How technology has changed Periodontal treatment options –

Most, minimally invasive now

By Juan M. Teodoro, D.M.D



Periodontitis or gum disease is a chronic inflammatory disease that destroys bone and the gum tissues that support the teeth. It is the major cause of adult tooth loss and it affects nearly 75% of Americans. Additionally, in the past few years several studies have shown that patients with periodontal disease have an increased risk for cardiovascular disease. Periodontal disease and cardiovascular disease are both inflammatory diseases, and inflammation is the common mechanism that connects them.

The practice of periodontics involves the diagnosis and treatment of all forms of gum disease. A periodontist is the dental specialist, who diagnoses and treats periodontal disease. Periodontist are in the "tooth-saving business." However, when teeth are lost, periodontics provides surgical solutions for replacement of these missing teeth with dental implants.

The new technologies available in the field of periodontics have provided patients with more options, and better solutions. In addition, these new advances have a common theme of allowing surgical goals to be accomplished with minimally invasive approaches. Shorter surgical appointments, accurate surgical planning, minimal post-operative swelling and discomfort, and speedier recovery times are of great benefit to our patients.

Periodontal Laser Surgery

Traditionally, when dealing with advanced periodontal disease, patients have to undergo gum surgery. This is an invasive procedure that involves cutting and folding the gum tissue from the bone to gain access for instrumentation. The Periodontist will then clean the bacteria from the tooth roots and the gums are stitched back in place.

However, there is now a new treatment option to treat periodontal disease that is virtually pain-free. It is known as the Laser Assisted New Attachment Procedure (LANAP) and involves the use of the PerioLase laser. This is the first and only FDA approved laser method used to treat periodontitis. It considerably shortens treatment time with fewer complications, less chance of recurrence and far less pain.

PerioLase removes the diseased tissue, killing the bacteria in the process. As the laser beam moves, the cuts are cauterized, leaving the healthy tissue unharmed, also resulting in a clean and sterilized wound. The blood from the wound is coagulated by the laser, allowing it to reattach to the tooth and seal it off, letting the body heal itself which means there are no stitches needed. This process if made possible because the diseased tissue is the color of the wavelength that the laser is calibrated to affect, the healthy tissue is a lighter color, therefore leaving it undamaged by the beam.

This means fewer appointments and a shorter duration of time to clean up the bacteria. There is less bleeding and swelling and most patients are able to return to work the very same day.

Computer Guided Implant Surgery

Computer Guided Dental Implant Surgery actually allows the procedure to be "performed" in advance of the surgery. Surgical simulations can be done on the computer, so the exact size and ideal location for the implant is known. In essence, the treatment is completed on the simulator pre-surgically. Recent computer technology breakthroughs enable a surgical guide to be electronically constructed to guide implant placement during surgery.

3-Dimensional Cone Beam Computerized Tomography (CBCT) imaging can provide important information regarding the width, shape, quality and volume of bone in cross-section. Once the scan is obtained, the shape of the bone can be clearly seen and a discussion can be conducted of whether procedures such as bone grafting will be required. Other important anatomic landmarks can also be identified that cannot be seen with traditional x-rays.

Computer Guided Dental Implant Surgery is typically performed in less than an hour. In most cases, no incisions or sutures are usually needed and therefore post-operative swelling / discomfort is minimal. This state-of-the-art procedure can be used for patients requiring 1 implant to patients in need of full mouth rehabilitation.

Periodontal Plastic Surgery

For the treatment of Gum Recession

Exposed tooth roots are the result of gum recession. There are many causes of gum recession including periodontal disease, aggressive brushing, anatomic susceptibility, and tooth position. If recession progresses without treatment, it can lead to esthetic compromises, tooth sensitivity, tooth decay on roots, or even tooth loss.

Gum grafting is aimed at covering the exposed tooth root surface. It is an excellent way to restore natural symmetry to the gums and make the smile look more aesthetically pleasing along with strengthening the tooth for long term retention and health.

Traditionally, a gum graft required removing gum tissue from the roof of the mouth (palate) and repositioning to the area of recession. Now, Instead of using the patients' own gum tissue, a tissue bank allograft uses tissue from a cadaver for the graft. By using a donor's tissue the patient does not have to go through the pain and recovery of the palate healing post-operation. Tissue from donors is safe and effective.

Additional approaches to gum grafting include the use of synthetic grafting system engineered proteins and growth factors that work by mimicking the biological processes of natural tooth development. They are engineered to stimulate wound healing and regeneration and do not require the use of the patient own gum or an allograft in many cases.

Contact Dr. Teodoro by calling 239-333-4343 to schedule a CONSULTATION.



