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Pattern of Ear, Nose and Throat Injuries in Children at Ladoke Akintola University of Technology (LAUTECH) Teaching Hospital, Osogbo, Nigeria

Blessures oto-rhino-laryngologiques chez les enfants au centre hospitalier de l'Université technologique Ladoke Akintola (LAUTECH), Osogbo, Nigeria

Sogebi O.A., Olaosun A.O., Tobih J.E., Adedeji T.O., Adebola S.O.
Ladoke Akintola University of Technology (LAUTECH) Teaching Hospital, Osogbo, Osun State, Nigeria.

Abstract

Background: Trauma to the ear, nose and throat region is relatively common in children. There is a dearth of literature on this subject in our environment. This study determined the patterns and mechanisms of Ear, Nose and Throat (ENT) related injuries in children in Osogbo, Nigeria.

Patients and Methods: This was a retrospective study of children with ENT trauma/injuries managed in the Ear-Nose-Throat department at Ladoke Akintola University of Technology (LAUTECH) Teaching Hospital, Osogbo, between January 2001and December 2005.

Results: Seventy-five (5.3%) children with traumatic ENT injuries were seen but complete records were available in 47 patients. Twenty nine of the 47 patients were males and 18 were females (M:F=1.6:1). Majority (59.6%) of the patients were in the age group of 0-5years. The duration of symptoms before presentation varied between the various regions, and was least in the throat region, averaging 2.7days. The most common cause of injury seen in all the regions was foreign body (60.71%), majority of which occurred in the ears (60.71%).

Conclusion: ENT injuries are relatively common in our children, and foreign bodies are the commonest causes.

Keywords: Ear, nose and throat injuries, children

Résumé

Arrière-plan: Le traumatisme de la région oto-rhino-laryngologique est assez fréquent chez les enfants à cause de leur curiosité, leur innocence relative, et leur nature quelquefois négligente, surtout quand on les laisse seuls. Il y a une pénurie de documentation sur ce sujet dans notre environnement. Cette étude a déterminé les modèles et les mécanismes des blessures liées à l'oto-rhino-laryngologie à Osogbo, Nigeria. ***Malades et méthodes:*** Il s'agit d'une étude rétrospective d'enfants atteints de traumatismes ou de blessures oto-rhino-laryngologiques traités au département d'oto-rhino-laryngologie entre janvier 2001 et décembre 2005 au centre hospitalier de l'Université de technologie Ladoke Akintola, Osogbo. ***Résultats:*** Nous avons traité soixante-quinze (5,3%) enfants atteints de pathologies oto-rhino-laryngologiques traumatisantes, mais seuls 47 malades avaient des dossiers complets. Vingt-neuf des malades étaient des mâles, alors que les 18 autres étaient des femmes (M:F=1.6:1). La majorité (59,6%) des malades étaient dans la tranche d'âge de 0-5 ans. La durée des symptômes avant la consultation médicale variait de région en région. La durée était plus réduite dans la région de pathologie laryngologique, ce qui donne une moyenne de 2,7 jours. La cause la plus commune de blessure vue dans toutes les régions était la présence de corps étrangers (60,71%), et la majorité de ces blessures se sont manifestées dans les oreilles (60,71%). ***Conclusion:*** Les blessures oto-rhino-laryngologiques sont relativement répandues chez nos enfants, et les causes les plus communes sont l'insertion/ l'ingestion et l'aspiration de corps étrangers. La majorité de ces insertions sont dans les oreilles et nous mettons l'accent sur la bonne surveillance des enfants par les parents et les gardiennes d'enfants. ***Mots-clés:*** blessures oto-rhino-laryngologiques, enfants.

Introduction

Children are naturally inquisitive and are prone to trauma. The mechanism and causes of ear, nose and throat (ENT) injuries in children are different from those in adults.[1]

The ear, nose and throat region is particularly vulnerable. While many of these cases like foreign bodies in the ear and nose can be managed expectantly, some that present with epistaxis will need urgent attention, and those presenting with upper airway obstruction are emergency situations that require immediate action. Despite the progress made in the fields of endoscopy and anaesthesia in children, the inhalation of foreign bodies remains a serious problem.[2]

The dearth of literature in our environment on

Correspondence: Dr.O.A.Sogebi, Department of ENT, LAUTECH Teaching Hospital, Osogbo, Osun State, Nigeria.
E-mail: ayosogebi2000@yahoo.com

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this subject stimulated us to examine the patterns and mechanisms of ENT related injuries in the children in a tertiary health institution in Osogbo, Nigeria.

Patients and Methods

This was a retrospective study of all paediatric patients aged 15 years and below who were managed between January 2001and December 2005 for trauma to the Ear- nose- throat at the LAUTECH Teaching Hospital, Osogbo Nigeria. The records were obtained from the clinic, the ward and the operating theatre registers and analysed for age, sex, presenting complaints, duration of symptoms before presenta-tion, final diagnosis, mode of treatment, complications and sequalae of the treatment.

