

CLINICAL INSIGHTS
PRESENTED BY
ESCONDIDO ENDODONTICS



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Endodontic Retreatment vs. Surgical Intervention

Over the years, endodontic research has reported a wide range of success rates, some as optimistic as 90% for all cases. In reality, while well instrumented and obturated vital cases enjoy a high success rate, the long term success for other cases is lower. Teeth with pre-operative necrotic pulps and well developed apical lesions have a lesser prognosis and may eventually require surgery.

In the late 1980's and early 90's advances in the use of the surgical operating microscope (SOM) by endodontists resulted in a proliferation of surgical cases. We were now able to visualize resected root surface anatomy and accurately place retrofilling materials into small preparations made with new generation ultrasonic instruments and micro mirrors. Even with advances in endodontic surgical techniques, surgery cannot fully eliminate bacteria and their by-products from the root canal system. If surgery is performed and the root canals are not clean, the prognosis is compromised. The most advanced microsurgical instruments are only capable of retroprepping into the canal space to a depth of 3-4 millimeters. That combined with various retrofilling materials may not provide the seal necessary to withhold the future apical leakage of bacterial by-products.

The development of surgical microinstruments led to the evolution of microinstruments that could be used within canal spaces. Needless to say, with regard to the microscope and microinstruments, the cart came before the horse. The incidence of surgical intervention is lower now than ten years ago. Retreatment aided by intracanal microinstrumentation offers the opportunity to address anatomical complexities or iatrogenic problems such as perforations and broken instruments that were not managed initially.

The two factors generally responsible for endodontic success are: (1) management of complex root canal system anatomy and (2) prevention of post endodontic orthograde microleakage. Endodontic surgery as a treatment option will not be successful unless these two factors are addressed.

- • Consider non-surgical retreatment first unless exploratory surgery for diagnostic reasons is the goal or disassembly of the existing restoration (i.e. crown, core, and post) would be impractical.
- • As always, evidence based treatment planning with proper informed consent and prognosis will be the foundation for the treatment of choice.