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Dental Trauma and Awareness

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Prevalence of dental trauma has been reported to be between 10.2% to 47% in the 1-6 age group [1-9] and between 9.4% to 58.6% in the 7-15 age group [10-12]. Possibly not all traumatic dental injuries are reported [13]. Patients do not always seek attention for dental trauma, there are often chance discoveries on routine examinations. The prevalence of untreated dental trauma was 21% in the 4 to 15 years old group in Tanzania [14], the majority of schoolchildren (82.6%) in a Brazilian study did not seek treatment after dental trauma [11].

Dental trauma, involving single or multiple teeth, may range from uncomplicated crown fracture [13], complicated crown fracture [15], concussion [15-16], subluxation [15-16], lateral luxation [15-16], extrusive luxation [15-16], intrusive luxation [15-16], and avulsion [15,16]. Depending on the outcome and severity of the injury sustained, consequences of dental trauma could be more than trivial. There could be negative effects on the quality of life [17-20]. Seeking treatment and appropriate care can be time consuming, for example, travelling [21,24], costly [21-24], and may cause loss of productivity [24].

Prognosis of traumatized teeth is unpredictable at large [24-27]. However, depending on the severity of dental trauma sustained, delay in appropriate care and treatment could adversely affect the prognosis and treatment outcome of injured teeth [28]. Ultimate goal of management is the healing of pulp and surrounding tissue [13,24]. This often depends on restoration of reduced/severed blood supply, integrity of tissue and degree of bacterial invasion [29]. Complication may include necrosis of injured pulp [13,14,24], inflammatory root resorption [24,14,13] ankylosis [24-30] and tooth loss [28,31]. In a number of cases, appropriate prompt treatment, such as immediate appropriate handling of avulsed tooth [32,33] replantation [34-36], splinting [24,30] and emergency root canal therapy [24], may be necessary in order to improve prognosis and treatment outcome. To such ends, immediate appropriate management by people at the scene of injury [24,25] and prompt referral to a dentist could be a decisive factor in long term prognosis of the injured tooth [24,25].

Dental trauma may due to sport activities [15,24,37,38], bicycle/traffic accidents [13,37,38], falls [13,24,37,38] and physical violence [18,24,37,38]. Policies on prevention of sports-related orofacial injuries were suggested [30]. Adherence to road codes should also be emphasized to prevent traffic accident. An educational intervention study has shown the knowledge of fall prevention was improved for mothers of children under five years old [39]. The home safety visit changed participant knowledge, beliefs, or practices around the prevention of home injuries [40]. The home safety visit and the injury specific safety pamphlets were each perceived as effective [40]. Many authors proposed different methods to promote the knowledge for immediate management of dental trauma, for examples, talks [41,42], educational posters [43,44,45], audiovisual means [46] and leaflets [47,48] in order to improve the prognosis.

Effectiveness and innovative preventive measures could form areas of research interests. Another area of research to cater for when accident does happen, could be directed at improving the healing/regenerative potential of the pulp and surrounding tissues [49-54]. For instance, the Low Level Light Therapy is another method to improve the possibility of survival of periodontal ligament cells in avulsion cases [55].

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