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Estimate the Complications That Resulting from Delayed Management of Dental Trauma in Tikrit City

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ABSTRACT

The objective of current study is to demonstrate the effect of delayed management of traumatized primary teeth and permanent teeth. 117 children aged 8-12 year-old were chosen from various primary schools in Tikrit city and the study survey was occurred at June 2019 to January 2020. All children (boys and girls) with injured teeth were chosen in the study. They were examined clinically for the presence of discoloration of the crown, tenderness to percussion, and signs of swelling or a sinus tract, as well as reaction to cold. The results show Male represented 70.9% and female patients 29.1%. The age group that showed the highest number of dental trauma was 8–10 years in which 48.2% boys and 47.1% girls were affected. The permanent central incisors of maxillary were the most injured teeth 68 (73.9%) followed by the permanent lateral incisors of maxillary 11 (12.0%), while the mandibular permanent central 16 (64%) and followed by mandibular lateral incisors 8 (32%). The fracture of enamel-dentin was described as the most dental trauma type, and in 70.1% of the cases it ended with pulp necrosis. The fracture of enamel-dentin with exposure of pulp represented the second type of injure of dental trauma and showed a frequency of 67.4% pulp necrosis. It's connected from present study that there is a need to parent's knowledge about the seriousness of dental trauma and must them to attempt to dental treatment as soon as possible.

Keywords: dental trauma; permanent central incisors; Primary central incisor.

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INTRODUCTION

The injury of tooth described as destruction and damage of tooth when immoderate power is placed on tooth [1]. An injury of teeth defined as a fracture (avulsion or luxation) although the injury combinations may happen in the teeth [2]. Traumas of mouth (Oral) are not frequent and form about 5% of all injures of human body at different ages while in age group of 0-6 years, oral traumas consist of approximately 17% [3]. Injuries of dental trauma are more widespread in permanent dentition (58.6%) compare with primary dentition which they consist of 36.8% [4-5]. A majority introduction of injuries of dental trauma includes one tooth (permanent) and the most affected tooth is the central incisors in maxillary [6].The most occurring injure types of dental trauma in permanent teeth are fractures of enamel, fractures of dentine part and enamel [7], and the fractures of dentine and enamel with involvements of pulpal [8]. Factors of predisposing for injuries of dental trauma comprise physical properties like elevated incisal over jet, open bite and incompetence of lip [9-11]. On otherwise, there is an evidence of an relationship between over jet size and injuries of dental trauma, there is evidence whether the anterior open bite is associated to the happening of injuries of dental trauma .there are many studies evaluate this relation in the permanent dentition [11-12].

MATERIALS AND METHODS

A subject of 117 children (boys and girls) aged 8-12 years were chosen from various schools (primary) in Tikrit city and the study survey was happened at June 2019 to January 2020. All children (boys and girls) with injured teeth were chosen in the study. They were examined clinically for the presence of crown discoloration, tenderness to percussion, and swelling signs, as well as reaction to cold condition. Periapical radiographs of dentil trauma were taken using the technique of standard periapical bisecting angle. All radiographs were read under standardized conditions by using viewer of x – ray. The estimation comprises peri apical pathology, resorption of root and fracture of root.

RESULTS

Male represented 70.9% and female patients 29.1% as shown in table (1). The dental trauma and its relationship to age and sex of children are shown in (table 2). The age group that showed the highest number of injure of dental trauma was 8–10 years in which 48.2% boys and 47.1% girls were affected as shown table (1).The maxillary permanent central incisors were the most frequently injured teeth 68 (73.9%) followed by the maxillary permanent lateral incisors 11 (12.0%), while the mandibular permanent central 16 (64%) and followed by mandibular lateral incisors 8 (32%) as shown in table (3). The fracture of enamel-dentin was described as the most dental trauma type, and in 70.1% of the cases it ended with pulp necrosis as shown in table (4). The fracture of enamel-dentin with exposure of pulp represented the second type of injure of dental trauma and showed a frequency of 67.4% pulp necrosis as shown in table (4).

Table 1: The percentage of each gender in study

Gender	Percentage
Boys	83 (70.9%)
Girls	34 (29.1%)

Total	117 (100%)

Table 2: Dental trauma etiology according to age and sex

Age group	Sex	
	Male	Female
2-4	3 (3.6%)	0
5-7	9 (10.8%)	5 (14.7%)
8-10	40 (48.2%)	16 (47.1%)
11-12	31 (37.4%)	13 (38.2%)
Total	83 (100%)	34 (100%)

Table 3: Location of traumatized teeth

Teeth	Maxilla	Mandible
Permanent central incisor	68 (73.9%)	16 (64%)
Permanent lateral incisor	11 (12.0%)	8 (32%)
Primary central incisor	7 (7.6%)	1 (4%)
Primary lateral incisor	6 (6.5%)	0
Total	92 (100%)	25 (100%)

Table 4: Frequency of pulp necrosis and root resorption in relationship of type of dental injury

Type of dental injury	Teeth No.	Pulp condition	Resorption	
		Necrosis	Internal	External
enamel only	18	5 (27.8%)	0	2 (11.1%)
Enamel+dentin	67	47 (70.1%)	4 (5.97%)	3 (4.5%)
Enamel+ dentin +pulp	46	31 (67.4%)	2 (4.3%)	5 (10.9%)
Luxation	37	34 (91.9%)	0	0
Avulsion	20	0	0	0
Extrusion	7	0	0	0
intrusion	11	0	0	0

DISCUSSION

This study show injure of dental trauma in boys was twice the rate in girls. Several studies have shown that males suffered injuries of trauma dental at least twice the rate in females. male: female ratio different from 1.5:1.0 to 2.5:1.0 [13-15]. Like this ratio could be may be to the boys greater involvement in different sports, fight games and accidents of car and other devices. Also it could be associated to the reality that the behaviors of girls are more mature compare with male, who have be more vitality and active. Different studies had shown a decreasing in the gender percentage which might be resulting to the elevated activities of sports [16]. In other study demonstrated some relationship between sex and injury type. Boys more often experience from tissue of dental and injury of pulp compare with girls [17]. Dental trauma injures effect most common on central incisors of maxillary. The similar outcome was reported by others researches [18-19]; this may be demonstrate by the reality that the maxillary incisors prominent position in the face was responsible for their more participation in fractures compare with other teeth [20]. the present study also showed that the injury type affecting the primary teeth was luxation, or avulsion, extrusion, Intrusion. These agree with the results of some studies [21-22] who have suggested that the supporting structures flexible natures are favors dislocation rather than fracture.

CONFLICT OF INTEREST

None

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