

# Developmental Disturbances In Permanent Teeth Due To Trauma To The Primary Dentition Orthodontic Endodontic Interdisciplinary Management: A Case Report And Literature. Review

Peter M. Di Fiore

Diplomate, American Board of Endodontics, Professor, Department of Endodontics, University of Texas, School of Dentistry, Houston, Texas, USA

## Abstract

Traumatic injuries to the first dentition are a frequent occurrence in children during the preschool ages of 1 to 4 years and are primarily thanks to falls. Developmental disturbances to the permanent teeth can occur from trauma to the first dentition, leading to hypo plastic defects and disruptions in eruption. The aim of this clinical case report was to demonstrate that developmental disturbances in permanent teeth thanks to early trauma to primary teeth can have a positive outcome with an interdisciplinary treatment approach. Methods: A clinical case is presented of the interdisciplinary management of a toddler with early trauma to the first maxillary anterior dentition that resulted within the non-eruption of a maxillary permanent central incisor with enamel/dentin hypoplasia. A literature review is additionally presented on the incidence and prevalence of trauma to the first dentition and its effects on the developing permanent teeth. Findings: Interdisciplinary management, with orthodontic, oral surgery, and endodontic treatments within the clinical case presented, leading to a positive outcome for the maxillary anterior permanent dentition and therefore the restoration and retention of the affected adult tooth during a state of excellent health. Conclusions: Developmental disturbances to permanent teeth thanks to trauma to the first dentition are usually detected well after the occurrence of the traumatic incident and in cases where multiple disturbances to the permanent teeth are identified an interdisciplinary treatment approach will often be necessary to realize a positive outcome.

The incidence and prevalence of pediatric traumatic dental injuries has been studied globally and particularly within the Scandinavian countries of Denmark, Sweden and Norway, where public health care for youngsters is definitely accessed and epidemiological clinical data is quickly available.

Traumatic injuries to the first teeth are a frequent occurrence, however epidemiological reports on the incidence and prevalence of trauma to the deciduous dentition can vary depending upon the dimensions, location and age range of the population sample studied .

Royal College in Copenhagen Denmark, whose ages ranged from 9 months to six years, found that 165 children sustained traumatic injuries to 248 primary teeth [1]. Seventy-six percent were luxation's that occurred between the ages of 1½ to 2½ years and afterward follow-up examination, damage was observed to their permanent successors.

Andresen and Ravn, during a retrospective review of the dental patient records of 487 preschool children in Copenhagen Denmark, found that 30% of the patients had sustained traumatic dental injuries to their dentition with the height incidence occurring during the ages of two to 4 years. Of the entire 233 injured primary teeth, 69% were luxation type injuries, 20% were fracture type injuries, 7% were exarticulations, and therefore the remaining 4% were undetermined injuries.

An extensive epidemiology study by Ravn conducted at the Copenhagen Municipal School Dental Service in Denmark which treated about 50,000 children annually, found that over a 5 year period, 9665 instances of traumatic injury events were reported in class children of 6 to 16 years aged that resulted in 11,767 injured teeth [3]. it had been determined that 35% of boys and 23% of women sustained a traumatic injury during their school age years .

## Biography

It have more than 15 years of experience in medical and Pharma (incl. targeted therapy or immunotherapy) as well as other fields.