.* 2011;15:59-63.
  30. Rana R, Ramachandra SS, Lahori M, et al. Combined soft and hard tissue augmentation for a localized alveolar ridge defect. *Contemp Clin Dent.* 2013;4:556-558.
  31. Pasquinelli LK. Periodontal plastic surgery as an adjunctive therapeutic modality for esthetic restorative dentistry. *J Calif Dent Assoc.* 2005;33:217-221.
  32. Faiella RA. Periodontal plastic surgical indications in the restorative practice. *J Mass Dent Soc.* 2005;53:26-28.

# Management of a Nontreatable Mandibular Anterior Tooth

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## POST EXAMINATION QUESTIONS

1. **Hirata et al concluded that mini implants are not as safe as single crowns in the anterior region of the mouth.**
  - a. True.
  - b. False.
2. **Narrow implants protect peri-implant crestal bone. Implant diameter does not influence crestal bone loss.**
  - a. The first statement is true, the second is false.
  - b. The first statement is false, the second is true.
  - c. Both statements are true.
  - d. Both statements are false.
3. **In appropriate clinical situations, the advantage(s) of mini implants is/are:**
  - a. Reduction in surgical time.
  - b. Less postoperative pain.
  - c. Lower cost.
  - d. All of the above.
4. **In the case report presented, a gain in bone of 4 mm horizontally and 8 mm vertically was achieved how long after ridge augmentation?**
  - a. 2 months.
  - b. 3 months.
  - c. 4 months.
  - d. 5 months.
5. **In the case report presented, density of bone at the time of implant placement was:**
  - a. Type I.
  - b. Type II.
  - c. Type III.
  - d. Type IV.
6. **In the case report presented, conventional radiographs did not provide a comprehensive picture of existing hard/soft-tissue volume 5 months after ridge augmentation. Therefore, computed tomography was performed.**
  - a. The first statement is true, the second is false.
  - b. The first statement is false, the second is true.
  - c. Both statements are true.
  - d. Both statements are false.
7. **Machtei et al observed that retained hopeless teeth with untreated periodontal disease displayed \_\_\_\_\_ more bone loss on adjacent teeth than when the hopeless tooth was removed.**
  - a. 3 times.
  - b. 6 times.
  - c. 10 times.
  - d. 15 times.

## Management of a Nontreatable Mandibular Anterior Tooth

- 8. In the first 2 years following extraction of anterior teeth, an average of \_\_\_\_\_ of the bony ridge may be lost because of resorption.**
- 10% to 20%.
  - 20% to 40%.
  - 40% to 60%.
  - 60% to 70%.
- 9. Nowzari et al found that facial alveolar bone width in the area of the maxillary central incisors was less than 2 mm in what percentage of healthy patients?**
- 56%.
  - 75%.
  - 87%.
  - 97%.
- 10. Periodonally compromised patients harbor more motile rods and spirochetes than healthy or edentulous individuals.**
- True.
  - False.





# Management of a Nontreatable Mandibular Anterior Tooth

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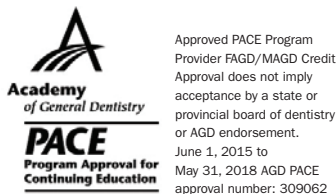
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