Hahn Tapered Implant: 45 years in the making

Since placing his first implant nearly 45 years ago, Dr. Jack Hahn has spent much of his career as an implantologist thinking of ways to make treatment more accessible to the practitioner as well as the patient.

Implant design has improved dramatically during that time, with Hahn spearheading key innovations that have helped make implant therapy the essential mode of dental treatment it is today. From the endosseous blade-form implant he helped Miter Inc. develop in 1978 to the newly released Hahn™ Tapered Implant, Hahn’s efforts have been driven by the desire to continually improve in order to make treatment simpler and more predictable.

“The easier we make it to position the implant for a restoration that looks like a natural tooth, the better results we’ll have,” Hahn said.

It was this line of thinking that inspired Hahn’s idea for the first tapered implant. After a long day that included several cases in which he had difficulty placing parallel-walled implants in the anatomically restricted space of the anterior maxilla, Hahn had an epiphany: “The tooth I was replacing was taper-shaped, so why was I putting in a square peg?” That very night, he sketched out the concept.

Steve Hurson, former chief scientist for Nobel Biocare, has said: “Dr. Hahn identified a need for an implant with a narrower apex, which would achieve higher primary stability in soft bone. The concept was to have an implant design that would have the tapered shape of a tooth root ... resulting in a system with outstanding predictability.”

In essence, this was an extension of the philosophy that inspired the design of the machined collar Hahn helped Steri-Oss develop. “By designing a 4 mm machined collar that was more like the neck of a natural tooth root, we were able to prevent crestal bone loss and improve outcomes,” Hahn said.

This drive to constantly improve, however, has not always been met with open arms. In fact, his role with Steri-Oss was borne of a disagreement with Miter Inc. “The Titanodont implant had some problems, including an abutment attachment that lost its retention after a few years and fins that would become exposed if there was any crestal bone loss. So I proposed a machined collar with a new prosthetic connection,” he said. “They couldn’t do it because it would be too expensive to change the machinery. I didn’t want to have my name associated with the implant any longer if they weren’t going to correct the problems.”

This led Hahn to other endeavors, including his role with Steri-Oss and, eventually, Nobel Biocare.

After the NobelReplace® tapered implant system launched in 1997, Hahn continued placing and restoring implants, completing thousands of cases. This experience afforded clinical observations that would serve as the basis for a new implant design that Hahn considers his best.

“I came to Nobel with my idea for a new implant in 2012, conceptual engineering drawings in hand, and they said, ‘Replace is so successful; why change now?’” Hahn replied: “Apple has become one of the most successful companies in history by constantly innovating. Why shouldn’t we do the same in implants?”

Wanting to take his design concept to the next level, Hahn began pursuing alternatives, which eventually led him to Glidewell Laboratories. The resulting partnership culminated in the recent launch of the Hahn Tapered Implant System, and Hahn couldn’t be happier with the results.

“When I first visited their facilities, it was immediately apparent that their manufacturing capabilities are state-of-the-art,” he said. “Their engineering team has the technology and know-how to bring design concepts to life with astonishing speed and precision, and their expertise on the prosthetic side of implant dentistry has been invaluable in creating an implant that is as simple to restore as it is to place.”

With a career that speaks volumes on the importance of continual innovation, Hahn is proud to have his name on an implant that contributes to the forward progression of implant dentistry while reducing the cost of treatment. “The better we make implant design, the more accessible we can make implant dentistry to doctors so they can improve their practices and the quality of life of their patients,” he said.

Note: The Hahn Tapered Implant is a registered trademark of Glidewell Laboratories. NobelReplace is a registered trademark of Nobel Biocare.