CLINICAL Roundtable

NEW COLUMN

What are some of the general situations in which an implant is indicated vs endodontic therapy?

INTERVIEWEES:
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In an effort to foster continuing conversation addressing seminal issues in oral health, Inside Dentistry *is proud to present its new forum—Clinical Roundtable. Each Roundtable will present the views of distinguished thought-leaders on clinically important and challenging topics in general dentistry, implant dentistry, periodontics, endodontics, esthetic dentistry, materials, and adhesion. We hope that you will enjoy this engaging format and will be willing to contribute your own questions in any of the aforementioned areas for consideration. Please submit your questions to jromano@aegiscomm.com.*

DR. NASSEH—
Endodontic Perspective

We should keep the axiom of biologic tissue preservation in mind every time we face a decision to save or replace such tissues with their artificial counterparts. We would not replace a severed finger with a mechanical one unless the reattachment prognosis is absolutely hopeless. We should also respect our dentition and make the attempt to preserve these organs using the same ethical principals. However, we cannot ignore the alternative option of implant dentistry as a predictable and effective replacement for missing teeth, as well as for teeth with poor bio-restorative prognosis. If anything, implant dentistry has helped improve our patient care and has improved our success in achieving the three aspects of patient demand: health, esthetics, and function. In my opinion, if these three demands can be met with attempts to preserve the patient's own dentition, all attempts should first be directed toward that goal. However, if caries and endodontic disease have rendered a tooth unrestorable for long-term maintenance, then the alternative option should be discussed and recommended. Teeth with biomechanical limitations (lack of adequate ferrule, very poor crown-to-root ratio, poor biological width that results in definite furcal involvement after crown lengthening, etc) are also poor candidates for preservation. Furthermore, if the endodontic disease has lead to long-standing periodontal conditions, high mobility, deep, refractory probing, cracks, and root fractures, prognosis is affected negatively.

Because our patients often look to us in helping them make the proper decision, we need to consider the modern axiom of the Golden Rule to our treatment planning for our patients: "What would we do for ourselves if we were in their shoes?" For many of us the answer comes intuitively; for others, financial limitations by the patient sometimes confound the answer. Ultimately, we need to put ourselves in our patients' shoes and, without imposing our value system and while respecting their views, educate them and come up with an answer that best serves them in their long-term goal of achieving optimum health, function, and esthetics.

DR. MARGEAS—
Generalist Perspective

Over the last several years, there has been a shift from trying to do heroic dentistry to doing implant dentistry. This procedure has been the most predictable when deciding on whether to restore a questionable tooth with endodontic therapy, periodontal therapy, and prosthodontics. In the past, every measure was taken to save the tooth from extraction. Now, extraction is considered more frequently when the tooth has a questionable prognosis. When a tooth is fractured off at the gumline, and it is impossible to get a 2-mm ferrule on the preparation, the prognosis for long-term success decreases dramatically. This would be an indication for extraction and implant placement. If a tooth has had previous endodontic therapy and continues to be symptomatic, an apicoectomy may be a treatment of choice if the bone is healthy and the tooth is not severely damaged. If the tooth is periodontally involved, then an implant would be the treatment of choice. If it is impossible to grab sound tooth structure and place a new post, being a hero by trying to save the tooth is not the best treatment for the patient. Single-tooth implant therapy is the best long-term treatment. Endodontic therapy is the first option if the tooth is periodontally healthy with adequate tooth structure to support a restoration. A tooth that has undergone numerous root canals and is still symptomatic may have a crack that will never heal. This would be an ideal situation for a single tooth implant.

DR. SONICK—
Periodontic Perspective

I suggest implant rehabilitation when the biologic, esthetic, and monetary cost of saving a tooth exceeds the cost of extraction and fixture placement. According to a number of studies, the success rate of initial root-canal therapy approximates 90% to 95% if no apical periodontitis lesion exists, especially in single-rooted teeth. Farzaneh and colleagues determined that the presence of apical periodontitis lowers the success rate by 10% to 15% or so to 80% over 4 to 6 years. Indeed, orthograde retreatment for teeth with periapical lucencies is not particularly predictable, ranging from 70% to 80%, and if the operator perforates during treatment, the chance for failure elevates. The reported success rate for apicoectomy fluctuates even more, spanning 60% to 90%, depending on the study.

In my experience, endodontic treatment or retreatment for compromised situations—those with apical periodontitis, silver point fillings, multiple or tortuous canals, calcified canals, extensive caries, or attachment loss—is not as reliable or cost-effective as extraction followed by implantation. Ten-year plus survival rates of implants hover around or surpass 95%. Irreversible pulpitis–affected or nonvital teeth with severe attachment loss, especially if the cause of the lesion is primarily periodontal and secondarily endodontic (or concomitant), do not have a favorable long-term prognosis. The effort, time, and expense extended to maintain such teeth may not be in the best interest of the patient. One treatment option for molars with extensive furcation involvement is root resection, which may necessitate root canal therapy as well as new prosthetic coverage. Langer et al, however, showed a 38% failure rate for resection, due in particular to fracture, after a decade. If there remains enough bone to anchor without major intervention and barring medical contraindications, I would suggest implant therapy instead of resection.

Lastly, the clinician should consider implants for a patient with high caries susceptibility. Severely decayed teeth often require root canal treatment, crown lengthening, or a post-and-core plus a crown. Crown lengthening may impair esthetics as well as the crown-to-root ratio. An implant rehabilitation may cost the same but be a more secure investment as it defies caries, requires no bone removal, and lasts longer.

Root-canal therapy certainly has its merits, but in cases of extensive periodontitis, apical or radicular, extraction and implantation may be indicated instead.

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