Implant Dentistry in Predoctoral Education: Where Are We?

Leila Jahangiri, BDS, DMD, MMSc

In 2013, the Commission on Dental Accreditation (CODA) mandated a competency in oral health care specifying that “replacement of teeth” options should include dental implant therapies with fixed or removable prostheses. The trend toward incorporating implant therapy in the predoctoral dental curriculum began a decade earlier, some 40 years after Professor Branemark introduced endosseous dental implants to dentistry.

In this issue of the Journal of Dental Education, a report on a survey regarding the teaching of dental implants suggests that we have moved beyond the question of “should it be taught?” to “what should be taught?” (See Barwacz et al.’s “An Overview of U.S. Predoctoral Dental Implant Programs and Their Directors,” pp. 265-77.) It is clear that the majority of U.S. schools have adopted a prosthetically driven curriculum that embraces simulation teaching followed by clinical patient treatment, often involving multiple disciplines. The spectrum of care includes fixed single implant-supported prosthesis; three-unit implant-supported fixed dental prosthesis (FDP); and two-implant overdentures. Some schools’ clinical criteria include more complex care, such as restoration in the esthetic zone and posterior three-unit implant FDPs. It is not advisable to prescribe a national curriculum or advise schools about their scope. Such multifaceted decisions are influenced by a number of factors, such as faculty training, school size, patient population, curriculum flexibility, and the availability of other specialty services. Other curriculum details such as the options of stock versus custom abutments, cement versus screw-retained, and analog surgical guides versus digital planning are all viable preferences. Nonetheless, the profession is urged to continuously follow the emergence of evidence-based data for further refinements of protocols and adaptation of new ones.

Without a doubt, some of our current curriculum will be challenged. For example, it is well documented and substantiated that the provision of implant-retained overdentures improves the general health of the edentulous elderly who are often debilitated. In the United States alone, 40% of the population over the age of 65 is edentulous in at least one arch. The most significant complaint of edentulous patients is dissatisfaction with retention of the mandibular dentures. Therefore, it is not surprising that nearly 90% of U.S. schools have embraced two-implant mandibular overdenture therapy in their core curricula. However, a recent study that evaluated the choice of one implant versus two implants in mandibular overdenture therapy concluded that there is no significant difference in patient satisfaction between the two treatments. This new finding requires a reexamination of our traditional curriculum beliefs.

The CODA standard also supports a patient-centered approach advocating a provision of appropriate options to patients. In many partially edentulous patients, treatment may be a choice of an implant versus a bridge. But as we offer the option of implant therapy to these patients, we are invariably reducing our students’ clinical experiences with traditional tooth-retained fixed dental prostheses. To that end, educators must define and design a variety of methodologies for effective competency assessment of students performing treatment with fixed dental prostheses as well as with dental implants. The assessments for implants should be generic rather than brand-specific because the choice of implant brand is less important than the critical steps in therapy. Dental schools indicate a general preference for limiting the brand variety because of curriculum development, inventory management, industry support, and repair and laboratory controls, as well as simplifying student learning.

Perhaps the next national debate among educators should be whether we should train our dental students in the surgical placement of implants. The implant industry reports that there is a huge demand for continuing education courses for surgical implant placement. Some educators argue that the teaching...
Future areas that schools may consider in the expansion of predoctoral patient care include implant-retained removable partial prostheses, further utilization of digitally fabricated prostheses, and intraoral surgical navigation technologies. Professor Branemark, the father of implant dentistry, recently passed away at the age of 85. He would surely be proud to know that his pioneering efforts have not only influenced the lives of many patients globally, but have also changed dental education as we know it.

REFERENCE

Dr. Jahangiri is Clinical Professor and Chair, Department of Prosthodontics, New York University College of Dentistry, 345 East 24th Street, New York, NY 10010-4086; lj14@nyu.edu.