

*Younesi Taravat***CONSERVATIVE MANAGEMENT OF ROOT CYST: CASE REPORT***Scientific supervisor: senior lecturer Volodko A.A.**Department of Periodontology**Belarusian State Medical University, Minsk*

Introduction. According to classification of Dedova, Chronic endoperiodontitis is a condition where inflammatory-destructive process occurs in the periodontium and endodontium, that goes within the medium and low parameters of the objective tests. Although there are various options of treatment for this case such as surgical, nonsurgical and combined, this report presents the procedures that must be considered for chronic endoperiodontitis with periapical cyst repair post nonsurgical endodontic treatment. The case discussed here involves a periapical cyst associated to the left mandibular central incisor, which can be formed as a result of untreated dental caries and it allowed bacteria to reach the pulp level causing an infection. Cysts originate from epithelial residues in the periodontal ligament as a result of inflammation. Periapical cyst lesions should be treated initially with conservative nonsurgical procedures. However preapical cyst therapy is still not systematized, as far as they are lesions of endodontic origin, the treatment should be as conservative as possible by endodontic therapy.

Aim: In this report it was described the clinical and radiographic outcomes of a large cyst that were treated by long-term intracanal medication of calcium hydroxide [Ca(OH)₂]. The reason behind the use of this technique is observed and its advantages are focused. This report supports the utilization of nonsurgical methods to address sizable cyst-like periapical lesions.

Materials and methods. Nonsurgical procedures were performed, including placement of intracanal Ca(OH)₂, which were periodically replaced four times per 3 months over duration of first 12 months but during second year of follow-up only 2 times, irrigation with ethylenediaminetetraacetic acid (EDTA) and 2% chlorhexidine bigluconate (CHX) in association with using dental restorative material glass ionomer cement (GIC) in carious cavity in the following steps of this technique. During the final appointment the root canal was filled with MTA (Mineral Trioxide Aggregate) according to apical plug method in half of the root. In addition the tooth got covered by dental composite together with fiberglass dental post. The previously done cone beam computed tomography (CBCT) investigations were used to compare the modification of the lesion at the 2-year follow-up in the end of first and second year.

Results and their discussion. At first there was no change observed but almost 12 months after initiation of the nonsurgical endodontic treatment with calcium hydroxide paste and dressing with 2% chlorhexidine along with EDTA, the size of the cyst started decreasing significantly. Also by the 24th month mark, a 2/3rd resolution of the lesion had been achieved, accompanied by the formation of new bone in the periapical region were observed. The treatment was successful as evidenced by radiographic evaluation and it matched the patient's being without complains, clinical signs or symptoms throughout the entire process.

Conclusion: endodontic treatment stands as the primary and preferred choice for effectively managing cases characterized by endoperiodontitis. By the availability of this specialized dental procedure, the need for extensive surgical treatment is often unnecessary. This conservative treatment approaches not only preserves the tooth structure but also contributes to the long-term functionality of the affected tooth and offering patients a reliable also predictable solution for managing endoperiodontitis effectively.