Forensic Medical Characteristics Dislocations of Teeth

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ABSTRACT

In the study of dislocated teeth, it was found that the displacement of a dislocated tooth depends on the place of action of the active force. Thus, when exposed to an impact on the front surface of the tooth, the crown of the tooth moves back and the tip of the root moves forward. And a blow to the side surface of the tooth changes the direction of the crown in the direction of impact, and the root in the opposite direction. Dislocations of the incisors of the upper jaw occur most often, the roots of which are softer than those of other teeth. A fracture of the alveolar wall often occurs with dislocations of the teeth located on the lower jaw. Dislocations of chewing teeth require significant external force, the greater the number of teeth in the row.

Keywords: Teeth, dislocations, mechanism, types, signs

Introduction: Along with the general increase in injuries, over the past three decades there has been an increase in the frequency and severity of maxillofacial injuries and combined injuries [1].

According to the authors, more than 75% of victims of combined trauma have multiple fractures of the bones of the facial skull; more than 56% have bruises of the brain, damage to the deep parts of the eye sockets and the base of the skull [2]. This is also evidenced by numerous data on the frequency of maxillofacial injuries among the total number of bone injuries in peacetime, ranging from 3.2% to 3.8% with the development of complications [3,6,10,11]. The proportion of victims with facial trauma in the structure of inpatient dental patients, according to the materials of individual authors, is different and varies from 21% to 40%. The data on the ratio of 4.1% of children with injuries among all patients of the pediatric department of the maxillofacial clinic are presented. Up to 36% of the structure of pediatric maxillofacial trauma consists of patients with injuries to the bones of the facial skull [4,5].

According to researchers, dentoalveolar injury accounts for up to 50% of all injuries to the hard tissues of the maxillofacial region in children. Data on 0.9-3.9% of dental injuries among maxillofacial injuries are given [7, 8, 9].

The purpose of the research was to establish the type and nature of dislocations of teeth.

Research materials and methods. The object of the study was the materials of the forensic medical examination of cases of dental injuries conducted in the outpatient department of the Tashkent city branch of the Republican Scientific and Practical Center for Forensic Medical Examination of the Republic of Uzbekistan.

Using a special computer program using questionnaire maps developed by us, including classifying parameters (circumstances of the case, localization, nature, cause, mechanism,

prescription and its effect on the outcome), 237 conclusions of forensic medical examinations were studied, including 225 (94.9%) primary, 8 (3.37%) additional and 4 (1.68%) repeat cases (group I).

A retrospective analysis of 152 case histories and outpatient records of patients with jaw injuries who were undergoing inpatient and outpatient treatment at the Department of Maxillofacial Surgery of the Tashkent Dental Medical Institute Clinic (group II) was also conducted.

The following research methods were applied: catamnestic, clinical, macroscopic, stereomicroscopic, X-ray, statistical.

The results of the study and their discussion.

The research results indicate that in the absolute majority of cases, the injury was sustained as a result of a fight 177 (45.5%), an automobile injury 80 (20.56%) and a fall 54 (13.88%) There have also been cases of injury during sports, tooth extraction, etc.

In addition to tooth fractures, tooth luxation of 5.4% (21), complete dislocation of the tooth of 3.86% (15), tooth intrusion or extrusion of 2.31% (9), etc. were also observed.

When determining the mechanism of dental damage, there was a clear predominance of impact in the dental area in both groups of 58.5%. Although there was a b and a bend of 38.04% in total, and in some cases a shift of 3.59%.

The most common punches were 48.59%, less with a stick, 10.54% with rebar and 32.39% with other objects. Brass knuckles strikes of 3.34% and bat strikes of 5.14% were also detected.

Dislocation of a tooth. In this type of injury, the periodontium, alveoli, and gums were damaged. The damage can be combined with a tear or rupture of the neurovascular bundle in the apical zone and displacement of the tooth. A mild degree of damage can be considered a concussion, or a bruised tooth.

