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## Determining the Best Treatment Option for a Patient

Timothy Kosinski, DDS

An 82 year old white male presented with controlled hypertension and no other significant medical findings. There was an existing prosthesis of splinted crowns #'s 4-13, with a pontic in the #13 area. Examination revealed significant decay under the splinted crowns of the maxillary right and left central incisors [figures 1-2]. The remaining splinted crowns appeared to be in good function.

The maxillary prosthesis was opposed by a removable partial appliance, supported by two natural teeth #'s 27 and 30 and a single implant with a Locator abutment in the #22 area.

### Evaluation

Determining the prognosis of the significantly decayed roots of teeth #8 and 9 was essential. Since the remaining abutments were in good repair, it may seem obvious that the existing splinted bridge case needs to be sectioned and the crowns over the maxillary central incisors removed.

Assuming, as was the case, that the maxillary central incisors were no longer restorable without the minimum treatment of extensive root canal therapy, crown lengthening and fabrication of new crowns, it was determined that the roots would be extracted.

With an anterior edentulous space, conventional treatment options considered could include a removable partial denture, removal of the other abutment crowns and re-fabrication of the splinted restoration #'s 4-13, with two new pontics, or what some would consider less conventional, the placement of single dental implants in the #8 and #9 areas.

### Implant Consideration

Dental implants have become an important method of restoring missing teeth with function and esthetics. Our patients are requesting and even demanding this type of therapy. Our modern materials and methods have made implant dentistry predictable with long term positive prognoses.



Fig. 1: Digital radiograph illustrating significant subgingival decay under the maxillary right and left central incisors.



Fig. 2: Facial view of decay which extended completely through the crowns #'s 8 and 9.

## Factors

The surgical placement of dental implants involves a comprehensive understanding of both the surgical and prosthetic applications. Today's implant dentistry is prosthetically driven. There must be a clear visualization of the completed restorative case prior to any surgical intervention. Anatomic considerations must be understood, including the position of the nerves, sinuses and undercuts.

The thickness and angulation of bone must be studied and the integrity of the buccal and lingual plates clearly understood. The aesthetic zone of the anterior maxilla is critical to an acceptable restoration. Simply placing an implant where there is adequate bone is no longer acceptable. Smile design and emergence profile has developed into an art unto itself.

## Limitations

Prior to surgical placement of any dental implant, limitations need to be recognized and dentists who may be uncomfortable with certain procedures or not confident enough to attain the appropriate final result should embrace the referral process. Complications may arise in any surgical protocol, so there also needs to be an understanding of treating postoperative complications such as a dehiscence or fenestration.

There are several reasons why dentists are not currently placing dental implants in their practices. They fear potential complications, damage to vital anatomy and/or implant therapy falls outside their comfort zone. There needs to be a clear understanding of the benefits, risks and techniques associated with implant dentistry. Confidence with surgical and prosthetic implant procedures are the result of education and repetition. There needs to be an understanding that in some situations, grafting procedures will be required prior to implant placement.

## Planning

Flapless surgical placement of dental implants has become more popular as technology and digital radiography has allowed us to visualize the underlying anatomy more effectively. Regular evaluations are a necessary part of the total implant dentistry practice. This includes hygiene and visual oral and radiographic examinations. Maintenance is critical to the long term positive prognosis of any dental restoration. The prosthesis must be designed in such a way that the patient can maintain it not only today but in the future. Minimizing surgical damage with flapless designs is tissue friendly, however, flap designs still need to be available for backup during complications<sup>1</sup>.

Placing dental implants in ideal position, angulation and depth, considering all emergence profile and smile design desires using flapless procedures is only obtainable by using our modern technology. This technique proves to be a cost effective solution to assist the implant dentist in planning an aesthetic final result and minimizing surgical challenges. Benefits include: Patients are positively influenced by the concept of virtual placement, safety and ease of surgery of implants in a procedure that they may psychologically feel is extremely invasive, and the healing time is reduced with less postoperative trauma and discomfort.

## Success

Success with dental implants is based on the need to achieve primary stabilization and secondary integration of the titanium fixtures and also maintain hard and soft tissue contours to create long term function and esthetics. Any anatomic irregularities or limitations need to be addressed prior to implant placement<sup>2</sup>. This saves the practitioner a lot of time and effort in doing the case properly from the first steps. "Measure twice, cut once" is a statement that can be readily accepted in dentistry today.

