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### RESEARCH ARTICLE

#### CLINICAL REVIEW OF EAR, NOSE AND THROAT INJURIES IN CHILDREN

Nemer AlKhtoum MD, Bashar shamayleh MD, Muath Al-Worikat MD, Ahmed Smadi MD and Abdelrazaq Alrfouh MD

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Injury, ENT, Trauma, Children

#### Abstract

**Objective:** The aim of present study was to carry out a retrospective analysis of types and causes of ENT injuries in pediatric age group.

**Patients and Methods:** We carried out a retrospective analysis of types and causes of 40 children up to the age of 14 years with ENT injuries managed in the department in the period from March 2019 to April 2021.

**Results:** The total number of patients was 40 and it comprised of 31 males (77.5%) and 9 females (22.5%).

Twelve (30%) of the children were under the age of 5 years, 14(35%) were 6-10 years of age and 14 (35%) in the age group of 11–14 years.

The most common injury was nasal bone fracture (28.45%) The lacerated soft palate was the second common injury which account for (22.5 percent). The most prevalent site of injury was the nose region.

About 32.5 percent of the injuries were caused by falls and accidents, which included falling from roof, trees, beds or cribs, and falls while sporting. About 35% of all injuries are caused by pointy items in the mouth and traffic accidents.

The falls while playing in addition to injury with pointy materials was observed in patients under the age of five years. Blunt trauma, falls from stairs and during playing, as well as damage with pointed items, were the most common etiological causes in children aged 6–10. The ages of 11–14 years were shown to be the most vulnerable to falls and traffic accidents.

**Conclusion:** ENT injuries in children differ from those in adults in terms of type and mechanism. Prophylactic measures should be adopted for children who are at risk of ENT injuries.

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#### Introduction:-

Emergency services are an important aspect of any clinical medical field and are regarded as a sign of a high-quality health-care system. Accidents and emergencies can happen at any moment, hence every hospital should have specialized emergency services from all specialties available 24 hours a day, seven days a week, rather than on a call basis.

**Corresponding Author:- Dr. Nemer Al-Khtoum**

Address:- P.O. Box 1834 Amman 11910 Jordan.

ENT emergencies are a specialized job that necessitates the use of specialized equipment and devices. ENT problems can range from minor complaints such as a sore throat or otalgia to serious respiratory difficulties or a brain abscess.

With the increase of traffic accidents, industrial disasters, and insurgencies, ENT and head and neck emergencies are on the rise, providing a difficult challenge for an attending junior doctor. If not addressed effectively, it can result in morbidity and, in rare cases, mortality. [1]

Ear, Nose, and Throat (ENT) injuries are common among children and are considered an unavoidable part of their development. These are significant reason of mortality and disability that can be avoided. [2,3]

Injuries can involve different areas of the body and differ considerably depending on the underlying cause and the child's age.

The aim of present study was to carry out a retrospective analysis of types and causes of ENT injuries in pediatric age group.

### **Material and Methods:-**

The sample of this retrospective study was carried out in the department of otorhinolaryngology, royal medical services. It includes 40 children up to the age of 14 years with ENT injuries managed in the department in the period from March 2019 to April 2021.

All children who were first seen in an emergency room and subsequently sent to an ENT specialist for treatment of particular ENT injuries were included in the study.

The vast majority of patients were managed as outpatients, with only a few requiring hospitalization for certain operations. This study excluded patients who had injuries to regions other than their ears, nose, and throat.

We carried out a retrospective analysis of types and causes of these ENT injuries.

### **Results:-**

The total number of patients was 40 and it comprised of 31 males (77.5%) and 9 females (22.5%).

Twelve (30%) of the children were under the age of 5 years, 14(35%) were 6-10 years of age and 14 (35%) in the age group of 11–14 years.

The most common injury was nasal bone fracture (28.45%) The lacerated soft palate was the second common injury which account for (22.5 percent). The most prevalent site of injury was the nose region.

About 32.5 percent of the injuries were caused by falls and accidents, which included falling from roof, trees, beds or cribs, and falls while sporting. About 35% of all injuries are caused by pointy items in the mouth and traffic accidents.

The falls while playing in addition to injury with pointy materials was observed in patients under the age of five years. Blunt trauma, falls from stairs and during playing, as well as damage with pointed items, were the most common etiological causes in children aged 6–10. The ages of 11–14 years were shown to be the most vulnerable to falls and traffic accidents.

### **Discussion:-**

The majority of the children in this study were males, with a male to female ratio of 3.4:1. The patients' average age was 7.6 years, although Synders et al. [4] reported an average age of 8.2 years in a comparative study of trauma in both adults and children, with 63 percent of males.

Singh et al [2] similarly documented a male dominance and an average age of 9.2 years (81 percent). Males appear to engage in more outdoor activities than females, resulting in a higher percent of males. Biking, bouncing, hiking,

and other hobbies are more popular among the males. In the past, similar results were observed [5]. It's also likely that in rural areas, boys are given more attention than girls. As a result, injured boys are taken to the hospital faster than girls who are treated at homes initially. [3]

In the current study, fractured nose, soft tissue damage, cartilaginous septum trauma, nasal septum hematoma or abscess, and perforation of nasal septum were the most common sites of injury in the ENT area, representing approximately 53 percent of injuries.

Other research have confirmed this [2,6]. In 5% of the patients, a septal abscess was the presenting condition. All of them had experienced trauma as a result of a fall or a direct injury in a car accident or a fight while playing. In a few cases, these children complained of worsening nasal blockage, discomfort, and fever. Nasal septal Perforation occurred in one of the individuals. It is also reported previously in a study conducted by Agarwal and Gupta. [7]

Older children were frequently involved in roadside accidents. This is due to an increase in recreational activities and roadside biking among older children. In roadside collisions, ear involvement with trauma to the auricle and external ear canal was prevalent. In more extreme situations, haemo-tympanum with perforation of the eardrum was detected. Other studies have made similar findings. [8]

Falling, sharp materials in the mouth, road traffic accidents, and blunt trauma were the most frequent cause of injuries, with comparable findings recorded elsewhere [4,9,10].

In school - aged children (11–14 years), the most common causative factors were falls and vehicle accidents.

Falling from trees, staircases, kite flying, falling from wall surfaces or roof tops, and working in farm lands are among the events that cause falls in the study. Children under the age of five were spotted falling from their cots, beds, tables, and chairs.

**Table 1:-** Causes of injuries in different age group of children.

Causes	0–5 yrs.	6–10yrs.	11–14 yrs.	Total
Fall	7	3	3	13
Pointed objects in mouth.	5	3	1	9
Playing	0	1	3	4
Road Side accidents	0	1	4	5
Injury by animal	0	1	0	1
Blunt Trauma	0	2	2	4
Injury by knife	0	1	0	1
Fall into the well	0	0	1	1
Sharp glass	0	02	0	2

### Conclusion:-

ENT injuries in children differ from those in adults in terms of type and mechanism. Prophylactic measures should be adopted for children who are at risk of ENT injuries.

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