

Clinical Realities

WINTER 2007

IMPLANT NEWSLETTER FOR CLINICIANS

From the treatment records of Paul P. Binon DDS, MSD



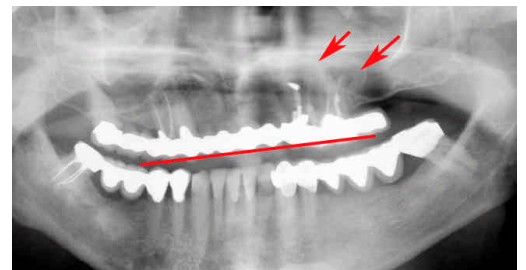
Treatment Decisions

There are many different ways of restoring a patient to full function and esthetics. The goals of the patient are an important aspect of the decision making process. Case in point is this case of the month.

He had been restored with fixed C&B by his GP who also happened to be a long time friend. The treatment was completed many years prior and was executed very well and served the patient for many years. Eventually the primary abutments on the 13 unit bridge started to fail and he was referred to me for evaluation for an implant reconstruction. The patient is class 3 with considerable pre-maxilla insufficiency and a bilateral posterior cross bite. Multiple restorative options were presented (5), which at first involved a combination of implants and natural teeth. The patient's decision making process was an extended one starting in 2003 and ultimately the teeth that could have been retained were further compromised and the prognosis changed to hopeless. The focus then shifted to an implant bar retained over denture or an implant supported fixed porcelain to metal full arch restoration. Even given time of treatment, sequential surgery and the expense, the patient was adamant about a fixed restoration with fixed bridges. A sequential treatment plan was developed and treatment started in earnest in May of '05. The bottom line was that the patients treatment goals and objectives were the ultimate determining factor in the reaching an end point. At one point it even involved changing the surgical team member as that individual concluded that the patient was a poor surgical risk and was unable to provide the additional surgical treatment required. Given the complexity of the treatment it was a commendable decision which I am sure was difficult to make. The sequential treatment plan took 28 months to complete. This case also illustrates that with today's available technology and a well versed and experienced team, exceptional end points can be achieved. The more exposure you have to what can be accomplished, the better you can serve your patients even if it means you have to refer the patient to someone else. How many maxillary denture cripples do you have in your practice that could benefit from Zygoma implant therapy, sequential implant placement treatment plans restored with bar over-dentures or fixed restorations? Next time you see one, think about the possibilities to make their life experience more meaningful and enjoyable. **The possibilities are unlimited.**

CASE OF THE MONTH

A 61 year old Caucasian male presented for evaluation for oral restoration. Patient was in excellent health with a medical history that presented no systemic contra indications. Patient related that he had been restored many years ago with a 13 unit maxillary FPD and two lower posterior FPD of 5 and 6 units respectively. His general dentist had advised him that abutments 12 and 13 were failing and that the bridge was loose. He indicated that he was interested only in fixed restorations to restore his mouth. Both 12 and 13 had significant periapical pathology and had undergone RCT at the time the FPD was placed. Further

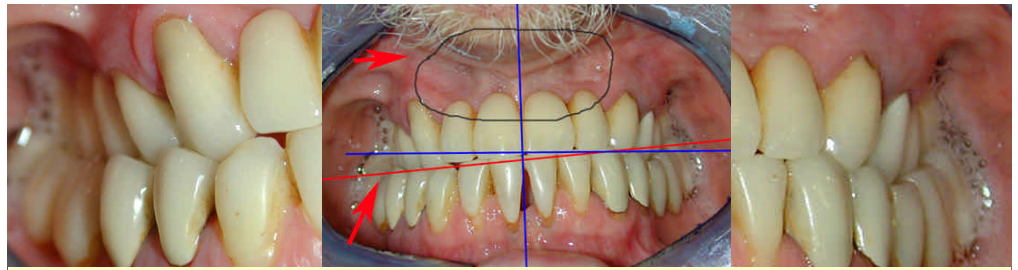


evaluation rendered a hopeless prognosis to both teeth. In the maxilla that left four teeth to support a FPD. The three anterior abutments (5, 6 and 11) were also endodontically treated. There was a distinct occlusal plane

