

# Incorporating Dentures & Mini-Implants Into Your General Practice!

by Ara Nazarian, DDS



**Today, more and more practices across the United States are experiencing a change in their practices.** There have been increases in no-shows or cancellations and problems of filling the schedule for treatment. Practicing in the mid-west, I have personally found that patients are concerned about what the future holds, since most of them rely on the “Big Three” automakers (GM, Chrysler, and Ford).

In just the last six months, tens of thousands of autoworkers have lost their jobs here in Michigan. Most of these patients’ primary concern is not their oral health, but on how they will provide for their families and put food on the table. Most of these patients tend to disappear from the practice only to return for emergency dental care.

One population that has been overlooked or avoided by many in the dental profession is denture wearers. For one reason or another, the denture patient has caused many frustrations for the providing dentist, especially with regard to the mandibular denture. Conventional mandibular dentures for patients with severely atrophic mandibles often times present problems of retention, phonetics, function and pain due to instability.

Endosseous implants have been successfully used to restore edentulous mandibles with implant supported fixed bridges, hybrid prosthetic dentures and removable overdenture prostheses. However, atrophy of edentulous ridges may limit implant placement in the mandible. Anatomic limitations and resorbed alveolar ridges may compromise implant number, length, and inclination. The use of traditional implants sometimes requires extensive surgery, ridge augmentation, or bone grafting.

Small diameter implants placed with flapless surgery to support pre-existing conventional dentures present an alternative method of restoring patients with atrophic mandibles. Mini-dental implants from the IMTEC Corporation are an excellent example of this trend. They dramatically broaden the spectrum of mandibular overdenture patients who can successfully be treated. These 1.8mm implants differ from their full-sized counterparts in a number of significant ways. The configuration of the implant permits a more conservative placement protocol. No tissue flaps or tapping procedures are required, which results in fewer traumas to both gingival tissue and bone. Their smaller size also permits placement in ridges that might not otherwise be suitable for full-sized implants.

The implants are firmly seated in place in intimate contact with bone. Once they have been fixed in place, they can be immediately loaded. There is no need for a long waiting period or second stage surgery. The simplified protocols, conservative procedures, and elimination of gingival surgery make this implant ideal for medically, anatomically, and financially compromised patients.

## Case History

A man in his early eighties presented to our office frustrated with his lower complete denture. He complained that it was non-retentive and non-functional always falling out during speech or during eating. The patient suffered from hypertension, which was controlled with medication. He had been a denture wearer for the last fifty years resulting in excessive resorption of the mandible.

Palpation and radiographic examination revealed a moderately narrowed mandibular ridge. Crestal bone and ridge height were sufficient to receive 13mm mini-dental implants. The mental foramen was located, and it was determined that four implants could be safely placed within the cuspid-to-cuspid area.

All risks, benefits, and alternatives were reviewed with the patient before initiating treatment. The patient was draped and a clean operating environment established. Local infiltration of anesthetic was administered. Markings were placed to designate landmarks and areas of insertion. Keeping correct alignment, the implant drill was advanced through the gingival tissue and the cortical plate. No surgical insertion was necessary.

During this stage it was very important to accompany each step of drilling with generous amounts of sterile water. Once penetration had been achieved through the cortical plate, the sterile mini-dental implant was placed with the finger driver until

firm resistance was met. At that time, the winged thumb wrench was employed. When advancement precluded further advancement, the ratchet wrench was employed, using small, carefully controlled incremental advancements until the implant was fully seated. Full seating was achieved when the threads and base of the implant were subgingival and only the abutment head was exposed (**Figure 1**). It was important that the implant be absolutely tight at that point (**Figure 2**). If it was not, the quality of the bone would indicate a poor prognosis.

At that point, the location of each implant was transferred to the denture using bite registration material. These areas were relieved to a diameter of 5mm and the denture was resealed, confirming adequate relief had been established.

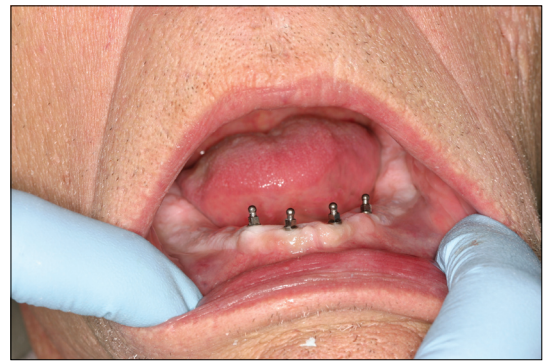
A small, plastic shim was placed over each implant, allowing only the o-ball of the implant to be exposed. This step prevented problems of the reline material locking around the implants. A female o-ring keeper cap was then fitted over each implant (**Figure 3**). Retentive fit and mobility were then again verified.

The cleaned and dried recesses in the denture were filled with cold cure acrylic (Secure, IMTEC Co.) and allowed to polymerize. Before complete setting of this material it was important to border mold the flanges for an accurate fit (**Figure 4**). Upon setting the denture was relieved of flash and any voids were filled (**Figure 5**). The patient was then instructed in denture placement, removal, and oral hygiene.

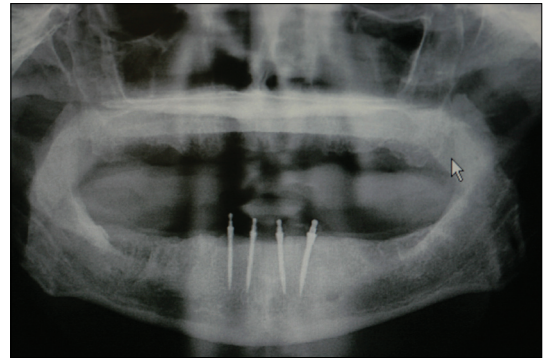
A mini-dental implant service provides clinical and economic benefits to your practice and restores function and confidence to your patients. Denture retention and function are dramatically improved, and the results are immediate. The advent of the mini-dental implant has given general dentists an easy, less costly and rapid way of solving many of the difficult problems that arise in dental practice with complete dentures. It is estimated that over 36 million patients in the United States have lost their teeth, however, only one half of one percent have received implant therapy. This striking disparity signifies a huge untapped market for implants and dentures. ●

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**Figure 1.** Four mini-dental implants placed in mandible for denture stabilization.



**Figure 2.** Panorex indicating the placement of the mini-dental implants.



**Figure 3.** Retentive caps before reline pick-up procedure.



**Figure 4.** Border molding accomplished during pick-up.



**Figure 5.** Reline denture with retentive caps ready for trimming and polishing.

