



The success and predictability of the science of osseointegration has had a global impact on dental treatment planning. P.-I. Brånemark's 1984 presentation in Toronto opened the door to a new thought process that has influenced everyday decisions in patient care.

My introduction to dental implants in 1966 was with subperiosteal implants that were mainly effective for atrophic edentulous mandibles. This era also included blade implants, but these implants were found to have a significant lack of predictability.

In the mid-1980s, implant practitioners began to expand beyond treating edentulous patients to include partially dentate individuals. Someone with a single missing tooth could have a single restoration without depreciating the structure of adjacent teeth. It was immediately apparent that partial restorations could not display titanium abutments such as those that were acceptable for mandibular edentulism. This necessitated innovative approaches and resulted in customized abutments to bring about results simulating fixed restorative dentistry. Patient acceptance and satisfaction were immediately enhanced.

Two significant detriments to patient care remained. The first was the 3- to 6-month waiting period between implant placement and delivery of the final prosthesis. A publication by Lazzara demonstrating success with an implant placed in an extraction socket played a significant role in legitimizing a shorter treatment regime. Today many patients are restored with provisional and sometimes permanent restorations delivered simultaneously with implant placement. Free-hand surgery has been supplemented by computer-guided implant placement.

A second detriment was the lack of alveolar process and the presence of anatomical obstacles such as the inferior alveolar nerve and maxillary sinus. The 1990s ushered in a rapid progression of surgical procedures with the use of biologics to construct bone that would successfully support occlusal loads. This was further augmented by the introduction of growth factors at the beginning of the 21st century.

The understanding of the role played by the implant surface became more and more sophisticated. This has improved success in challenging situations and resulted in developments in which rougher surfaces can be used more apically and smoother surfaces more occlusally.

In the future, I fully expect to see a steady stream of additional breakthroughs and improvements involving implants, abutments, impression techniques, and restorative materials that will be a segue for continued success. This special supplemental issue reports on a number of recent developments aiming to make implant treatment safer, more effective, and enduringly esthetic. I truly expect the best is yet to be.

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