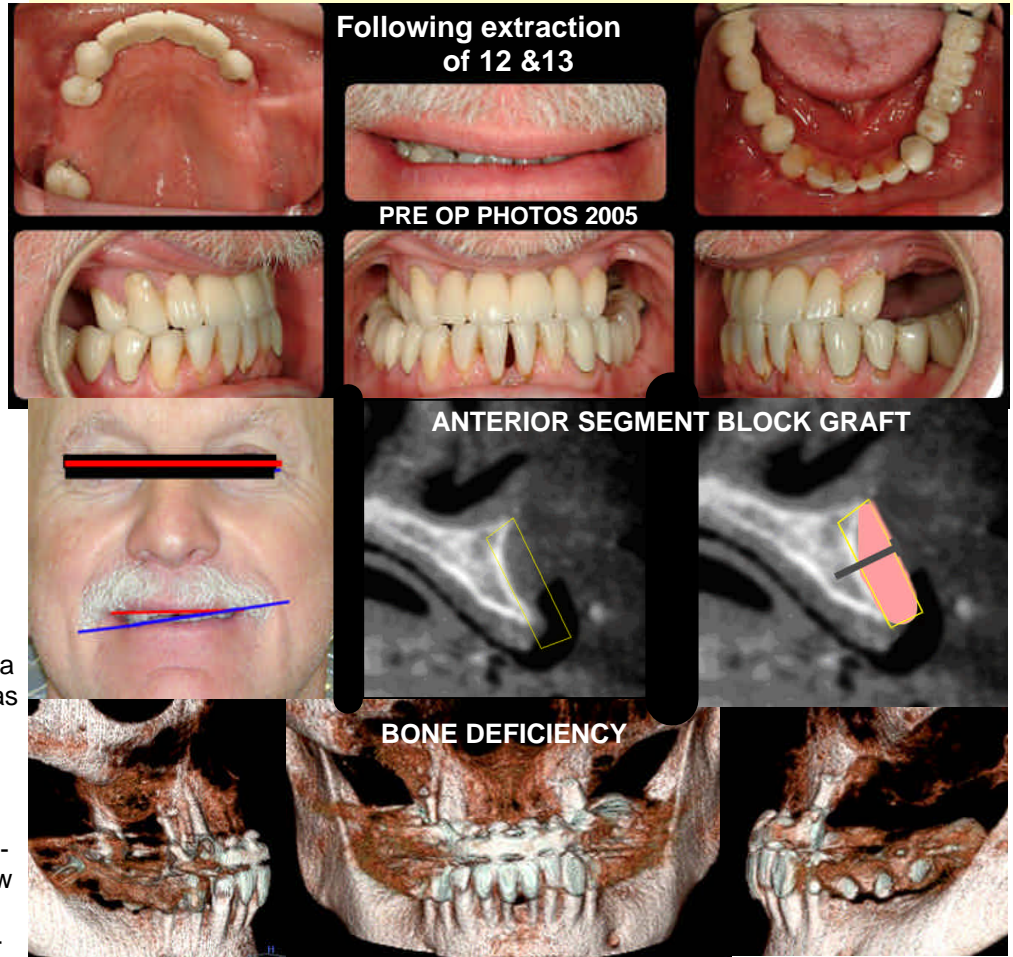


disharmony with an incline to the left, a bilateral cross bite and a significant premaxillary insufficiency. The maxillary anterior incisors were labially inclined in order to reach the incisal

incisal edges of the lower teeth. Initial treatment consisted of sectioning the bridge unit and having a MFS remove the two infected bicuspids. CT scan were then taken and evaluated. Several different treatment plans were developed and presented. There was a considerable time delay before a final decision was made and the patient then chose to pursue a fixed implant supported FPD. A diagnostic wax up was completed and a sequential treatment plan was determined. The initial surgical involvement would be for bilateral sinus augmentations, conjoint grafts in the left bicuspid area and large block grafts to the deficient premaxilla area. After a six month healing period six implants were placed in sites 3,4,5,12,13 and 14. During this time interval, the original FPD was modified and supported by 6 and 11. After the initial healing period, a temporary partial denture replacing the posterior teeth was made. The RPD was tooth supported by 2, 6 and 11. Since these were grafted sites, a 7 month integration period was deemed appropriate prior to second stage and loading. At second stage, an impression was made of the six implant locations and a fixed implant supported provisional was constructed. Approximately three weeks later, the remaining three teeth were removed and implants were placed in sites 6, 9 and 11. At the same time the provisional implant supported prosthesis was inserted to allow stress free integration of the new implants and provide functional and cosmetic replacement of the teeth. The # 9 implant was placed to eliminate any cantilever effect between the 6 and 11 implant placements. Again, after six months of healing, second stage surgery was accomplished. Following several weeks of soft tissue healing, final impressions were made of the upper arch. A verification jig was made on the master cast to assure the accuracy of the master cast. The substructures were then cast and milled and tried in the mouth for passive fit. A new master impression was taken with the segments in place and remounted with new occlusal records. The superstructure was then made and again tried in the mouth. Again verification impressions were made. Shade and esthetic considerations were verified and porcelain was applied.