## Flapless Surgery

Single flapless surgical procedures can be simply done by most practitioners provided they understand their limitations and understand important anatomy. Digital radiography allows them to predictably measure ideal angulation and depth of any implant system. Taking radiographs to insure proper position is easily obtained. Infiltration of the soft tissue with anesthetic, rather than a complete nerve block of the site, will make the patient and doctor aware of the proximity of vital anatomy. Following a careful step-by-step process, realizing the exact position of each drill can make the surgical procedure less scary for the practitioner<sup>1</sup>.

The procedure for placing dental implants today is fairly straight forward and not terribly traumatic to the patient, in most circumstances. It is generally painless and quick. Following local infiltration of the surgical site, preparation for the dental implant placement begins. First a small drill is used to create angulation and final depth; then larger diameter drills are used to create the opening to accept the particular implant chosen. Like the roots of teeth themselves, it is best to use the longest, widest implant we can for the available space.

## Advantages

The major advantage for implant treatment to replace one or more missing teeth is that the adjacent teeth are not compromised. The implant retained crowns will not fall out when eating, laughing or talking.

People who wear partial dentures may worry that the appliance will loosen. The bone is bonded or integrated around the dental implant. Also there are no unsightly metal clasps showing, which decreases esthetics. Finally the patient is able to clean the final individual implant retained crowns naturally, which is easier than cleaning under and around a fixed bridge.

### **Longevity**

But how long are these implants going to last? Clinical research demonstrates that implant-supported replacement teeth, when properly fabricated, have been successful for over 30 years. Dental implants are designed to be permanent; however, there are many factors that contribute to the long-term stability of implant therapy. These factors include metabolic health, home care, and biomechanical forces placed on the dental implants.

Forces that are to be placed on the restoration and implant itself can exceed the ability of bone-titanium interface to function. If the bone does not integrate (osseointegrate) onto the surface of the titanium fixture, failure may occur. Under-engineering of our dental implant cases may be a significant contributor to improper healing. Careful planning is essential.

Each case must be designed specifically for the patient. Consider the patient's periodontal history and habits, including bruxism, which may have contributed to their initial tooth loss. When dealing with the posterior part of the mouth, we have bone of compromised strength in the maxilla. These cases must be carefully planned so that the implant can absorb the stresses placed on it with daily function. A small percentage of implants do not heal for unknown reasons. It could be the implant itself or the surgical technique. It could be the result of changes in body chemistry or hormonal changes. However, with today's technology, if an implant does not integrate, it occurs during the initial healing period of three to four months.

### **Criteria**

There are two basic criteria for people who desire dental implants. First they must be relatively healthy, meaning no uncontrolled medical problems which may affect proper wound healing. Conditions that could affect healing include: uncontrolled diabetes, cancer, liver diseases, blood disorders, severe alcoholism, cardiac conditions, smoking and intravenous bisphosphonate use over a specified period of time. All these conditions have one similar common denominator - compromised wound healing. The body needs a consistent healthy blood supply to assist and encourage healing and a mechanism to avoid putting additional stresses on the body's system.

Are the procedures painful? Most people relate that the implant placement procedure is similar to a simple or easy tooth extraction. They may be slightly sore, but certainly not debilitated. Many state that following the procedure that if they knew what the surgery was going to be like, they would have done it a long time ago. Every person is different, however, so proper post operative pain management is appropriate. The second criteria is that there must be enough bone volume for implant placement.

How long does the entire process take? This varies and depends on the location and number of the implants.

Are dental implants experimental? Absolutely not. Dental implants have been thoroughly researched, and the current technology is backed up by an outstanding success rate in the hands of well trained and experienced clinicians.

### **Benefits**

What are some of the benefits to dental implants? Increased confidence when smiling, speaking and eating, elimination of the use of denture adhesives, preservation of the integrity of facial structures, elimination of the need to aggressively grind down adjacent tooth structures, easier maintenance for single dental implant reconstructions, restored self esteem and improved quality of life.

Replacement of missing teeth with dental implants is predictable and has become commonplace. Patients present to our practices with information gathered from many sources, including other medical specialists and even the internet. They often have educated themselves on the benefits of implant dentistry. However, some cases present themselves that may be more difficult for the practicing dentists than others. Bone contour, tooth position and vital anatomy need to be carefully evaluated to ensure a high quality functional and esthetic final result. Risks need to be considered with the patient.

