

Narrow-diameter Implants with

LOCATOR

Attachments for Overdentures

by Paresh B. Patel, DDS

Let's face it; the graying of America has started. With 10,000 people a day turning 65, the need to embrace these patients with products that serve their needs is enormous. There have been quantum leaps in new dental materials, products and equipment. However, few to none of these products provide the denture patient with an economical and practical solution. In today's landscape, implant therapy only reaches three to five percent of the population, leading most of these patients to rely on cumbersome adhesive products. Many dentists I talk to don't want to get involved with dentures or partials because the end result is a frustrated doctor and patient. With seniors living longer we must offer this set of patients that has never been given options a predictable, economic and aesthetic solution. Narrow-diameter implants (NDIs)

with a Locator Attachment (ZEST Anchors) should be considered to fill this oft-overlooked void in modern dentistry (Fig. 1).

The standard body two-implant overdenture has been considered by many to be the first treatment of choice when dealing with the lower edentulous arch.

In my experience, I rarely see a long-term edentulous ridge 6mm in buccal lingual dimension, the width needed to encase a standard body implant properly in bone. Additional procedures are often necessary to increase the buccal lingual

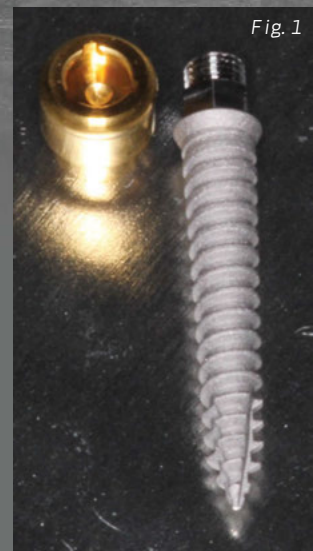


Fig. 1

continued on page 116

width, which can be met with resistance from the patient. By design, the two-implant solution will always have significant rotation, vertical movement and will be rendered useless if one implant fails. An elegant solution to consider in these cases is four narrow-diameter implants with a low profile Locator Attachment. With this treatment, rotation of the denture is drastically reduced and precious alveolar bone is preserved in two additional locations, as the narrow implant body will stimulate the bone.

Clinical Case

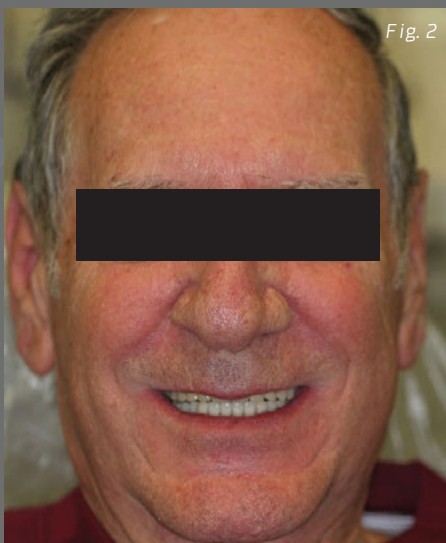
The patient, a 68-year-old male presented with a lower denture that would not stay in place (Fig. 2). He had several dentures made, as well as numerous relines throughout the years. He was frustrated and felt very unsatisfied with what conventional dentistry had offered him. His expectations were realistic as his main request was to have a more retentive denture. Aesthetics were not a major concern, however, he wanted his new “teeth” to be whiter than his current upper denture. His medical history did not preclude him from implant therapy. Diagnostic records were taken along with a digital pan X-ray. Bone sounding measurements were taken with a bone caliper at the four pro-



posed sites between the mental foramen. The ridge measured 4-5mm in width and would provide excellent bicortical stabilization for a 2.9mm NDI. His current lower denture had significant problems (poor occlusion, worn teeth, inadequate flange extensions) and a new upper denture was treatment planned as well. Full-arch impressions were taken with PVS (Take 1 Kerr) in custom trays (Triad). The patient returned for a tooth try-in to assess aesthetics, phonetics and occlusion (Fig. 3). After patient approval it was returned to the dental lab (Burbank) for final processing, with a request to leave relief wells in the proposed locations of the NDIs.