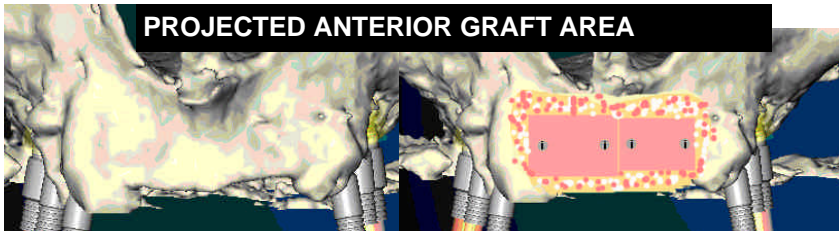


Occlusal plane disharmony, premaxilla insufficiency, Class III relationship.



During the lengthy sequential treatment of the upper arch, 2 additional implants were placed in the 30 and 31 site to support implant crowns. The lower arch was retreated to correct the occlusal disharmony. In addition, anterior ceramic restorations were placed on the lower incisors.

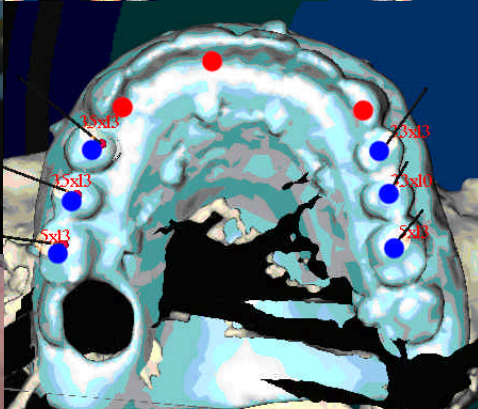
To maximize arch stability, the posterior implants were splinted with a milled gold substructure. Custom cast gold abutments were made for the 6, 9 and 11 implants with a common draw. The superstructure consisted of three distinct PFM units. The posterior units are inserted first and retained with a set screw on each side. The anterior unit is cemented onto the 3 abutments and connected to the posterior units with milled screw block attachments. On insertion the 3 segments are sequentially cemented in place and attached to the substructures with four set screws. In this manner all segments are completely retrievable. Uniting the segments together results in cross arch splinting and load sharing during function. Even with the block grafting to the premaxilla area, the anterior segment required a tissue colored cervical drape to prevent air and saliva leakage. Sculpted interproximals allow for optimal hygiene access with a water irrigation unit and perio-aids. The cross bite was corrected on each side and optimal lip support was provided with an improved anterior incisal relationship. Total treatment time was about 28 months with **essentially 4 major segments to the treatment plan**. During that time he never went without a fixed anterior maxillary prosthesis.



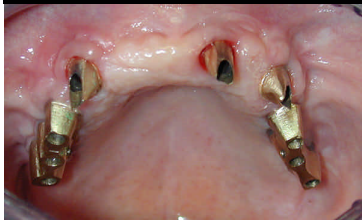
PROJECTED ANTERIOR GRAFT AREA



DIAGNOSTIC WAX UP



**BLUE - INITIAL IMPLANT SITES
RED - ADDITIONAL SITES**



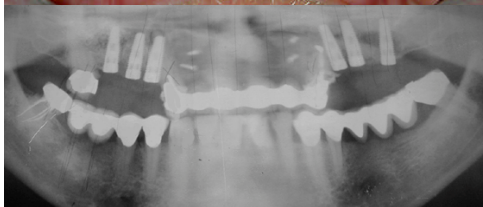
METAL SUB AND SUPER STUCTURE



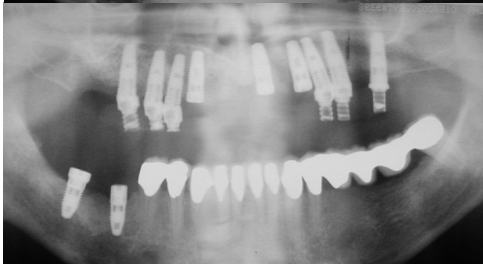
COMPLETED PORCELAIN



PANS FOLLOWING 2ND AND 3RD STAGE SURGICAL TX.



