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Millennium Dental Technologies: Helping Clinicians Stem the Tide of Failing Implants

While Millennium Dental Technologies, Inc., does not manufacture dental implants, Delwin K. McCarthy, DDS, co-founder of the Cerritos, California company, says Millennium creates a product that can make or break the success of “problem” implants, and thereby provides a significant contribution to the implant industry.

Implants have been a “game-changing” innovation in dentistry as a solution for missing teeth, according to McCarthy, as an estimated 2 million-plus of them are placed annually,¹ a trend that continues to gain acceptance as an alternative to dentures or bridges.

But what happens when a good implant goes bad? Along with the shift toward increased implant placement, McCarthy, who is also the co-inventor of the LANAP[®] protocol and Millennium’s PerioLase[®] MVP-7[™], notes a new and startling trend in dentistry—ailing and failing implants. Statistics indicate that up to 80% of dental implant patients experience complications due to inflammation,² and short-term failure rates are reported to be from 5% to

16%.^{3,4} “This indicates the longevity of dental implants is dependent on maintaining the healthy tissues around them,” McCarthy acknowledges.

Millennium’s LAPIP[™] protocol is a patient-friendly, minimally invasive, microflap surgical approach with a tissue-sparing, therefore predictable, solution for ailing implants. The LAPIP protocol, McCarthy explains, is an implant-specific modification of the well-defined LANAP protocol for the treatment of periodontitis re-designed to treat peri-implantitis. “Both procedures utilize a selective denaturing of pathologic proteins to reduce the inflammatory response, remove inflamed pocket tissue, disrupt biofilms, and decontaminate the root/implant surface,” McCarthy states. “A laser-induced hemostasis step further decontaminates the tissue and creates a durable blood clot to close the system.”

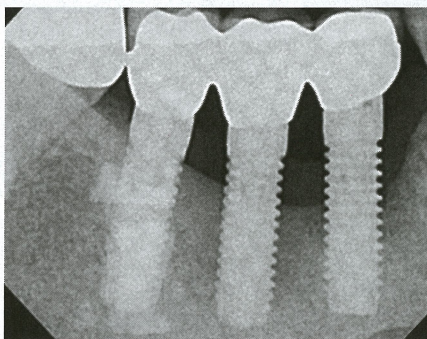
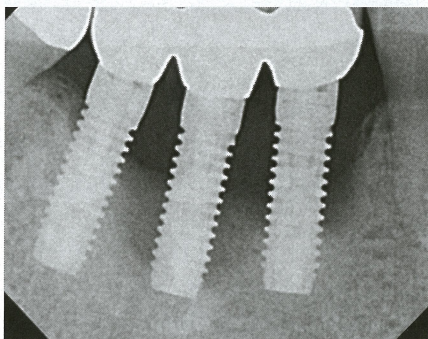
What makes the LAPIP protocol unique, McCarthy asserts, is that it allows the tissue to return to health, regrowing bone and allowing for reintegration of the tissues around the implant similar to the regeneration seen in the histology of LANAP. He says there is no need for removal of the implant,

waiting for the healing to take place, and then replacement weeks later if at all. The process requires a single appointment with shorter recovery time—all significant benefits for patients, he notes.

Outcomes using the LAPIP protocol have been notable, McCarthy says. “What we’ve experienced is success in treating ailing and failing implants, as multiple cases have indicated that failing implants treated with the LAPIP protocol have reintegrated in the pocket and stabilized with bone growth of three to eight threads,” he says. He adds that because no resection or reflection of a vertically oriented flap is needed, the integrity of the structural tissue is retained. “This means all future treatment options remain possible.”

The LAPIP protocol leverages the positive effects that the optimally configured PerioLase MVP-7, a “free-running” pulsed Nd:YAG laser, has on treating peri-implantitis. “Specifically, the PerioLase MVP-7’s ability to penetrate the soft tissue to achieve an effective kill of bacteria and biofilm and promote hemostasis without damaging healthy tissue, makes it uniquely designed to support the LAPIP protocol.”

According to McCarthy, all decisions and research at Millennium are based on the precept, “It’s all about the patient.” Providing minimally invasive surgical options with successful outcomes to encourage treatment, he suggests, ultimately helps the patients’ oral—and overall—health. He summarizes: “The minimally invasive LAPIP protocol offers a successful option for saving ailing and failing implants, benefiting both patients and clinicians.”



Preoperative radiograph (left) compared with radiograph 1-year post-LAPIP protocol (right). (Dentistry performed by Braden Seamons, DDS, periodontist, Honolulu, Hawaii.)

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