### **Platform Switching**

There have been significant dental implant design improvements over the past few years, each creating better initial stability and less crestal bone loss over time. Retention of the implant and abutments are a given today, as the abutments are torqued into place. The type and size of abutments placed within the implant has changed recently with the advent of the concept of implant platform switching. This

proposed method of abutment placement has apparently shown a propensity to reduce circumferential bone loss around the dental implants<sup>2</sup>. The horizontal microgap is changed to be on the inside of the external diameter of the implant neck, and this process may result in decreased bone loss<sup>3</sup>. Preservation of soft tissue contours is achieved by maintaining crestal bone levels and this is critical in the esthetic zone demonstrated in the following case study.

As design improvements are achieved in implant dentistry, the predictability and improved long term prognosis of the systems make implants a more popular restorative technique for dentists. Surface coatings and treatments, design characteristics for size and shape of the implants, and prosthetic components all make the technique a clinical success.

### Design

The OCO Biomedical ERI two piece dental implant system has a body design of mini cortico-thread pattern at the top of the implant that locks into the cortical bone, and a bull nose, "auger" design at the apex, that actually condenses bone around the tip and threads. This OCO Biomedical dental implant design is a minimally invasive, bone condensing implant system designed for dual stabilization of the implant in place to provide a true initial mechanical lock. The surgical techniques in the placement of the ERI implant is both user friendly and simple. Chair time is dramatically reduced due to simple staged surgical drilling.

### Case Study

In this case, an 82 year old male with no significant contradictory medical concerns presented to our practice, with significant decay under maxillary right and left central incisor splinted crown abutments [figures 1-2]. We needed to decide which treatment option would work best for our patient. Placing implants in #'s 8 and 9 would allow us to maintain the existing crown and bridgework. While the edentulous space was made ideal by proper root repositioning, the mesial distal width was large for lateral incisors. It was determined after careful intraoral and radiographic examination that dental implants could be predictably be placed in the bone without complication.

The treatment options were presented to the patient, who elected to have the roots removed and dental implants placed. Occlusal relationships were determined and the crowns #8 and 9 sectioned off the existing crown and bridgework, leaving splinted crowns #'s 4-7 and 10-14 intact [Figure 3]. It was clear that the decay had extended extensively subgingivally after the crowns were removed [Figure 4]. Figure 5 illustrates the atraumatic socket sites following extraction of the decayed root tips.

A flapless surgical protocol would be used to maintain any interproximal gingival tissue and minimize shrinkage. The dental implants would have to be ideally placed approximately 3 mm palatal to the facial contours of the natural dentition. The implants would be positioned 3 mm apical to the adjacent teeth's cemento-enamel junction; placement was subgingival about 3 mm, to maximize the ultimate emergence profile of the final crowns<sup>3</sup>.

The type of implant chosen in this case was determined primarily by the prosthetic components available. Since there was adequate interocclusal clearance, preparation of a screw retained stock or custom abutment would be done. One piece implant systems could be an option but may have created an even bigger concern, since implant placement was critical for proper angulation and interocclusal clearance.

Also, immediate placement of dental implants following extraction creates some unique dilemmas.



**Fig. 3: The existing splinted crowns #8 and 9 were sectioned off of the bridge #'s4-13.**



**Fig. 4: The remaining root structure shows gross, non restorable decay.**



**Fig. 5: The non restorable root structures were atraumatically removed.**



**Fig. 6: A 1.8 mm pilot drill in the OCO system provides proper depth and angulation for the final implant.**

Sockets are usually egg shaped in contour, but our dental implants are round in shape. It is imperative that a major portion of the apical aspect of the socket be obliterated in our osteotomy; however, the coronal portion would still have quite a defect. The OCO ERI implant provides abutments that can be prepared by the dental laboratory and torqued into the internal design of the implant to allow stability and retention for the final cement retained crown.

### Procedure

The typical surgical technique for the OCO Biomedical brand of dental implants begins with the use of a 1.8mm pilot drill extending to the depth desired [Figures 6]. Frequent digital radiographs allow us to determine perfect angulation and depth required [Figure 7]. Placement of the apex of the implants in line with the adjacent roots is a safe and effective guideline for implant placement. Depth is determined primarily by this 1.8 mm pilot drill, as all other drills simply widen the osteotomy to proper width. In this situation 4.1 mm X 10 mm ERI two piece, dual stabilized, esthetic region implants were chosen.

A second and third drill were used to create a 2.8 mm and 3.5 mm diameter osteotomy site respectfully for the final 4.1 mm wide dental implant. The second and third drills do not end cut and therefore they stop at the predetermined depth created by the 1.8 mm drill. Because a socket was created during the extraction, we eliminated any possibility of soft tissue engaging the osteotomy site.

