

Three-dimensional view of crown dilaceration on a permanent tooth after a traumatic injury to its predecessor

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Crown dilaceration is a condition that occurs after a traumatic injury such as an intrusion or an avulsion of a deciduous tooth. The extent of a dilaceration on the permanent tooth germ depends on the severity and direction of the trauma, the age of the child at the time of occurrence as well as the dissipation of the impacting force. The younger the child's age, between 1-4 years old, the more severe the developmental changes involving the permanent tooth crown will be. In the last twenty years, the conventional dental radiograph has been replaced by diagnosis through digital imaging. To overcome the limitations of twodimensional imaging and improve the quality of imaging diagnostics, the Cone Beam Computed Tomography (CBCT) has been used to visualize the buccomaxillofacial complex on a

three-dimensional way. The purpose of this study was to report a clinic case of a child who suffered avulsion of the tooth 51 at 15 months of age, leading to crown dilaceration to its successor. A three-dimensional virtual surface model was generated through the semiautomatic segmentation, obtained when the child was 6 years old, enabling to view the position of the succedaneous tooth, as well as the dilaceration extent. Topographic sections with different orientations can give the dentist a definitive diagnosis, improve planning and treatment of traumatic injuries in permanente teeth in order to ensure a better clinical outcome for the patient.

Keywords: Traumatic Injury; Avulsion; Crown Dilaceration; Computed Tomography.

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