ABSTRACT

Objective: Tooth avulsion constituting an emergency for children and adolescents necessitates management approaches ensuring the survival of avulsed teeth. The aim of this study was to determine the causes of tooth avulsion and to examine some factors affecting the clinical & radiographic assessment of their prognosis after replantation.

Methodology: The study sample was created by using archival records of patients who were referred to the Suleyman Demirel University, Faculty of Dentistry, Department of Pedodontics, with complaint of traumatic injuries, between December 1999 and 2008. The information about age, gender, time and cause of the injury, number of affected teeth, the root maturation level (mature/immature), vitality of the affected teeth, condition of supporting tissues, extra-oral time of avulsed teeth, storage media, time of replantation, type and duration of splinting, and healing process was obtained from the patients' records.

Results: The sample consisted of 66 traumatized children who had a total of 93 avulsed anterior permanent teeth. The age of these patients ranged from 6 to 16 years and the 9- and 10-year-old group had the highest incidence (n=25). The most frequent causes were falls (n=24; 36.4%). Thirty-three out of a total of 93 avulsed teeth (35.5%) were replanted. Of the 33 replanted teeth, 3 (9.1%) were stored in milk and 25 were stored in dry media (n=25; 75.8%). Fifteen teeth (45.5%) were replanted within 30 minutes after the injury. After clinical and radiographic evaluation a total of 12 replanted teeth (36.4%) were considered as failed. Ten of the replanted teeth had to be extracted due to progressive root resorption. Statistical analysis showed no significant relationship between the successes of replanted teeth with extra-oral period, storage media, root formation stage, and additional traumas to the supporting tissues (p>0.05).

Conclusion: In this study, during the 9-year period, it was determined that 5.87% of all traumatic dental consisted of avulsion injuries. Thirty-three avulsed teeth in 26 patients were replanted, and 12 replanted teeth were revealed as failures. A high rate of success can be obtained when the avulsed teeth are kept under wet conditions and brought to a dental clinic as soon as possible. KEY WORDS: Traumatic Dental Injuries, Tooth Avulsion, Replantation.