Due to the absence of external signs of tooth injury and the rapid disappearance of bruising pain, victims rarely have severe anxiety about the injured tooth, so they do not often consult a dentist. Usually, patients seek help if there is a more serious injury to other teeth, and the dentist simultaneously identifies a tooth contusion. Patients often find out about a former tooth contusion after several months or years, when there is a discoloration of the tooth, complications of traumatic tooth damage in the form of periodontitis or a radicular cyst. Often, a tooth contusion in which the pulp is not affected remains undiagnosed.

Luxation of the tooth. This type of injury is characterized by pain when biting, increased sensitivity to percussion to both vertical and horizontal, a decrease in the electrical excitability of the pulp up to its complete absence, mobility of the tooth I-II degrees, but the tooth remains in its original position. When examining the oral cavity, the hard tissues of the tooth are without pathological changes, small tooth extrusion is possible (due to hematoma), bleeding from the gingival groove, the gum surrounding the tooth is edematous or has a laceration. The X–ray shows the expansion of the periodontal fissure throughout.

This type of injury also includes a lateral dislocation of the tooth. With this type of injury, the ligamentous apparatus of the tooth is significantly damaged, often a rupture of the neurovascular bundle occurs.

The patient complained of a change in the position of the tooth after injury, pain when biting. Upon examination, a displacement of the tooth in the medial, distal, buccal-lingual direction is revealed, there is tooth mobility of varying degrees of severity, pain is noted during palpation of the gums, a feeling of crepitation or the presence of protruding sharp edges of the alveolar bone is possible. The color of the tooth is not changed in the first days.

An X-ray reveals a displacement of the tooth, the root without pathological changes, there is damage to the alveoli. The periodontal gap is narrowed on the displacement side and widened on the opposite side.

Tooth intrusion or extrusion. Depending on the degree of immersion of the tooth into the jawbone (partially or completely), partial or complete intrusion is distinguished.

Partial intrusion is a relatively common injury. One or more frontal teeth may be damaged,

most often the upper ones, which are in visible intraocclusion. The patient complains that the tooth looks shorter than others after injury, the gum hurts at the site of injury in the gum area, but there is no pain in the tooth. The damaged tooth is more often immobile, there is swelling and bleeding of the gums in the area of damage or the presence of a blood clot here. The X-ray shows the absence of a periodontal gap in the apical zone, tooth insertion, damage to the germinal zone, and alveolar fracture.

Complete intrusion is a fairly rare type of injury. Usually, the upper teeth are damaged with incomplete root formation. Clinically, the tooth is not visible in the mouth, which can simulate a complete dislocation of the tooth. The X-ray shows the entire tooth embedded deep into the alveolar process, sometimes the tooth may be rotated around its axis, the periodontal gap is missing, the alveolus in the apical part is destroyed. With minor insertion (within the apical periodontium) and preservation of pulp viability (in teeth with incomplete root formation), the tooth itself moves into place as the root forms.

Dislocation of the tooth (exarticulation). Complete dislocation of the tooth is rare compared to other types of dental trauma and is characterized by a complete exit of the tooth from the hole of the alveolar process. Upon examination, the absence of a tooth is visible or the tooth is held only by a circular ligament. The gum and the well may be damaged to varying degrees. Morphological changes – rupture of the pulp, rupture of the periodontium, absence of a tooth in the hole, damage to the gum and bone of the alveoli.

Conclusion. Consequently, dislocations of teeth were more common in people of working age, mainly in men. The displacement of a dislocated tooth depends on the location of the active force. When an impact is applied to the front surface of the tooth, the crown of the tooth is pushed back and the tip of the root is pushed forward. A blow to the side surface of the tooth changes the direction of the crown in the direction of impact, and the root in the opposite direction. Dislocations of the incisors of the upper jaw occur most often, the roots of which are softer than those of other teeth. A fracture of the alveolar wall often occurs with dislocations of the teeth located on the lower jaw. Dislocations of chewing teeth require significant external force, the greater the number of teeth in the row.

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