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**INTRODUCTION:** Information of success rates of endodontic surgery is inconclusive and ranges from 37% to 91% and the huge difference is attributed to different methods and tools employed for the procedure.<sup>1</sup> The present case report the importance of apicoectomy in the treatment of two radicular cysts that were associated to endodontically compromised teeth as well as the multidisciplinary value in order to get better aesthetic and functional results.

**CASE DESCRIPTION:** A healthy 46-year female patient presented to the FMDUP dental clinic in November 2015 with complaint of an “aesthetically displeasing on her upper anterior teeth” and worried about a “gum bubble” . The clinical examination revealed that the central and lateral incisors were endodontically treated and had aesthetically inadequate restorations. Radiographically two osteolytic lesions were visualized. The non surgical endodontic retreatment of teeth 12, 11, 21,22 e 23 was made and the lesions were evaluated 12 months later. There were no substantial improvements and consequently we opted for conventional endodontic surgery.

A later rehabilitation of upper anterior teeth using fixed prosthesis was suggested. The patient was anesthetized with articaine/epinephrine hydrochloride 72mg + 0.018mg (vestibular and palatine infiltrative technique). A total Neumann incision and mucoperiosteum detachment were performed. With a Lucas curette the lesions were removed and their bone walls cured. The endodontic surgery was performed with a laminated drill (Komet® H254E / 012) and the 3 mm deep root-end preparation with the NSK® E320 S tip of the NSK® VarioSurg 2 ultrasonic system. The filling material was 0.14g + 1mL BIO MTA® cement, CERKAMED. The flap was repositioned and sutured with 4/0 coated multifilament polyamide wire. An excisional biopsy was also performed for anatomopathological study of the two collected samples.

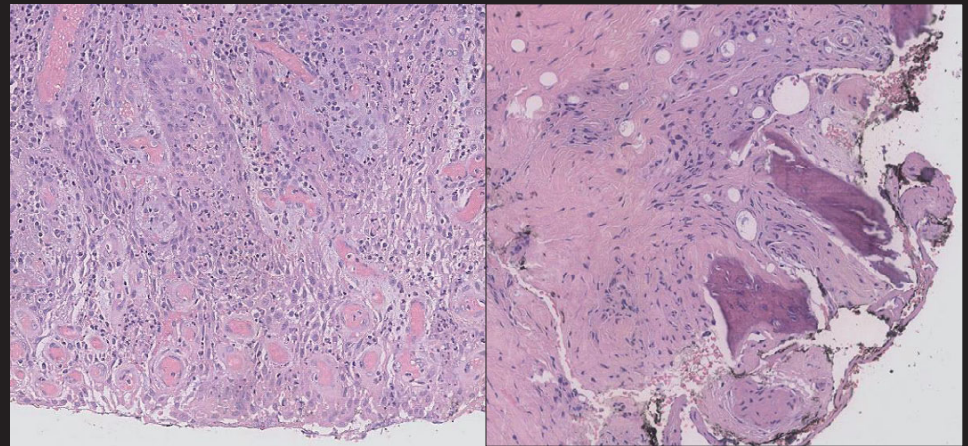


Fig. 1 – Histopathological examination. Augmentation: 40x.

In the post-surgical period it was prescribed amoxicillin + clavulanic acid 875 / 125mg (8 days), paracetamol 1g (8-8h in case of pain), ibuprofen 600mg (12-12h 5 days) and chlorhexidine gel 0.2% for topical application (14 days). The histological examination showed cysts partially coated by non-keratinized stratified squamous epithelium with abundant polymorphic inflammatory infiltrate.

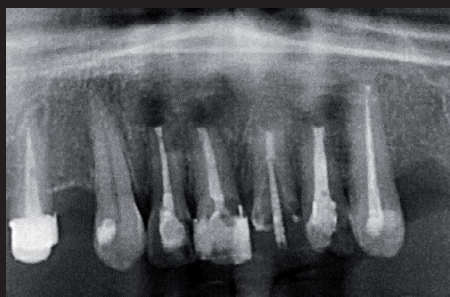


Fig. 2 – Panoramic radiograph – anterior maxilla



Fig. 3 – Initial Photo – vestibular view



Fig. 4 - Initial Photo – palatine view



Fig. 5 – Soft tissue management and first access to lesion



Fig. 6 – Apical lesions evidence

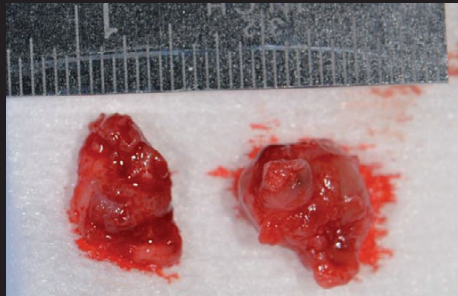


Fig. 7 – Apical lesions removed and sent for histological examination



Fig. 8 – Curettage and evidence of buccal bone fenestration

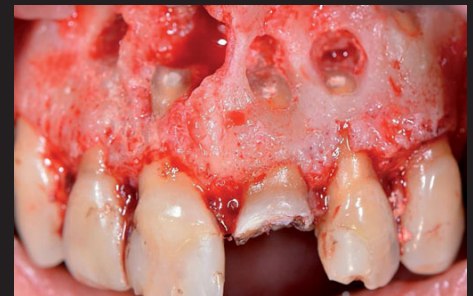


Fig. 9 – Apicoectomy and root-end filling



Fig. 10 – Final photo – vestibular view of sutures



Fig. 11 – Final photo – palatine view of sutures



Fig. 12 – Postoperative photo – vestibular view – 10 weeks



Fig. 13 – Postoperative photo – palatine view – 10 weeks

**DISCUSSION:** Although the prognosis of microendodontic surgery in young patients shows better results<sup>2,3</sup> measures were taken to perform the conventional surgery within the main parameters for its success: the raised flap was protected from damage and desiccation during surgery, good hemostasis before root-end preparation, good curettage of the bone wall and irrigation with saline solution, apicoectomy of the incisors and root-end filling with 3 mm depth with compacted MTA. This was the chosen material for its biological compatibility, osteoinductive and osteoconduction potential and excellent sealing in the elimination of untreated apical ducts. It is also described the possibility of using other materials such as eugenol zinc oxide cements, glass ionomer-based products and amalgam (currently not recommended), however the MTA should be the first choice for its excellent characteristics and high success rates.<sup>2,3,4</sup>

Both cysts were histopathologically examined and there was no evidence of any trace of malignancy.

The complete coronal sealing of the fixed crowns to be performed in the future is essential for surgical success since it depends on the non-bacterial contamination and consequently the relapse of lesions.

**CONCLUSION:** Properly performed conventional apicoectomy can be an effective surgical method when root canal treatment fails. Follow-up is essential to detect early recurrences as well as the multidisciplinary work in order to reform other outcomes that may be inherent to perioendodontic problems.

## REFERENCES:

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