### Grafting

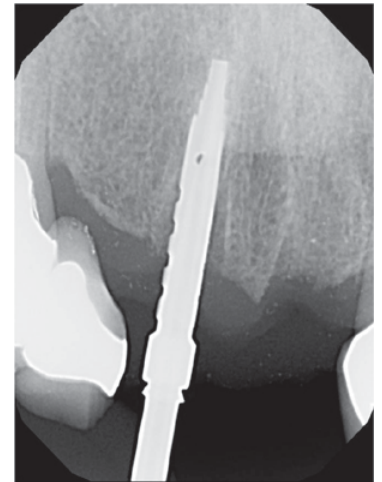
Following creation of the osteotomy site in ideal angulation and position, blood was harvested from the socket using a simple insulin syringe. This blood was thoroughly mixed with Tri-Calcium phosphate granules, which would be used inside the socket prior to implant placement to fill in any gap between the implant and the walls of bone [Figures 8-9].

Bone grafting is possible because bone tissue,

unlike most other tissues, has the ability to regenerate completely if provided the space into which to grow. As native bone grows, it will generally replace the graft material completely resulting in a fully integrated region of new bone. The biological mechanism that provides a rationale for bone grafting is osteoconduction, osteoinduction, and osteogenesis.

All skeletal bone demonstrates volume stability over time except dental alveolar bone, because dental alveolus is very labile in the absence of loading. Removal of teeth results in loss of crucial support plates, loss of vascularity to the alveolar process, ultimate bone resorption, crestal bone loss, site collapse where there are thin buccal lingual plates and bone loss on adjacent teeth. Graft materials sequester integratable bone and allows us to better plan for the restorative future.

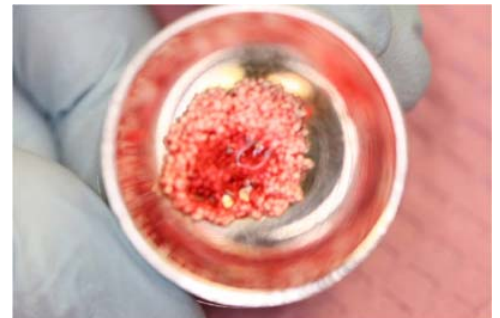
The art of bone grafting consists of guided tissue regeneration, which is a procedure that enables bone and tissue to grow into a desired area. The mechanisms of bone regeneration consist of osteogenesis, [the ability to create viable bone cell development], osteoinduction, [ability to stimulate those cells capable of formulating bone cells, such as bone morphogenetic proteins and platelets derived growth factors as a



**Fig. 7: Digital radiograph of the pilot drill positioned to proper depth and angulation.**



**Fig. 8: An insulin syringe is used to collect blood from the osteotomy site.**



**Fig. 9: The patient's blood is mixed with tri-calcium phosphate crystals.**



**Fig. 10: The OCO ERI dental implant is placed into the osteotomy site.**



**Fig. 11: Three mm tall healing abutments are placed into the internal design of the implant.**

chemical process], and osteoconduction, [a structure that is created to support or scaffold bone development as a physical process]. Platelet derived growth factors stimulate cell proliferation and healing cascades in bone and other cell types. These are proteins produced from mesenchymal cells, or released by platelets during clotting. The tri-calcium phosphate materials used to augment the socket site is an osteoconductive material and is mixed with the patient's own blood. This material is completely resorbed over time and there is ingrowth of the granules by bone cells and blood vessels. Bone replaces these materials.

### Placement

The two 4.1 mm X 10 mm ERI dental implants were torqued into the created site and stopped when 70Ncm of torque was achieved [Figures 10-12]. This implant is designed to be self tapping but will also stop at the pre-determined depth. As the implant "bottoms out," the bone is condensed at the apex and the cortical bone by the mini threads at the bottom of the tapered polished collar. Once the implant was placed, an additional few quarter turns were given to condense the bone at the tip and wedge the cortico threads into the cortical bone. A mechanical lock is therefore achieved at the top and bottom of the implant. We ended up about 3.0 mm subgingival and a 3 mm healing abutment was placed to allow tissue healing [Figure 13]. There was little or no bleeding at the surgical site. Note the radiographic position of the dental implant placement. My pre-operative diagnosis prepared me to place the implants in ideal position and to create normal sized maxillary central incisors.

