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Q: Interdisciplinary Communication: What Are the Key Factors for Success in Surgically Based Restorations?

Mr. Alter

Today, many of the greatest documented successes achieved in surgically based restorative dentistry are facilitated through an approach that is collaborative in nature. Such an approach encompasses the sentiments of a comprehensive dental team whereby all of the related specialties (ie, dental practitioner, dental surgeon, and dental laboratory technician) collectively combine their experiences and dental “IQs” to implement an appropriate treatment plan for the patient. Each specialty offers its own unique perspective and critical information with regard to what is required for each case and what outcomes can be achieved.

Ideally, these “brainstorming” discussions occur prior to the initiation of treatment. Therefore, after the initial consultation between the patient and dental practitioner, important information, such as CBCT scans, radiographs, photographs, preliminary impressions, and diagnostic casts, is gathered and shared. Once all of the pertinent material has been acquired and distributed, the dental team meets to take a “deep dive” into a plan of action. This meeting should include all participating dental professionals. Collaborating today has become more convenient than ever with many digital mediums available. Data files and images can easily and quickly be shared and transported through HIPPA-compliant methods, and virtual meetings may be facilitated through means of computer programs like Skype and other similar communication software.

Traditionally, the dental patient would have been referred to an oral surgeon, who would seek to place dental implants in an area of bone that would achieve the greatest level of osseointegration. However, seldom was the restorative and esthetic outcome a consideration when placing the implant(s). As a result, the restorative dentist and dental laboratory were left having to establish a prosthesis on those implants that potentially could be compromised with regard to longevity and

overall success. As an experienced technician and lab owner, I can surely say that from a laboratory perspective, being engaged in the process from the ground up is highly beneficial to the dental team and, ultimately, the patient. This approach is significantly more advantageous than adhering to the more traditional philosophy of all participants contributing from their individual specialty silos.

Qualified and knowledgeable dental laboratory personnel, along with the use of surgical planning and surgical guide software, can suggest suitable placement locations and depth of implants in the bone that takes into consideration bone density, bone size, bone health, nerves, and other bone topography to achieve optimal osseointegration, all while being restoratively centric to achieve the desired outcome of a functionally viable, long-lasting, esthetic treatment and restorative protocol. These suggestions must be approved by a licensed clinician to proceed in fabricating surgical guides.

True collaboration and interdisciplinary dental team protocol involves everyone working up the case together and inputting their own unique and relevant perspective on how to achieve the best restorative and treatment outcomes. This method and philosophy is conducive to maximizing success and reducing anxieties related to implant placement and/or surgical-based restorative dentistry. It offers patients a diverse network of dental professionals with differing thoughts and opinions, and, moreover, it provides the practitioners a springboard off of which to bounce ideas and enables them to attempt innovative concepts with the support of their colleagues. Consequently, this gives each team member the opportunity to grow and learn individually and collectively, as a dental professional.

Dr. Bilski

Interdisciplinary dentistry is in high demand these days. Too often, however, it seems specialists are asked to complete complex

surgically and/or restoratively based procedures that are handed off from a referring general dentist. The specialist gladly accepts the patient, yet, unfortunately, often does so without a game plan, roadmap, or proper diagnostic assessment and treatment plan. To support the referring dentist, the surgeon may take on the responsibility of working directly with a laboratory and perhaps a separate guided surgery company to plan the full-arch reconstruction surgery and subsequent temporary restoration, and maybe capture the records for the final prosthetic. Meanwhile, the surgeon relies on his or her restorative skills and that of the laboratory technician to design a top-down, prosthetically driven treatment plan.

This scenario requires a step back and conversation about what is best for the patient and the parties involved. Managing the communication flow among the laboratory, general dentist, and surgical team—prior to delivering a treatment plan and therapy—may be the most critical element of a “team approach.” Depending on the final restoration, laboratory input is valuable regarding implant position and bone volume or space based on CBCT imaging. The general dentist provides the occlusal concept and manages the patient for hygiene recare appointments. The surgical team manages the patient’s medications and provides additional surgical services, such as bone grafting and platelet-rich plasma/platelet-rich fibrin therapy, to optimize the final surgical result.

