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Apical surgery has traditionally been thought of as the last resort to treat persistent periapical lesions; in the last few decades it has undergone a transformation with the introduction of the surgical microscope, ultra-sonic instrumentation, and surgery-specific retro-filling materials. The changes have resulted in dramatically improved success rates (80 – 90%); so much so that the term endodontic microsurgery was needed to more accurately reflect the procedure.

Since age does not appear to influence the success rate of microsurgery it is a viable option for all. The literature suggests success rates are best if the lesion is small and the obturation is either excessively short or long (extrusion). The pictures to the right are of a microsurgery I performed on a 50 year-old lady in January 2012; the 1.2 was previously treated with symptomatic apical periodontitis and swelling in the buccal vestibule. Not only is the lesion large, but the obturation is to length with no extrusion. The tooth was originally treated 20 years ago, followed by a retreatment and surgery a few years later. The literature also suggests the success rate for a second apical surgery is significantly worse than the original surgery. However, the original surgery was apical surgery and we were to perform microsurgery. It was also encouraging that the coronal seal was intact with no history of it being compromised. The patient was motivated to avoid a second retreatment and chose to proceed with microsurgery.

The large (1  $\times$  2  $\times$  2cm) soft tissue lesion was encapsulated with purulent exudate in the centre; the biopsy diagnosis was acute exacerbation of chronic apical periodontitis. Due to the size of the lesion it was not unusual to see a little post-surgical bruising under the right eye. However, there was little to no accompanying discomfort. The soft tissue aesthetics were preserved (see photo). Another re-evaluation was performed earlier this month; it demonstrates almost complete resolution of the large bony defect. In order to keep the costs down, no membrane or grafting material was used during the surgery; the healing is 100% self-propelled.

Endodontic microsurgery offered this lady an economical treatment with no compromise to the existing soft tissue aesthetics or function of the dentition. Tooth 1.2 is asymptomatic and functional with a great long-term prognosis. Insurance companies often do not cover a retreat if the original root canal treatment was done within 5 years. However, microsurgery is often covered soon after the completion of orthograde endodontic treatment (RCT). So before you take out your forceps and chequebook, consider a referral for endodontic microsurgery as a viable option.

Regards,

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PRE-OP

RECALL



SOFT TISSUE IMAGE



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## **Office Hours**

8am to 5pm - Monday to Friday Extended hours are also available

The Richmond Endodontic Centre Boardroom is open; it is available for meetings, lectures, and study clubs. Please come by and have a look at our new presentation centre!