### Restorations

Following approximately four months for integration to progress, impression copings were placed into the implants and final impressions taken using polyvinylsiloxane impression materials [Figure 14]. From here the dental laboratory would fabricate an accurate master cast mimicking the internal position of the dental implants found in the mouth. Figures 15-16 demonstrate the positioning of titanium laboratory prepared abutments, which were torqued into the dental implants. The abutment design allowed for fabrication of ideally contoured splinted crowns. Figures 17-19 illustrate the emergence design and contours of the implant retained cemented crowns.

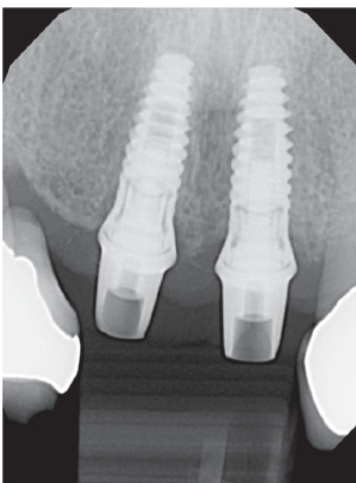
### Summary

The OCO Biomedical ERI two piece, dual stabilized, esthetic region implants allowed for surgical predictability, terrific initial immediate implant stability and reliable osseointegration. Simple prosthetic techniques made fabrication of the final implant retained crown as easy or easier than a conventional crown. No retraction was necessary. Smile design and emergence profile considerations were addressed with proper planning along with our dental laboratory technicians and execution of the techniques<sup>4</sup>. This proved to be an outstanding treatment modality in a difficult esthetic circumstance.

Implant dental therapy was certainly an acceptable treatment modality, rather than replacing the entire splinted crown and bridgework #'s 4-13 for this 84 year old male. Choosing not only the right dental



**Fig. 12: Final digital radiograph of the implants in ideal position.**



**Fig. 16: Digital radiograph of the abutments completely seated into the internal design of the implants.**



**Fig. 13: Tissue contours are created around the healing abutments.**



**Fig. 14: Polyvinylsiloxane impression material is used to duplicate the internal design of the dental implants.**



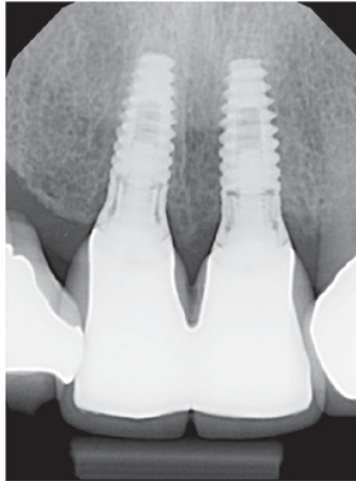
**Fig. 15: Custom prepared abutments are torqued into the implants.**

implant surgically, but also considering the proper prosthetic components is important. Immediate placement techniques and immediate load considerations were made preoperatively. Not every implant system works ideally in every situation, so providing yourself with the correct tools and diagnostic ability will make even compromised cases optimal.

Dental implants can be a predictable way to improve the patient's smile and function. Over time there may be a significant cost savings since they are safe and highly successful in most candidates. Implants are not experimental in any respect. They are the future of dentistry and the future is now. The quality of life of many of our patients will be dramatically improved through the process of implant dentistry.

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**Fig. 18: Final digital radiograph of crowns in place.**



**Fig. 17: Final splinted crowns cemented to place.**



**Fig. 19: Final smile of a happy patient.**

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## An Amicable Resolution to a Serious Complaint

Eddie Scher, BDS, LDS RCS, MFGDP

This 43-year-old patient requested that her crowns (placed 15 years previously) be replaced. She had received some periodontal treatment more than six months prior to her appointment, and there was a black line around the crown margins. The gingival margins were now stable and the periodontist recommended crown renewal.

The teeth had undergone satisfactory root canal treated prior to the original crown work [Figure 1] and no posts had been constructed at that time. The upper right root did have an amalgam core, as seen in the X-ray in Figure 1. The patient was warned that gold posts might be necessary when constructing the new crown work.

Preparation for crown work on the two upper central incisors proceeded. The teeth were very sturdy, with very little tooth loss. As these teeth had lasted 15 years, efficiently supporting bonded crowns, it was considered inappropriate to construct posts, which might actually weaken the tooth structure. It was explained carefully to the patient that this was a compromised area and, if the tooth did fracture, it may be necessary to do a post crown or other treatment in the future. The patient accepted this. All of this was carefully recorded in written notes.