Who takes charge during which steps in the full treatment plan must be decided in the initial surgical/laboratory/general dentist communication. The dentist placing the provisionals and final restorations should take the initial diagnostic images, analog or digital impressions, and CBCT scans. He or she will mostly lead this take-charge approach, along with the lab of his or her choice, and will likely be responsible for records, diagnosis, and the ultimate treatment plan. The entire general dentist and surgical dentist team may collect the fee(s) from the patient and establish fee standards with referrals. The surgical team collects the fees for surgery, implants, and biologics for bone grafting, along with related follow-up appointments. The general dentist collects fees for the provisionals and final restorations with considerations for follow up. Laboratory fees can be divided fairly between the general dentist and surgeon based on delivery of the lab-fabricated surgical guides and restoration services.

The surgeon must contend with expenses incurred from the implant company and bone biologics supplier and understand that the expense of materials in relation to fees charged to the patient must not exhaust profit. The general dentist would be responsible for the diagnostic work-up and treatment-planning session with the dental laboratory, at which the implant brand, sizes, and position for receiving provisional and final restorations are identified.

Another question is, who pays for a prolonged restorative phase when cases need multiple final restorative visits, such as large “all-on-x” cases? An experienced restoring dentist may be able to develop an all-inclusive fee for service, which should be explained to the patient prior to any fabrication of lab items and surgery appointments. While both the surgical dentist and restoring dentist should set realistic and reasonable expectations that are within the scope of the patient’s needs, patients often have unrealistic desires.

In such instances, sensitive and thorough communication with the patients may help them understand that the doctors’ solution is in their best interest. Once patients understand this, they may be more apt to accept the recommended therapy.

Dr. Duplantis

As with any healthcare industry, dentistry is changing at a rapid pace. Multiple new and improved treatment modalities have been introduced to better serve patients. In addition, technological advances are supplanting traditional analog methods. When considering the myriad treatment options, technologies, and anticipated outcomes, the decision-making process for dental professionals can be rather arduous. For clinicians to achieve anticipated outcomes, effective communication among the dental team is paramount.

A current popular treatment topic is the full-arch implant-supported hybrid prosthesis, commonly referred to as the “all-on-x” procedure. It has been greatly publicized in dentistry and highly requested by patients. In my opinion the key to success with this procedure is not only the acumen or ability of those involved in performing it, but it is the communication. Any breakdown in patient selection, collaboration, planning, or design may lead to failure. In addition, the treatment should be prosthetically driven with the end result in mind throughout the entire process.

For complex dental procedures such as the aforementioned, a hierarchy that I call the “pyramid of implant success” may be considered. It encompasses three team members—the restorative dentist, implant surgeon, and dental laboratory—with one goal: to successfully treat the patient. All planning and treatment is always patient-centered, with the best interest of the patient’s overall health foremost.

In this hierarchy, each team member has a specific job, but the restorative dentist should be the leader. The roles of each are as follows:

Restorative dentist: The dentist identifies the potential patient and diagnoses the need for dental implant therapy; is responsible for replacing or maintaining function, form, and esthetics; manages the timelines; and maintains an open line of communication among the team members.

Dental implant surgeon: In some cases, the restorative dentist and implant surgeon may be the same individual. The surgeon is responsible for assessing the diagnosis and treatment plan provided by the restorative dentist. He or she also assesses bone quality and quantity and appropriate implant location(s), and places the implant in a safe and restorable location.

Dental laboratory: The final piece of the hierarchy, the laboratory has an extremely vital role, especially in complex cases. These cases are “prosthetically driven,” which means the lab should be involved from diagnosis to delivery. The lab is ultimately responsible for producing the function, form, and esthetics that the restorative dentist is trying to create or replace.

Success in almost any aspect of life requires the ability to communicate. Effective communication is essential in interdisciplinary dentistry. A favorite phrase of mine is, “proper preparation prevents poor performance.” Communication and collaboration among the dental team helps ensure quality care, predictable results, and consistent outcomes.