



Hold ^{that} Space!

by Jay B. Reznick, DMD, MD

As I was preparing for a lecture that I was scheduled to give in Las Vegas recently, I began thinking about what I wanted to get off my chest in my next column. But nothing was coming to mind. My next patient changed that.

I do a lot of dental implants in my practice. In the anterior and premolar regions, I try to do immediate implant placement with extractions and immediate provisionalization whenever possible. In the molar regions, I am a little more conservative. I usually will do ridge preservation grafting and place the implant about four months later, then give the implant about four months to osseointegrate before placing an abutment for the patient's dentist to restore the tooth. This means, in most cases, the patient is missing a tooth for about nine months.

I am a stickler for details, and I work hard to protect my treatment outcomes. One of the things that I have a very strong opinion about is making sure that the patient has some type of appliance, I don't really care much what type, that will help to maintain the integrity of the edentulous space from the time the tooth is extracted until the time it is replaced. Most of the time, when I call the referring dentist to let them know I am sending the patient back to their office to get impressions for an appliance, the usual response is, "They don't need that. They will be just fine without it. It is only going to be a few months." I will admit that for the majority of patients, nothing much will happen during the treatment period, other than their tongue will keep playing with the edentulous space. However, at least a few times per year, that is not the case.

In our first year of dental school, we learned about the phenomenon of "mesial drift," that is, the unexplainable natural force that causes permanent posterior teeth to migrate mesially in the dental arch. It is thought that this mechanism is nature's way of compensating for interproximal tooth wear due to the abrasive nature of early man's diet. The further distally in the arch you go, the stronger the tendency for this to occur. Another undeniable force at play is the fact that teeth will continue to erupt until they come into contact with an opposing force, such as a tooth in the other arch. As long as that opposing contact stays in place, so too will the tooth on the other arch. However, if the opposing tooth goes missing, eruption will again resume until a resisting force is met.

So, why am I spending time repeating something you learned very early in your dental education? Because almost everyone seems to forget about these two phenomena during the period between tooth extraction and tooth replacement. Again, in about 95 percent of cases, the amount of movement of the opposing teeth and mesial drift of the teeth to the distal is essentially negligible during that six-to-nine-month interval. However, that means five percent of these patients will exhibit a measureable amount of movement in that relatively short time. Five percent is one out of 20. If you do more than 20 implant cases each year,

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then chances are you will see this occur in a patient or two. In about one percent of patients, there will be significant shifting of teeth around an extraction site to the extent that placing the implant and/or restoring the case may be extremely challenging. In my practice, I place hundreds of implants each year, so I see this at least a half-dozen times annually. A number of cases come to mind where implant placement or restoration had to be delayed so the patient could undergo orthodontic treatment in order to replace the distal and/or opposing teeth to their original positions. Implant therapy is expensive enough and takes enough time when everything goes smoothly. Having to throw in some orthodontic treatment greatly increases the patient's cost and total treatment time to replace an extracted tooth. At the very least, this occurrence will complicate the restorative process, necessitating the use of short crowns with compromised retention or inadequate bulk of porcelain or base metal.

It amazes me that many of the experienced, intelligent dentists with whom I work will tell me, time after time, that some type of space maintaining appliance is unnecessary. They assume all of their patients have some type of genetic immunity to these well-known laws of nature. They think that "nothing will happen" over nine months, and that the appliance is a waste of money. Yet, without fail, a few times per year, in patients with whom I was not insistent with the dentist, I have a patient come in for implant second stage, who exhibits mesial drift of a distal molar, or hypereruption of opposing teeth in to the edentulous site. There have even been a number of patients in whom this was evident when the patient came in for implant placement. I kick myself (mentally, of course), because this could have been prevented very easily with a simple removable piece of plastic.

The most common prosthesis used for this purpose is the old standard "flipper" or stay plate. I describe this to my patients as a "retainer with a tooth attached." They seem to be much more accepting of this than when it is called "temporary partial denture," which conjures images for many patients of an elderly patient wearing full dentures. When this type of prosthesis is used, it is important that the intaglio surface not put any pressure on the grafted ridge or implant, as this will compromise healing and reduce the chance of success. My preferred prosthesis is known as an Essix bridge. This is essentially a vacuformed clear acrylic shell that contains a pontic tooth in the edentulous area. It is very simple and inexpensive to make, and can be done either by a lab or in the office. It is highly aesthetic, comfortable for the patient, and most importantly, does not put any pressure over the surgical site. I tell patients that I want them to wear the appliance for eight hours per day, and to leave it out eight hours per day. During the remaining eight hours, they are free to either wear it or not.

Author's Bio

Dr. Jay B. Reznick is a Diplomate of the American Board of Oral and Maxillofacial Surgery. He received his Dental degree from Tufts University, and his M.D. degree from the University of Southern California, and trained in Oral and Maxillofacial Surgery at L.A. County-USC Medical Center. His special clinical interests are in the areas of facial trauma, jaw and oral pathology, dental implantology, sleep disorders medicine, laser surgery, and jaw deformities. He also has expertise in the integration of digital photography and 3-D imaging in clinical practice. Dr. Reznick is one of the founders of the Web site OnlineOralSurgery.com, which educates practicing dentists in basic and advanced oral surgery techniques. He is the Director of the Southern California Center for Oral and Facial Surgery in Tarzana, California. He can be reached at jreznick@sccofs.com.



We all strive to provide the best care for our patients. We also want our lives to have as little stress as possible. So, preventing situations that make our job more complicated is certainly a good thing. So, I am making my public appeal here. Please remember to include maintenance of the integrity of the extraction site during the healing period as part of your treatment plan when a tooth needs to be extracted and is planned to be replaced by a dental implant. I know that very few of your patients will show clinically significant occlusal changes if this is not considered. However, a major headache can be prevented by a very simple, inexpensive piece of plastic. If you have not had to deal with this problem yet, don't worry. It will happen. It is all a numbers game, so if you have a busy practice and place or restore implants, just wait. Next time you refer a patient for an extraction, or you do one yourself, remember my advice: Hold that space! ■