The crown work was completed successfully, to the patient's satisfaction, with no black lines showing on her wide, 'gummy' smile.

### Serious Complaint

Three years later, the patient returned, saying that she wanted to make a complaint. She stated that on biting into a sandwich, her upper right central incisor sheared off at gum level, and she had to have an emergency plastic denture made up for her by a local dentist.

Her complaint was that her crown work should have lasted longer than three years. She asked what I was going to do about it.

On clinical examination, the root had a vertical shear fracture on the buccal aspect, which would make it very difficult to construct a satisfactory post [Figure 2].

My receptionist had warned me that there was a complaint with this case, and so I reviewed my notes and X-rays very carefully. In my notes, at the time of fitting the definitive crowns, I had written that the patient had confided in me that during the two weeks between preparation and fitting she had knocked her two front teeth with a tennis racquet. She assured me that she was not in any pain, and that there appeared to be no damage done. The clinical examination at that time revealed nothing abnormal.

At our complaint consultation, I listened carefully to what the patient had to say and answered her questions regarding possible future treatment options and outcomes: a denture, a three-unit bridge or an implant. She definitely wanted to get rid of her denture and a three-unit bridge turned out not to be appropriate as the upper left central incisor would make a poor abutment.

We were therefore left with the option of an implant. However, the patient had to be carefully warned that the aesthetic outcome might be compromised, as she had a high smileline and there was a risk of a slightly longer crown on the implant than the adjacent tooth.

We then discussed the question of accountability. She suggested that I had not performed treatment up to the required standard. I explained to her that I had written in my notes that we had a compromised situation with a root canal filled tooth, and that she had been advised that there was a risk of problems in the future. I then gently suggested to her that this could have been exacerbated by the fact that she knocked her tooth with the tennis racquet between the preparation and the fitting of her definitive crowns.

Her reaction to this was great surprise and some embarrassment. She said that she had completely forgotten that she had done that, and agreed that it could have been the reason for the weakness. She apologized for blaming me, and asked me if I would be prepared to do her implant treatment for her.



Figure 1: X-ray showing the satisfactory root canal treatment. Note the amalgam core in the upper right root.



Figure 2: X-ray showing the fracture of the upper right central incisor.



### Treatment

A very careful and detailed treatment planning letter was sent to the patient, emphasizing the possibility of a longer tooth in this region and the possibility she would need a soft tissue graft before exposure of the implant. She was warned that some pink porcelain may also be needed to disguise the apparent length of the crown.

Under strict sterile conditions in the practice operating theatre, the root of the upper right central incisor was gently and carefully removed using piezosurgery (Vercellotti T et al, 2000) and root luxators.

The buccal wall was intact but thin, so a protocol was followed of placing the implant immediately, slightly on the palatal aspect of the socket, leaving a 1.5mm gap between the buccal plate and the implant. The gap was augmented using NuOss and platelet-rich plasma (PRP) was used to obtain the best possible soft tissue healing in the region (Arora NS et al, 2009).

A low level healing collar with a built in emergence profile was placed [Figure 3], and 6.0 Vicral sutures were used to hold the tissues in position. The temporary denture was adjusted to make room for the healing collar. Figure 4 shows the healing collar in place. The sutures were removed 10 days later.



Figure 4: The healing collar in place.

### Restoration

Three months later, the healing collar was removed and an impression transfer was placed. An X-ray was taken to ensure the transfer was properly in place subgingivally [Figure 5].

A closed tray addition silicone impression was taken. A soft tissue model was made with the analogue in place, and the technicians proceeded to make a post for the implant.

A gold post was fitted [Figure 6] and a provisional plastic crown with a similar emergence profile to the healing collar was placed [Figure 7].

The provisional plastic crown is essential in this situation, as it allows the healing and recession at the gingival margin to be checked. The provisional restoration also allows this implant to be placed in minimal or no occlusion, so that progressive bone loading can be achieved (Misch C, 1995). In addition, the provisional plastic restoration allows the patient to criticize the shape, size, color, position and projection, and the phonetics, before proceeding to the final, definitive crown.

The patient was given strict instructions not to bite anything hard with this provisional plastic restoration for at least six weeks. It is suggested by Wise (1985) that it will take three months or more for the healing of the gingival tissue to stabilize around a tooth after sulcular surgery. No such investigation has taken place in relation to implants: no research has been performed to suggest how long a wait is needed for healing around an implant, but my experience tells me that we should also wait at least three months.

