# *Commentary:* Removable Dentures with Implant Support in Strategic Positions Followed for Up to 8 Years

The study by Kaufmann et al in this issue addresses a common clinical scenario and subtly asks the reader to consider if the current method of treatment for partially edentulous patients with fixed implant-supported restorations is the most appropriate treatment. Is the dental profession guilty of gross overtreatment in these scenarios? Are we overlooking a much simpler, less costly, and less invasive treatment modality?

Implants were originally touted as a cure for edentulism. However, the insistence that an implant-supported restoration had to be "fixed"—mimicking the natural dentition—firmly put this treatment modality out of reach for most patients and dramatically limited patients' acceptance (except in countries with a very generous public insurance system). It was only with the development of the concept of an implant-supported overdenture that this treatment began to reach the masses. Implant-supported overdentures require only limited surgical intervention, benefit from predictable prosthodontic management, permit oral hygiene procedures to be easily carried out, and have a favorable price point in comparison to fixed implant-supported restorations.

The overwhelming clinical success of implant therapy in fully edentulous patients has now seen a natural transition to the realm of partial edentulism. Regrettably, the current implant treatment paradigm is to restore partially edentulous spaces with fixed implant-supported restorations, incurring high surgical, prosthodontic, component, and laboratory costs along the way. But for many patients, especially those with large or multiple edentulous spaces, a substantially less costly and invasive treatment modality is available that, in many, will satisfy all of the patients' requirements. Although some patients object to having a removable appliance per se, the vast majority are seeking implant treatment because their current removable appliance lacks retention, stability, and support. All of these factors can be dramatically remedied with the utilization of one to two strategically placed implants along with careful attention paid to the design and execution of the removable appliance. The allure of fixed implant-supported restorations is tempting but may result in over-treatment. The goal of prosthodontically driven implant rehabilitation is not the provision of the most expensive, most invasive, most technically demanding treatment modality that seeks to restore the patient's dentition to its former idealized state. The goal is to restore the dentition to a state of maintainable physiologic health that satisfies the patient's goals and objectives in the most economical, most predictable, and least invasive manner.

Two points raised in the study warrant additional discussion. Numerous studies on overdentures have compared various overdenture attachments. The results have been inconsistent—with some studies finding little or no difference among the various attachments and others coming to the opposite conclusion. Subsequently, reviews of overdenture treatments commonly group studies by the type of attachment they considered (eg, ball attachments vs bar vs magnet). However, the use of the same term to describe a technique or product does not guarantee that the products or techniques mentioned in various publications are in fact the same. The overdenture attachment mechanisms have changed in design and material composition over time and are not compatible among the various implant manufacturers. Thus, comparisons of studies performed at various time points using diverse components are difficult to interpret.

Bruxism is a common culprit cited as a cause of complications in implant reconstruction. Dentistry has a long history of assigning blame for negative treatment outcomes to occlusally mediated parameters, including bruxism or, to be more precise, parafunction. Theoretical biomechanical analyses and clinical experience support the notion that the occlusal interface plays a vital role in the maintenance of integrity of prosthodontic restorations. However, parafunction is an entity that is difficult to quantify clinically, and it is even more difficult to establish its direct impact on the incidence of complications with certainty. This likely explains the largely inconsistent findings of preliminary investigations attempting to link parafunctional behavior to implant treatment complications. Research activity should focus on better methods to quantify parafunctional activity before this clinically important entity can be established or rejected as a definitive risk factor for biologic or mechanical complications.

David Chvartszaid
University of Toronto
Toronto, Ontario, Canada
david.chvartszaid@utoronto.ca