**CORE SKILL OF THE
PROSTHODONTIST
IS
DIAGNOSIS**



**MULTIPLE
TREATMENT
OPTIONS ARE
ALWAYS POSSIBLE**

RETREAT OF PROBLEMATIC CASE

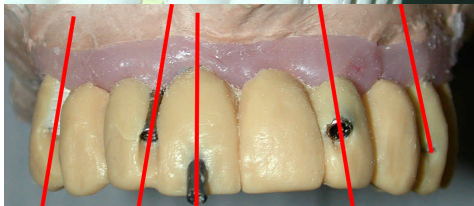
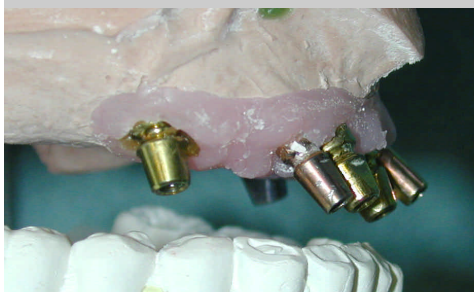
A 68 year old patient presented with a chief complaint that her implant bridges kept falling out. She was to have additional implants placed and more crown and bridge treatment. She was disillusioned and was unable to get satisfactory answers to her questions so she decided to terminate further treatment. The cosmetics were also not to her liking. Another implant had recently been placed and was as yet un-restored. Patient had seven implant placements in the anterior maxilla from # 5 to # 13. Her natural cuspids remained (with plus 2 mobility). There were no posterior teeth and she was not wearing a partial denture.



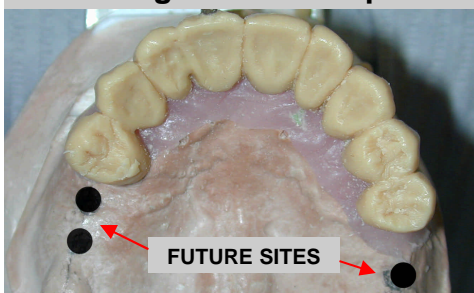
Seven and 8 and 9 and 10 were restored with splinted PFMs units, cemented on prefab abutments. The distribution of the implants was unusual in that the anterior segment is typically restored with alternating implants to preserve the soft tissue architecture. There are a number of

issues to consider in evaluating this case. First, with the proper distribution of seven implants, the patient could have had a full arch restoration. There was adequate bone in the posterior area to support implants. If the implants would have been placed in the 3, 4, 6, 9, 11, 13 and 14 locations, the patient would have had posterior support. Second, with abutments of adequate length, the restorations as they were, would not have come out frequently. The overall treatment plan vision is perplexing as failing cuspids were retained and piecemeal implant placement was done. A master plan with 7 adequately spaced implants would have avoided the necessity of placing additional posterior implants later to provide posterior function. The implants were also placed at a severe angle. This could have been avoided if the implants were placed in the buccal segments. Two were also placed in inter proximal areas (7 & 10) so as to preclude esthetic results. In retreating the case, three abutment segments were made with a superstructure PFM bridge retained with cement and set screws. The 7 and 10 sites were left as sleepers. Three additional implants are planned along with a lower restorations to restore worn tooth structure.

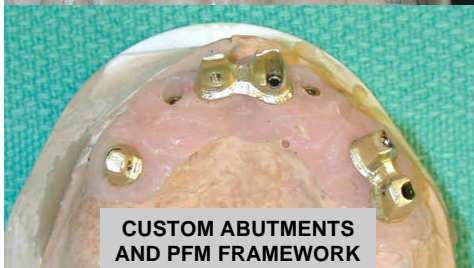
Angulation of implants



Diagnostic wax up



FUTURE SITES



CUSTOM ABUTMENTS AND PFM FRAMEWORK



BISQ BAKE TRYIN



COMPLETED CERAMO METAL BRIDGE



POST OP SMILE

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