In this case, the patient's gingival biotype was favorable and it was pleasing to see that there was very little gingival recession after three months. The definitive restoration in gold and porcelain was then completed.

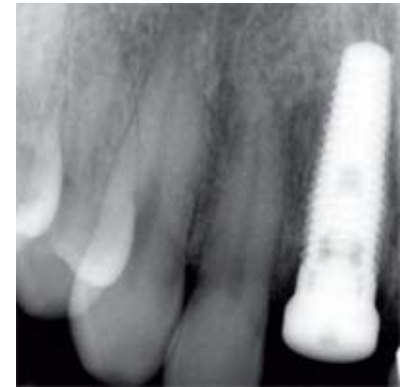


Figure 3: X-ray of the healing collar.



Figure 5: The transfer in its proper place subgingivally.



Figure 6: The fitted post.



Figure 7: The provisional plastic crown.

**Figure 9** shows an X-ray with the definitive crown in place. **Figure 8** shows the final result, with which the patient was very happy.



**Figure 8: The final result.**



**Figure 9: X-ray with the definitive crown in place.**

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### Implant Research

According to the ADA's Science & Technology newsletter, Practitioners Engaged in Applied Research and Learning [PEARL], a practice-based research network supported by the National Institute of Dental and Craniofacial Research, is seeking participants in a retrospective dental implant study. Patients accepted into the research must have received dental implants within the last 3-5 years. Dentists will be compensated and their patients will receive gift cards. The purpose of this endeavor will be to take the research out of the traditional arena focused on specialists and/or academic settings and into clinical settings of the general practice office. Researchers will be examining the factors associated with success and failure of implant therapy and how implants can effect a patient's quality of life. For more information call Dr. Rick Curro at New York University [212-998-9555] or go [www.pearlnetwork.org](http://www.pearlnetwork.org).

### Online Discussion Groups

We try to monitor various online discussion groups to share their views on implants with our readers. Recently, there was an interesting discussion on [acesthetics@lists.acesthetics.com](mailto:acesthetics@lists.acesthetics.com) on **a patient who challenged an implant fee**. To learn about the benefits & how to join, go to [www.ACEsthetics.com](http://www.ACEsthetics.com).

Had a guy from a local music store I deal with for everything call me last night. His wife needs a custom implant abutment (UCLA wax to) and Emax crown for #13. He was FURIOUS for the fee I charged for these

(\$2200). This fee is what I charge everyone for this treatment, but HE thinks it should be between \$700-900 (what HE paid for HIS implant crowns). I've been dealing with this guy in his music store for over 30 years. I've probably spent \$20K in his store over the years. I never heard him talk to me like this, and well, frankly I left it at this. I told him I'd ask some of you, my colleagues, about their charges and see what 'normal' should be. SO, what are your charges for a customized abutment and Emax crown for a bicuspid? I am contemplating NEVER dealing with him in any way at this point, but he was SO unreasonable with me about what "HE" pays for "HIS" implant crowns and what I charged his wife.

**Raymond J. Voller, DMD, MAGD, FADI, FACE, Kittanning, PA**

He may have had a crown done on top of a stock or solid abutment which may have been placed by the surgeon and he paid for it on that end and then a lower priced office made him a crown for the fee he claimed. Don't forget this could have been done a while ago as well.

**John Ackley, Implant and Precision Manager, BonaDent Dental Laboratories, Seneca Falls, NY**

For me, I charged my normal crown fee, plus the cost of parts, plus an extra percentage for expertise. In 2002 my crowns were \$1,000. Today the analog and impression transfer coping would be about \$100. Soft tissue model about \$40, abutment about \$250. Adding 20% the total would be \$1680. Screw retain would cost extra. Multiples of a lab fee has no meaning. What is important, IMO, is your profit structure: How much profit do you want to build into each procedure? My profit structure in 2002 was based on an hourly rate for my time @ \$500 per hour plus direct costs, plus expertise factor (20%) for complex procedures, plus a PIA factor if needed. I had the same profit for a crown as for fillings. Hence, my crown fee did not distinguish implant or natural tooth. But implant parts added to it, and then the expertise added to it. Today, I am sure my fee for a single implant crown would be around \$2,000.

**Dean Mersky**

Custom abutment \$499; Implant crown \$1567; A lot depends on your lab fees too! If you get an Atlantis abutment, you may need to charge more for the custom abutment.

