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IMPLANTOLOGY

Full Team Approach for Provisional Stabilization of the Edentulous Implant Patients

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Although a full team approach, involving restorative dentists, dental surgeons and laboratory technicians, has been the ■cus of discussion for several years, the reality is that a true plan of communication has still not been blueprinted for the management and treatment planning of dental implant patients. A relationship of mutual respect and early communication must be established for carrying through the process to a satisfactory conclusion.

It is hard to expect a restorative dentist, taught to follow strict guidelines, to be confident when he moves into the world of implant dentistry where guidelines are just now being agreed upon or followed. Without the opportunity to fall back on such guidelines as a support, restorative dentists find themselves in a world with too many different voices. ■eed for a common ground, the most supportive communal approach from which to draw, has to develop.

In most practices, the

abundant number of implant patients goes unnoticed. Treatment suggestions are not made or when they are made are done so unconvincing, at great loss to patient and dentist. Uncertain of a routinely successful outcome, dentists may be unconvincing when they present an implant treatment plan to patients.

The training and prime responsibility of restorative dentists have been overlooked in the early stages of site selection. The first steps in implant cases are thought to be primarily dependent on the surgeon's site selection and accurate implant placement. However, restorative dentists must become more active in choosing sites because the functional and cosmetic consideration is the first line responsibility to patients. To date, the only means to transmit these guidelines to a surgeon has been surgical stents, constructed by a laboratory. Therein lies the first of many problems.

Even though a CT scan gives a surgeon a good idea



Fig. 1



Fig. 2

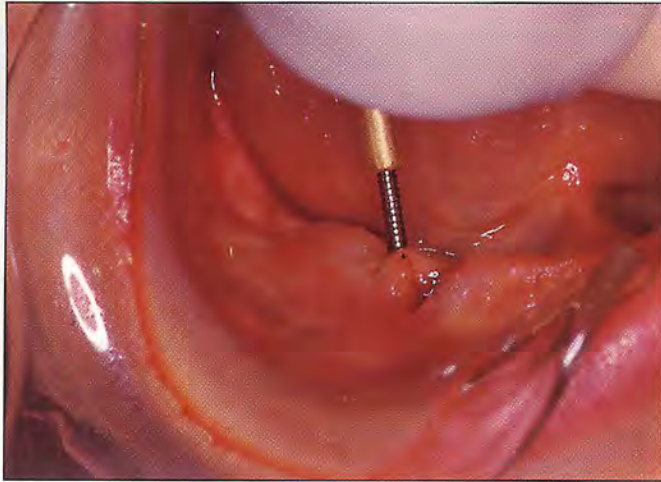


Fig. 3



Fig. 4

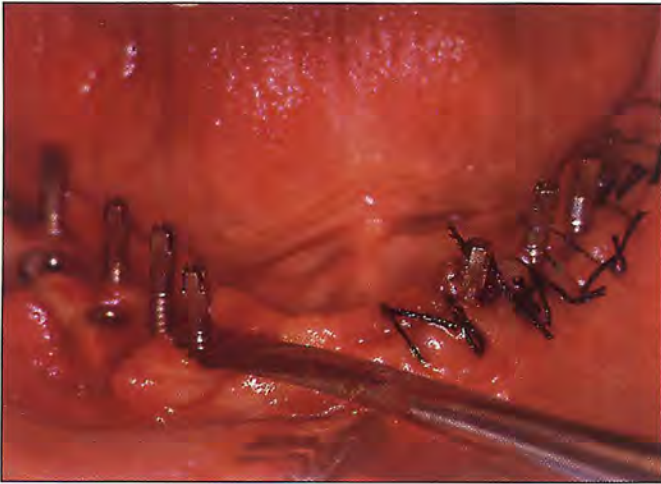


Fig. 5



Fig. 6

of bone quality and quantity, it is not fool-proof. Surgeons realize that there may be surprises once the flap is opened. Surgeons require a full view of the surgical field. This is often obscured by a stent and/or the struggle of keeping it in proper position. The stent, designed for full-arch crown and bridge reconstruction, has been made on a model replicating the intact soft tissue. Once a surgeon flaps the tissue, the stent has no record base and is rendered

useless despite the best intentions. Because of this, a fair number of stents lay unused on a shelf behind the surgeon. The excellent thought and theory that have guided restorative dentists have been squandered. Once the flap is opened, it is too late for a surgeon to call a restorative dentist. A surgeon then continues with placement in line with his experience and to the best of his ability. Now that the surgeon is working on a one-dimen-

sional platform, in most cases, he has no references to choose from for the drilling of the first osteotomy. At this juncture, experience has shown that even when using the best of surgical skills, drilling, without guidance of the Mini Implants, should be discontinued. Otherwise the path chosen by the surgeon may not fulfill the requirements of the restorative dentist, the laboratory and a satisfactory team approach.

Although the technique

described here may not be fool-proof, it is anticipated that it should overcome the fears and surprises in implant dentistry. By following the described procedures, a surgeon and restorative dentist can anticipate a smooth and productive relationship for providing ideal services to their patients.

