

Hypoplasia of a Permanent Incisor Produced by Primary Incisor Intrusion: A Case Report

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Abstract

Orofacial trauma is common in athletic children and 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 in the permanent tooth. In the present study a case report of an unusual case in which injury to the primary dentition resulted in developmental disturbances in the crown and the non eruption of the permanent tooth is presented. Localized malformation of the crown of the permanent maxillary right central incisor and enamel hypoplasia were treated with a light-cured composite resin restoration. The unerupted permanent left central incisor was removed surgically. The study also discusses the management after extraction with removable partial denture.

Keywords: Orofacial trauma Maxillary Enamel Hypoplasia

Introduction

Injuries to primary dentition are among the most common traumas that occur in the maxillofacial region; 30%–40% of all children injure at least one of their primary teeth (Flores *et al*, 2007). Consequences of such trauma include colour changes, pulp necrosis, obliteration of the pulp canal, gingival retraction, tooth displacement, pathological root resorption, alterations in the process of normal root resorption and premature loss of the primary tooth (Borum & Andreasen, 1998). Sequelae in the permanent dentition after trauma to primary dentition are usually related to intrusive injury; either the coronal or root region, or the entire permanent tooth germ may be affected (Gondim & Moreira Neto, 2005). An intrusive injury occurs when the impact of an axial force displaces the tooth within the socket. Between 18% and 69% of intrusive injuries to the primary dentition cause anomalous development of the

permanent teeth (Holan *et al*, 2002). Such alterations in dental pathology can include white or yellow brown discoloration, or circular enamel hypoplasia; crown dilaceration; root duplication; vestibular or lateral root angulation or dilaceration; partial or complete arrest of root formation; sequestration of the permanent tooth germ; and disturbed eruption (Flores, 2002) Depending on the age of the child at the time of injury and the direction and severity of the trauma, force transmitted from the affected primary tooth may result in similar consequences to the underlying unerupted permanent tooth. In the following report, we present the case of a 10 year old boy in which there is uneruption and localized crown malformation of the right permanent central incisor and enamel hypoplasia in the permanent left central incisor which was caused by trauma to its preceding primary tooth while playing at play