

Chapter 8

CURRENT PERSPECTIVES OF APICAL RESECTION

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APICAL RESECTION

Apical resection (apicoectomy) involves the removal of the affected apical portion of the tooth and the curettage of all necrotic and inflamed tissue in the periapical region. Conventional endodontic treatment has a high success rate, however failures have also been observed and retreatment may be indicated. In cases where retreatment is not feasible or fails again endodontic surgery may be preserve the tooth (Mandava et al 2015, Jain et al 2016).

The aim of endodontic surgery is to fill the exposed root canal system and isthmuses, eliminating bacteria and preventing their byproducts polluting the periradicular tissues, providing an environment for regeneration of periradicular tissues.

Indications for apical surgery include;

1. Periapical disease associated with a permanent tooth subjected to endodontic treatment, with pain and inflammation
2. A radiopaque lesion measuring over 8 to 10 mm in diameter (Figure 1)
3. Symptomatic gutta-percha overfilling or presence of a fractured file not removable in orthograde (the blockage proved not to be removable, displacement did not seem possible or the risk of the damage was too great).
4. Persisting or emerging disease following root canal treatment when root canal treatment is not possible
5. Perforation of the root or the floor of the pulp chamber and where it is impossible to treat from within the pulp cavity (Carrilo et al 2008, Sanchez-Torres, Sanchez-Garces and Gay-Escoda 2014, ESE 2016,).

Post-treatment disease following root-canal treatment is most often associated with poor quality procedures that do not remove intra-canal infection (Figure 2).

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CONCLUSION

Improved microsurgical instruments, ultrasonic tips, and current biocompatible retrograde filling materials have improved the evaluation of healing of periradicular tissues. It has been an alternative method for tooth extraction with appropriate case selection, increased skill and advanced current materials.

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