Results

One thousand, four hundred and fifteen cases of paediatric patients were seen during this period, 75 (5.3%) of which were of traumatic origin. Only forty-seven out of these 75 case notes could be retrieved and these have been analysed. Twenty nine of the patients were males and 18 were females (M:F=1.6:1). Majority (59.6%) of the patients were in the age group of 0-5years, 21.3% were between 6-10years of age while the remaining 19.1% were between 11 and 15 years of age. More than half (60.7%) of the pathologies were due to foreign bodies in the ears, nose and throat (table 1).

Table 1: Causes of Trauma in Children

Causes of Trauma	Ear	Nose	Throat	Total
Foreign Bodies	24	5	5	34
Road Traffic Injuries	3	5	-	8
Domestic Trauma	4	2	1	7
Burns (flames, corrosives)	2	1	2	5
Child Abuse	1	1	-	2
Total	34	14	8	56

Table 2: Duration of Symptoms

Duration of Symptoms	Ear	Nose	Throat	Total
0-1	10	8	3	21
2-4	12	3	3	18
5-7	7	1	2	10
>8	5	2	-	7
Total	34	14	8	56
Mean	5.45	3.32	2.70	
Standard Deviation	7.81	4.59	2.36	

Table 3: Symptoms at Presentation

Ear		Nose		Throat	
FB Insertion	18	FB Insertion	5	FB Ingestion/aspiration	4
Otalgia	9	Epistaxis	4	Dysphagia	4
Bleeding	6	Rhinorrhoea	4	Dyspnoea/Stridor	3
Otorrhoea	5	Facia swelling	3	Neck pain	3
Hearing loss	3			Corrosive ingestion	2
Pinna laceration	1			Bleeding from oral cavity	1

The duration of symptoms before presentation was between 1 hour and 2years, with a mean of 5.44 days (S.D.=7.806) in the ear, 3.32 days (S.D.=4.593) in the nose and 2.70 days (S.D.=2.359) in the throat. The average duration of symptoms before presentation in this study was least in the throat/laryngeal cases (Table 2).

The most common mode of presentation in all the regions was with a history of insertion /ingestion of foreign bodies, the other complaints are as shown in Table 3.

Discussion

The 5.3% incidence of ear, nose and throat trauma in this study indicates that ENT trauma is common in our environment. This is similar to the 4.7% in a study by Leager.[3] Over half (59.6%) of the children were less than five years old. The incidence was especially high in the first two years of life. Increased in bodily activities may prone the boys to trauma more than their female counterparts as suggested by the male preponderance in this study. A previous study reported that accidents from foreign bodies are common in the paediatric population.[4]

Foreign body- associated injuries constituted the majority of the cases seen in this study. The presentation depends on the site of lodgment of the foreign body. In the airways presentation is usually dramatic, with sudden dyspnoea, stridor and respiratory distress. Unrelenting rhinorrhoea despite medications, sometimes with thick,

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offensive mucous discharge and others present with recurrent unilateral epistaxis may be the presenting features of a foreign body in the nose. Diagnosis is confirmed by an anterior rhinoscopy.[5] All the nasal foreign bodies seen in our study were successfully removed while those complicated with secondary rhino/sinusitis were treated with antibiotics and nasal decongestants.

Ear injuries constituted the bulk of trauma cases in this study, making up to 60.7% of the total number and 24 (70.6%) of the ear trauma were due to foreign body insertions. As in previous studies in Jos community[6] and Lagos[7] in Nigeria, the foreign bodies in our study occurred most in the ears, and in children under the age of five years.

Foreign body impactions in the throat tract are less dramatic and dysphagia, odynophagia, neck pains are the most common clinical features.[8] After the confirmation of the diagnosis by plain radiographs, all the foreign bodies (impacted in the crico-pharyngeal junction and upper oesophagus) were successfully removed without any complications.

Two patients had oesophageal burns from accidental corrosive ingestions. We managed our patients conservatively with early and gentle passage of nasogastic tube, antacids and antibiotics. A barium swallow done after three weeks of ingestion showed that one of these patients developed oesophageal stricture necessitating bouginage.[9]

The nasal trauma in this study was mainly of foreign body and road traffic origin. In the case of road traffic accidents, injuries to contiguous structures were common and these presented within hours of injury. The severity of these injuries may be underestimated unless intranasal examination is performed.[10] Most of our patients had soft tissue injuries with the epistaxis that resolved spontaneously in two patients and in others, after anterior nasal packing. In a report by Khan1, most ENT injuries were in the nasal region and nasal bone fracture was the most common.[1]

There were two cases of child abuse with injuries to the ear and nose, respectively. Non-accidental injuries in the ear, nose and throat are difficult to detect because of their covert nature.[11]

Ear, nose and throat injuries in children are common in our setting, and foreign bodies insertion/ingestion and aspiration are the most common causes. Majority of these foreign bodies are inserted into the ears and so proper monitoring of children by parents and caregivers are emphasized.

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