**Dr. Mike Maroon, Founder & Fellow Academy of Comprehensive Esthetics**

I'm about \$750 for a custom abutment and from \$1250 to \$1400 for the crown. My regular crown fee is \$1250. Sometimes I think these fees are really too high. Most of these restorations, except anteriors with tissue support issues, are so easy. I think in the future implants and crowns will become more reasonably priced.

**Mark Sheklian DMD, Sea Girt, NJ**

"Sorry, guy—

We have lost a few patients because of our fees but never because of the quality of our treatment. We're the only ones who realize what it costs US to provide the highest standard of care, and it's just about impossible to describe to a civilian. Sure, it's always possible to cut corners on materials and planning and all sorts of other areas of care, but we can't bring ourselves to do that. It is what it is."

See how that flies.

**Bill Domb**

Difficult sometimes to accept that everyone will not agree with us or our philosophies. Fortunately HE is not your patient, she is!!! My fee for that procedure is 1750.00 but my overhead, lab, etc.....is likely totally different. That is the part that patients don't get. We know what we need to make a profit, and if that does not work for him, too bad. Some folks merit a break from time to time BUT it seems he is not in that category!!

**Dennis J. Jenkins DDS, Director, Greater Louisville Aesthetic Masters**

My question is why isn't he taking his wife to the DDS who did the bargain implant crown on him?

**Gregori M. Kurtzman, DDS, MAGD, FPFA, FACD, FADI, DICOI, DADIA**

So why aren't all the guitars in this store the same price? A guitar is a guitar, right? Fee is in line with mine.

**John Highsmith DDS, Clyde, NC**

BTW, I don't even break these down for patients. Restoring an implant starts at \$2000 and goes up from there depending on location, materials, and esthetic demands and challenges.

**David R. Boag, DDS**

## Implant News & Views

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implant dentistry"

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We're at the same price as you Ray, and haven't been able to raise fees due to this economy for at least 4 years. There has been a drastic run - up in the price of precious metals, as everyone is well aware, and we're actually making way less now, than we should be, given the price of precious metal. Suspect metals from 3rd world labs. Shortcuts taken to save a buck.

**Steve Markus, Haddon Heights, NJ**

We charge a little more than that Ray.... it's cheaper at UCLA, even cheaper in Tijuana, hey and nearly free in Antarctica.... but see the gas and drive time, and they don't get you..... so makes your choices, right?

**Kevin Shuster**

Custom abutment = \$461.00; crown = \$935.00; but I live in a cornfield.

**Jason Luchtefeld, DMD, Fellow, AGD, Fellow, ICOI**

Those are practically my lab fees - how do you have any net profit?

**Craig O'Donoghue**

I wouldn't be doing business with him any longer- I would have reminded him of what you spent in his store- the people that you have referred to him, and I certainly would have lost my cool in doing so. By the way, did he want anesthetic with that? What the hell did he pay for the implant in the first place? I would tell him that he could get someone to do it in a flea market or working out of his garage (we have that here in South Florida) and tell him to take a hike. Maybe you can't do that in a small town- Fee custom abutment \$800, Implant crown \$1475- \$1680.

**Howard Hoffman**

Last I looked an Atlantis abutment and crown on the abutment was about a \$585-\$650 lab fee, so you at least have to do 4x your lab fee - don't you?

**Kenneth Siegel, D.M.D., Blue Bell, PA**

I live in a wheat field, and my fees would be abutment \$610; implant crown \$1270.

**David Hamel DDS, Marysville, KS**

For an anterior, I'm at \$765 for custom abutment and \$1480 for implant crown. Many times that includes a longer term provisional to help contour the tissue. If it's out of the esthetic zone, I may drop it down to \$1980 total.

**Jay Nelson**

The wife of the irate music shop owner (my patient) called this morning apologizing like CRAZY over the phone call the other night from her husband! She told me he was drinking, his dad is dying, and his day was TERRIBLE on Thursday. Then the guy himself called, apologizing up and down that he was 'in the wrong' and that he had all this issues on Thursday, and that his wife 'loves your office' and wouldn't go anywhere else. He was as nice as he could be, and we're invited over their house on Tuesday next week for dinner/drinks. Go figure. I hope all of you have something really good happen to you this morning. This call really was hard on my mind, potentially losing a very nice patient and a place to get my musical stuff!! Wow..Life is so full of surprises..most of em, good..

Love you guys.

**Ray**