

Conclusions: The study found that institutionalized children have high morbidity of dental caries, with multiple treatment needs. Children with moderate and particularly with severe mental retardation have limited ability to independently perform tooth brushing and need help from staff in cleaning the oral cavity.

Key words: dental caries, oral hygiene, tooth brushing technique, children with mental retardation.

THE PULPITIS TREATMENT OF PERMANENT TEETH WITH UNFORMED APEX

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Introduction: The variety of clinical forms and the complexity of the pathogenic mechanisms make the pulpitis treatment of permanent teeth with unformed apex to keep being a subject with many unknowns, interesting both the researchers and also practitioners. The anatomic particularities of immature permanent teeth (bulky pulp chamber, relatively low dentine thickness and increased permeability) determine the incidence of pulp inflammation. The aim of pulp therapy is to establish an environment in which apexogenesis can occur. Currently, the optimum material for use in pulp therapy is Mineral Trioxide Aggregate (MTA). Compared with the traditional material of calcium hydroxide, it has superior long term sealing ability and stimulated a higher quality among reparative dentin. The aim of this study is to evaluate the efficacy of various pulpitis treatment methods of permanent teeth with unformed apex.

Materials and methods: The study was realized on 87 patients of 6-13 years old, which are treated for one year period. Gathering of evidence about the patients is done by cards and their radiography and we estimated only treatment of permanent immature teeth. Then we made statistic analyse related to clinical forms of pulpitis, method of treatment and its results.

Results: We have treated 36 immature permanent teeth, from which 1 with indirect capping, 7 with direct capping with $\text{Ca}(\text{OH})_2$, 2 with MTA direct capping, 9 with pulpotomy with $\text{Ca}(\text{OH})_2$, 3 with MTA pulpotomy, 14 with pulpectomy (apexification). According to our analyses both treatment (the ocalexic therapy and the method using MTA) resulted with apexogenesis. But comparing MTA and $\text{Ca}(\text{OH})_2$ at the 12 month recall time, 2 of 9 teeth in the $\text{Ca}(\text{OH})_2$ group were considered failures, whereas none of the teeth treated with MTA failed (0 of 3). Calcific metamorphosis was evident radiologically in 2 teeth treated with $\text{Ca}(\text{OH})_2$ and 2 teeth treated with MTA.

Conclusions: The main objective in treatment of immature permanent teeth is to maintain pulp vitality in order to reach the necessary length of root and to achieve apexogenesis. The indications of pulp therapy depend on whether the pulp is vital or nonvital. Pulp capping is the first treatment of choice if the pulp is considered largely normal. For cases that the coronal pulp tissue has more advanced inflammation, pulpotomy is the next method of choice. The immature teeth with non-vital pulp are treated with a shallow (Cvek) pulpotomy or pulpectomy. While the decision for teeth undergoing apexogenesis or apexification has been determined by the result of pulp vitality, recent clinical case reports show that after conservative treatment, severely infected immature teeth with pulpitis can undergo healing and apexogenesis. Also, clinical assessment has demonstrated MTA is a good substitute for calcium hydroxide in vital pulp procedures.

Key words: pulp therapy, calcium hydroxide, mineral trioxide aggregate (MTA), apexogenesis