Since a restorative dentist's attention is focused on the coronal portion of a tooth above soft tissue, it may be difficult for him to

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Fig. 7



Fig. 8



Fig. 9

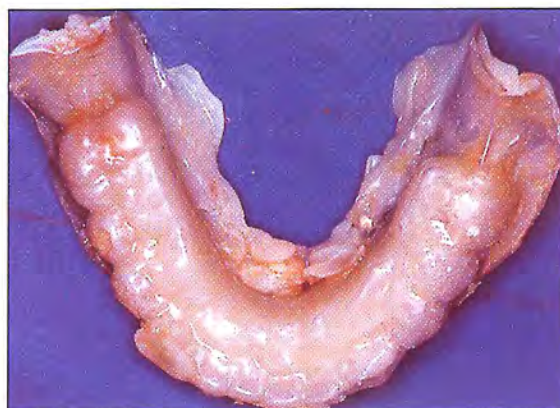


Fig. 10

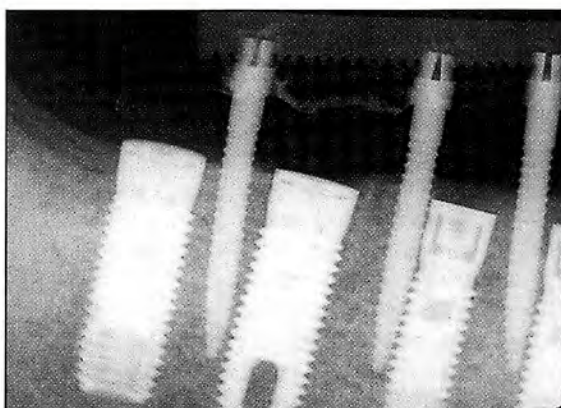


Fig. 11



Fig. 12

visualize what takes place under the tissue. Consequently and perhaps incorrectly and mistakenly, we leave the important site selections entirely to surgeons. The solution is a system that allows dentists visually to place implants and to establish a convinc-

ing line of communication on both sides.

The greatest fear of surgeons and restorative dentists is loss of endosseous implants. The plea from surgeons has been to not place a load on top of the freshly placed implanted fixtures. The goal for

restorative dentists, however, is to provide, at the earliest, patients with beautiful teeth and smile and to continue in his normal activities without delay.

We are indeed fortunate, with the latest development by Dentatus USA, Ltd., of a system, that per-

mits the placement of temporary restorations immediately upon the Mini-Transitional Implants (MTI). This, together with the Dentatus companion MP Modular Prosthetic components, make it possible to create such provisional restorations immediately at chairside.

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Giving it a closer look, MTI can also be used as a three-dimensional, on-sight alignment system to help surgeons in placement and paralleling of implants while creating a non-bearing support on the implanted fixtures at the time of the first surgical visit.

The initial step requires an alginate impression to be taken of the failing bridge-work (Fig. 1) and poured with stone. In the mouth, under anesthesia, a special Dentatus Pilot drill is used to make pilot marking holes through the tissue into the alveolar bone (Fig. 2). The drill site is placed 1mm to 3mm lingual to the interproximal placement. Once all pilot sites have been completed, the prosthesis can be removed, which helps guide the natural selection of implant placement sites.

The surgical flap is designed and the surgical site is exposed. The pilot drill sites are relocated and drilled slightly short of their necessary depth. The Mini-Transitional self-threading implants are then screwed into their sites (Fig. 3). The MTI are used as a visual for optimal implant placement. The implants (Dentsply Screwvent), which have been selected with presurgical planning, are then placed (Fig. 4). Normal finishing procedures are then completed, which may include bone grafting when required. The surgical flap should be closed with primary contact of both sides of the flap around the Mini-Transitional Implants (Fig. 5).

At this time, a dental assistant can place a light-cured material (Dentsply Triad) to the lingual walls of

the stone model, approximately 4mm in depth from the interproximal contact (Fig. 6). The relief extends the full lingual contour of the model to allow for adequate coverage of the lingualized Mini-Transitional Implant. The prepared model is then used as a form for a temporary splint. The model is placed in a vacuum former to be made. A form is pressed and trimmed to the gingival contour of the teeth for a temporary splint.

The same light-cured material should be used to stabilize the vacuum formed mold from flexion. The material is placed on the circumference of the lingual borders of the mold and light cured. Without this step, the stent can twist or distort from its properly designed original form.

Along with proper preparation of the stent, corresponding preparation must be done in the mouth. Three component parts are necessary. Gingival protective sleeves are placed on top of the Mini-Transitional Implants and are slid down over the head. This prevents the temporary material from locking into an undercut. The temporary stent is tried in the mouth to note clearance of the minis and room for adequate material (Fig. 7).

The titanium connective bar is placed through the alignment slots on the occlusal surface of the Mini-Transitional Implants (Fig. 8), and the plastic modular coping is placed over the bar. Once all modular copings are placed over the Mini-Transitional Implants, they are luted to the connective bar using Super T, a fast setting acrylic (Fig. 9).

GC Pattern Resin (GC American, Inc.) can also be used. The connector bar should be fully covered. This helps in corresponding the path of insertion for the temporary bridge. Release spray is placed in the stent mold and the fast-setting acrylic is poured into the stent. The stent is placed lingually in the mouth and pulled forward. The patient is guided into a proper alignment and asked to close down into contact. The lingual to forward movement of the stent ensures that the acrylic will lap under the bar and withdraw properly with the removal of the stent. (Before this, Vaseline is placed on the tissue to protect the surgical site.)

The stent is removed when the material is cured (Fig. 10) and trimmed occlusally and interproximally allowing adequate clearance of gingival tissue. The prosthesis is temporarily inserted in the mouth and the patient is dismissed, returning at the prescribed time for suture removal (Figs. 11 and 12).

This procedure allows for an immediate functional prosthesis, eliminating the problems associated with relined dentures or transitional appliances, which have placed immediate load over submerged implants and second state healing caps. Because the Mini-Transitional Implants have been placed lingually to the implants, a temporary prosthesis can be used without modification during the

integration period and through all phases of construction of the final framework and attachments for the edentulous patient.

When the final abutments are seated with provisional bridgework for loading the implants, the Mini-Transitional Implants are simply unscrewed without harm or discomfort to the patient. The described system and procedure save surgeons and restorative dentists valuable time and provide the means to maintain the patient in a dentate, comfortable and aesthetic state from the beginning to end. ■

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