Titanium implants have been successful in both dentulous and edentulous patients. The original Brånemark titanium implants were introduced with external hex connections between implants and abutments. Successes and failures/complications with both the biology and mechanics of this connection system have been reported. In an attempt to improve the predictability and success of implant/abutment connections, internal connections between implants and abutments were developed significantly differently from external implant/abutment connections in terms of size, surface area, and geometry. Forty-five consecutive partially edentulous patients were treated with 83 implants (Osseotite Certaina). The implants were allowed to heal for at least 8 weeks without occlusal loading. All were restored with single, nonsplinted restorations. The implants were loaded with fully functional occlusions for at least 1 year. Recall appointments were scheduled at 1, 6, 12, 18, 24, and 36 months after implant placement.

Eighty-three of the 83 implants were clinically stable and considered to be osseointegrated 18 months after occlusal loading for a cumulative survival rate (CSR) (implants) of 100%. All of the abutment screws and restorations were non-mobile 18 months after occlusal loading for a CSR (prostheses) of 100%. This internal implant/abutment connection was clinically successful and should benefit restorative dentists involved in implant dentistry by decreasing the number of maintenance visits and problems associated with dental implant treatment.