
Traumatic dental injuries occur with great frequency in preschool, school-age children, and young adults comprising 5% of all injuries for which people seek treatment. Within this group of injuries crown fractures are the most commonly presented cases comprising 44% of the total, while in private dental practice this percentage can be as high as 76%. Although in the majority of cases crown fractures require simple treatment, an increasing number of them may present serious complications in the long term, particularly the ones involving immature teeth in addition to those having an underlined periodontal injury.
Correct diagnosis and immediate treatment are necessary in order to ensure a good prognosis for the traumatised teeth for the rest of the patient's life. Every trauma case can be different from the others and factors like the age of the patient, the maturity of the teeth and the time of treatment initiation are critical parameters indicating the final outcome.
Recent guidelines from the International Association of Dental Traumatology (2012) have particularized the exact treatment steps for the cases of infraction, enamel fracture, enamel-dentin fracture, enamel-dentine-pulp fracture, crown-root fracture without pulp exposure and crown-root fracture with pulp exposure. In addition pulp treatment and relevant complications are recorded and presented in detail.
In the present lecture a large number of cases per category are presented together with long term follow-up of the more severe ones and specifically for the possible post-treatment complications. Also particular emphasis has been given to the new approaches for the immature pulp treatment like the use of MTA (Mineral Trioxide Aggregate) for apical barrier and the Pulp regeneration/revascularization together with the possible root development continuation, as these were reviewed and documented in the recent European Academy of Paediatric Dentistry Interim Seminar (2011) on the subject.