

**PP – 65****USAGE OF BIOACTIVE CEMENT IN VITAL PULP CELL SIMULATION-REPORT OF TWO CASES**

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Introduction: Biodentine<sup>®</sup>, new bioactive cement ( Septodont, St. Maur-pass-Fosses, France), was recently launched on the dental market as a dentin substitute. It is biocompatible and capable of inducing the apposition of reactionary dentin by stimulating the odontoblast activity and reparative dentin by induction of the cell differentiation. During the setting reaction of the cement, ions of calcium hydroxide are released. Biodentine<sup>®</sup> can be used in pulpotomy of teeth with incomplete root formation.

Aim of the study: to show the effect of Biodentine<sup>®</sup> in apexogenesis stimulation in immature permanent teeth

Material and method: the study reports two cases of pulpotomy treatment of immature permanent teeth: a 9-year-old patient with horizontal fracture on the enamel and dentin with pulp exposure on tooth #21; and an 8-year-old patient with deep carious lesion on the tooth #36.

Results: the postoperative X-rays and the clinical data of the two patients, shows that they aren't any side effects in the treatment with Biodentine<sup>®</sup>, but the most important is that the apexogenesis continue without any disruptions.

Conclusion: Biodentine<sup>®</sup> caused satisfactory response of the pulp in both cases where we made pulpotomy and direct pulp capping. According to these results, as well as the number of many studies, it can be concluded that the Biodentine<sup>®</sup> is one of the most powerful bioactive cements that can be used in many procedures, including pulpotomy and direct pulp capping.

Keywords: calcium-silicate cement, apexogenesis, immature permanent teeth, pulpotomy