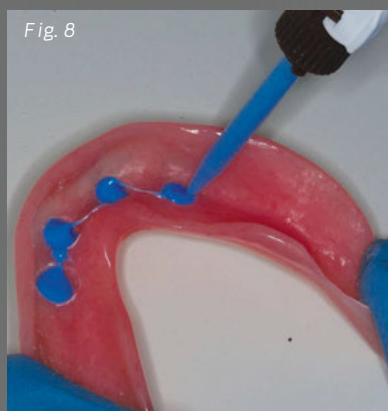
“[The patient] was completely satisfied with the retention of his new lower denture, more importantly with the ease and speed of how the entire procedure was accomplished.”

On the day of implant placement local anesthesia was administered and a 1.2mm pilot drill with copious irrigation was used to create the initial osteotomy to three-quarters the length of the implant. The blunt end of an endodontic explorer was used to confirm no perforation of the buccal or lingual walls had occurred. A rotary tissue punch was used to remove a plug of gingival tissue (Fig. 4). This serves two purposes: to give direct visualization of the ridge and prevent any epithelium from being carried down into the osteotomy. Because the bone encountered was dense in nature (D1 or D2), the next two drills (1.6mm and 2.4mm) were progressed into the osteotomy to three-quarters the length of the implant. A Locator Overdenture Implant (LODI) was removed from its sterile packaging and transferred to the mouth with the use of the implant hand-piece driver (Fig. 5). An implant hand-piece and motor (Aseptico AEU 7000) was used to drive the self-tapping implant into the osteotomy. A hand driver placed into the torque-indicating



ratchet wrench was used with slow finger pressure for final placement of the implant and to ensure the implant was placed to the crest of bone. A unique feature of the LODI is that it is a two-piece NDI (Fig. 6). The included Locator Attachment is removed from the top of the sterile vile and is torqued on the LODI to 30Ncm. The Locator Attachment also comes in two different cuff heights, 2.5mm and 4mm. These features allow for replacement of the Locator Attachment if it is ever damaged or wears during service and allows the clinician to compensate for varying tissue heights.

All four NDIs achieved greater than 45Ncm of torque, thus it was decided to place the implants into service. In a separate vile, the NDI comes with a processing pack including the denture cap, three different levels of retention inserts (males) and a white block out spacer (Fig. 7). The white block out spacer was placed around the neck of the Locator Attachment and the denture cap was snapped on. Fit test C&B material (QuickUp VOOCO) was injected into each of the wells and the denture was seated over the attachments (Fig. 8). In 30 seconds the denture was removed and inspected to see if any show through was visible; none was detected. The relief wells in the denture were cleaned and a thin coat of adhesive was placed and air-dried. QuickUp resin was placed in the denture wells and seated over the denture caps (Fig. 9). The patient was instructed to remain closed for 2.5 minutes. After the resin set, any voids were filled in with pink flowable composite (QuickUP LC) that is included in the kit. The back processing males were removed and replaced with the blue male (extra light reten-



tion). It is recommended to initially place the least retentive male needed for ease of denture removal, function and patient satisfaction.

At the end of the procedure when the patient was interviewed, he was completely satisfied with the retention of his new lower denture, more importantly with the ease and speed of how the entire procedure was accomplished. Narrow-diameter implants with Locator Attachments are not just another treatment but one that improves the lives of patients with a time proven technology. With much less height than the standard O-ball attachment, dentures can be made more natural feeling because of reduced bulk and they require less maintenance throughout time. The Locator Overdenture Implant is an outstanding new product that should be considered by clinicians to help patients remember that modern dentistry has not forgotten about them. ■

Author's Bio

Dr. Paresh Patel is a graduate of UNC-CH School of Dentistry and the MCG/AAID MaxiCourse. He is the co-founder of the American Academy of Small Diameter Implants and is a clinical instructor at the Reconstructive Dentistry Institute. Dr. Patel has placed more than 2,500 mini implants and has worked as a lecturer and clinical consultant on mini implants for various companies. He can be reached at pareshpateldds2@gmail.com or online at www.dentalminiimplant.com.

