Extraction technique with immediate placement of implants

By Dr. Andrei Mark

One day a 50-year-old patient and dentist friend of mine (who already has multiple dental implants) came to my office and presented with a non-restorable fractured tooth #8 (see Fig. 1).

As you can see from the photograph, this looked to be a complicated extraction. As always, my treatment plan consists of proper imaging. With dental implant cases, it usually involves the i-CAT (Pre-op i-CAT image).

The primary challenge was to remove tooth #8, while maintaining the soft tissue and bone intact.

As I have mentioned in previous articles, I will strategically plan out the entire case before beginning any procedures. The plan was to extract tooth #8 and place an immediate implant. Because there was no root to grab on to, and lifting a flap would compromise the buccal bone, I decided to utilize a new instrument on the market called the Tooth Extractor by Meisinger.

I feel one has to have state-of-the-art tools and technology at his or her disposal for just the right application. This case was an ideal case for the Extractor. This device works like magic for removing single roots without lifting a flap or cutting bone.

The specific technique involves drilling a hole in the pulp chamber and threading a post with an anchor. A pulley system rests on the adjacent teeth and is attached to the anchor with a cable mechanism.

By rotating a knob at the end of the cable, pressure is applied in the vertical axis of the root. As you gently increase the pressure to the cable, it allows the periodontal ligament to stretch. The root is extracted from the socket when sufficient pressure is applied, making a popping noise (Fig. 5).

When this works, it feels like magic. Left behind is an intact socket with the soft tissue and bone preserved and ready for immediate placement of a dental implant.

The implant osteotomy is performed slightly palatal to allow a small minimal gap between the future implant and the buccal bone. The pilot drill with the MIS implant system is used to start the osteotomy. Then the next two larger drill sizes are used to enlarge the osteotomy site further.

The implant I chose was a tapered implant with aggressive threads that find its way by self-tapping into the osteotomy. (MIS 7 implant 3.75 x 11.5 mm)

After placing the implant and filling the small buccal gap between the implant and the bone with a bone graft, I placed a 5 mm healing screw to maintain the gingival anatomy.

As you can see (Fig. 4), the soft tissue anatomy is identical to the pre-op photo. The patient will wear her temporary bridge for the next three months, at which point a final prosthesis, including the implant in position #8, will be fabricated.

Having the right tool at the right time can make all the difference in the patient’s final treatment outcome. I strive to have the latest technology and techniques available at my fingertips. This way, I have greater predictability of the results of my treatment plan each and every time.

About the author

With more than 20 years of experience in oral surgery and more than 5,000 successful implant procedures to his credit, Dr. Andrei Mark is no newcomer to the field. Mark is a board-certified oral and maxillofacial surgeon in midtown Manhattan. Accepted from high school into the seven-year, combination undergraduate and graduate dentistry program at NYU, Mark completed college in three years and transferred to the prestigious SUNY at Stony Brook School of Dental Medicine where he completed a hospital-based four-year residency. He served as chief resident from 1987 to 1988. At a time when more and more general dentists are venturing into implant dentistry, Mark is regarded by many of his peers as an expert in the field. In addition to his private practice, Mark is also president of the Central Park Oral Surgery Study Club, an organization dedicated to educating dentists on implant dentistry with lectures and hands-on workshops. His passion for research and development has helped him to enhance and perfect many of the latest developments in bone grafting, bone reconstruction and complex implant dentistry. Mark is one of only a few oral surgeons in New York City using bone morphogenetic protein-2 (rhBMP-2) for sinus augmentations and alveolar ridge procedures.