A Case study of a Rare Case of Turner's Hypoplasia and Unilaterally Fused Deciduous and Permanent Lateral Incisor Caused By Trauma

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Abstract

Orofacial trauma is a serious orodental and general health problem that may have medical, esthetic and psychological consequences for children and their parents. When the root of the primary tooth is close to the unerupted permanent tooth, primary tooth trauma may result in developmental disturbances and pulpal reaction in that permanent tooth. We report an unusual case of an 8 year old girl who met with trauma at 15 months of age in which injury to the primary dentition resulted in developmental disturbances in the crown of the permanent tooth and fusion between permanent and deciduous tooth. Localized malformation of the crown and enamel hypoplasia was treated with a light-cured composite resin restoration. The treatment of fused permanent and deciduous incisor is also discussed.

Introduction

Hypoplasia is defined as a quantitative defect of enamel visually and is histomorphologically identified as an external defect involving the surface of the enamel and associated with reduced thickness of enamel *(Ozturk et al, 2004)*.Turner's hypoplasia usually manifests as a portion of missing or diminished enamel, generally affecting one or more permanent teeth in the oral cavity. If it involves anterior teeth, most likely cause is traumatic injuries leading to primary incisors being knocked out or driven into the alveolus affecting the permanent tooth bud. The affect of trauma are more pronounced if it occurs prior to third year of life. The topographic relationship of the primary teeth to the permanent tooth germ explains the potential for possible developmental disturbances *(Andreasen & Andreasen, 1994)*. The developmental defects of the permanent successor tooth range from mild alteration in enamel mineralization in form of simple white or yellow brown discoloration to crown dilaceration, crown duplication, root dilaceration, root duplication, odontome like malformation, disturbed eruption, partial or complete arrest of root formation to severe sequestration of the developing tooth germ *(Andreasen & Andreasen, 1994, Shafer, 2007)*. Hypoplasia was categorized into the following types by *Silberman et al (2010)* Type I hypoplasia: Enamel discoloration, Type II hypoplasia (Abnormal coalescence), Type III hypoplasia (Some parts of enamel missing due to hypoplasia) & Type IV hypoplasia: A combination of previous three types of hypoplasia. According