



## 9. CHRONIC APICAL PERIODONTITIS. METHODS OF DIAGNOSIS AND TREATMENT.

**Author:** Fărîmă Vladislav

**Scientific advisor:** Chetrus Viorica, MD, Associate Professor, Sofia Sîrbu Department of Dentistry, Periodontology and Oral Pathology, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** Chronic apical periodontitis is a frequent pathology in the periapical area, usually caused by complications of teeth with pulp necrosis, whose prevalence depends on the country and population. In the case of chronic apical periodontitis, the clinical and paraclinical examination is important for establishing the diagnosis and differential diagnosis of different forms of pathology and will determine the tactics and treatment plan, which may include extraction, root canal treatment or other methods.

**Aim of study.** Aim of the study is to identify the factors in the development of chronic apical periodontitis and to highlight the methods of diagnosis, differential diagnosis and treatment.

**Methods and materials.** The study included 51 patients with chronic apical periodontitis, aged between 18 and 66 years, of which 35 were men and 16 were women. The average age was 31 years. The diagnosis was based on the clinical ( objective and subjective ) and paraclinical ( Orthopantomography and CBCT ) examination. The periapical index (PAI) was also used to analyze the apical lesions. Treatment included the use of rotary instruments, irrigation with 5.25% sodium hypochlorite and subsequent sealing of the root canals.

**Results.** Apical periodontitis is preceded in most cases by the presence of an intraradicular infection and a poor root canal treatment. After the study, it was established that 86.3% of the patients came for aesthetic/pain/functional reasons, and only 13.7% came for a systemic visit. The gender distribution showed a predominance of men over women with a ratio of 2.19, which could be explained by the higher incidence of dental trauma among men. Following the analysis of the Periapical Index (PAI) - the most recorded scores are 3 (45.1%) and 4 (31.4%), indicating that patients mostly seek treatment in advanced stages of periodontitis.

**Conclusion.** Apical periodontitis is a pathology that occurs as an inflammatory response to microbial aggression, involving the destruction of periapical tissues, often in teeth with root canal treatment in the past. Although there may be other factors that contribute to the development of periodontitis, inadequate root canal treatment and the quality of the seal remain the most common causes, leading to a persistent infection. This pathology is often overlooked in orthopantomography but can be more easily identified using cone-beam computed tomography (CBCT), and detecting it at an early stage will allow the choice of optimal treatment strategy.