

## **Tongue Entrapment in an Aluminium Milk Can: An Unusual Cause of Tongue Injury.**

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**Peri-oral injuries are common findings in paediatric patients; however, tongue injury following entrapment in bottles and cans is rare and has not been reported in our locality. A case of a 9-year old previously healthy female child who got her tongue tightly entrapped in an half opened aluminium milk can while in school is hereby presented. This case highlights the result of careless and often dangerous play and misadventures of children and the challenge of management. It calls for vigilance and close supervision of children by caregivers at home and at school. Early presentation, immediate intervention and treatment can prevent grave consequences.**

### **Introduction**

Peri oral injuries are common findings in paediatric patients, and they may have significant medical, dental and psychological consequences in the affected children<sup>1</sup>. In the USA, the tongue is the second most common site of oral mucosal lesion in children and youths after the lip and this is commonly due to bites, followed by stomatitis, herpes labialis and geographic tongue<sup>2</sup>. In Nigeria however, the tongue is the most common reported site of oral mucosal lesion and this is most commonly due to fall followed by road traffic accident<sup>3</sup>.

Tongue injury may also result during convulsions in children with epilepsy, intense oro - facial spasms in Leigh diseases<sup>4</sup>, forceful insertion of spoon into the mouth of children with febrile convulsion<sup>5</sup> and from baby walker injury<sup>6</sup>. A complete tongue amputation during a fight had been reported<sup>7</sup>. It is seen more commonly in boys than girls<sup>2,3</sup> within the age range of 3 months to 17years with the highest occurrence in the 0-5 years old<sup>2,3</sup>. These may be due to the fact that children are more restless, exploitative and adventurous<sup>8</sup>, and are constantly exploring<sup>9</sup>. Most tongue injuries are minor injuries that can be managed conservatively<sup>3</sup>. There are few report of tongue injury from tongue entrapment in bottles<sup>10,11</sup> and can<sup>12</sup> from the western world but we are not aware of any such report from the tropics.

We are reporting the case of a 9-year old Nigerian girl who had tongue entrapment in an old half opened condensed milk can while trying to lick 'garri' and sugar contained in the can.

### **Case Report:**

**O. J.**, a 9-year old Nigerian girl presented to the paediatric emergency unit of our hospital with history of tongue entrapment in an old aluminium milk can 20 minutes before presentation while licking garri (A staple Nigerian food) and sugar contained in it while at school. There was associated pain, drooling of saliva and minimal blood loss. There was no difficulty in breathing. There was neither a previous history of similar incidence nor history suggestive of mental derangements. She had no history of previous hospital admission, surgery or blood transfusion. She was the only child of deceased parents, and lives with her maternal grandmother. Review of systems revealed no abnormality.

Examination showed a healthy school girl in obvious painful distress, sweating profusely and drooling saliva. Vital signs were within normal limits. The anterior 1/3 of the tongue was trapped in a half opened milk can (Figure 1). It was massively edematous and cyanotic. There was minimal bleeding. The ear, nose, oro-pharynx and other systems were essentially normal.

The tongue release was done under sedation with intravenous diazepam in the emergency paediatric department, using a strong Mayo's scissors to cut open the can. Fragments of the can were removed and the oral cavity copiously irrigated with normal saline (Figure 2).

Post procedure findings were minimal abrasions on the dorsum tongue at the junction of the anterior and middle one-third. The anterior one-third of the tongue was massively edematous. This however returned to normal size within one and a half hour (Figure 3) which began to resolve quickly. She was given 750 i.u of anti-tetanus serum after a test dose, 0.5ml of tetanus toxoid, amoxicillin- clavulanic acid antibiotics, analgesic and regular warm salt water gargle.

She was subsequently discharged the same day to the ear, nose and throat clinic for follow up in the outpatient clinic after several hours of observation but was lost to follow up.



**Figure 1.** Tongue was trapped in a half opened milk can



**Figure 2.** Post procedure findings showing minimal abrasions on the dorsum tongue at the junction of the anterior and middle one-third. The anterior one-third of the tongue was massively edematous.



**Figure 3.** Normal sized Tongue within one and a half hours after release.

## **Discussion**

Injury commonly occur in children due to the fact that they are more restless, exploitative and adventurous and are constantly exploring<sup>8,9</sup>. These injuries commonly follows falls from heights, febrile convulsions, burns and electrical injuries, drowning and near drowning and usually affect major body parts<sup>3,5,13</sup> and occasionally the tongue. Tongue injury due to entrapment had been reported as isolated cases mainly in the United State of America<sup>10,11,12</sup>. This 9 year old girl presented with tongue entrapment in an-old half opened milk can while trying to lick garri (a powdered Nigerian staple cassava food) contained in it while at school.

In injury to the tongue, the most common location is the dorsum of the anterior 1/3<sup>2,14</sup>. This is also the site in this index case. The age of our patient is also within the commonly affected age group involved in oro- facial tissue injury<sup>2,3</sup>. The tongue on presentation was massively edematous because of impaired venous return due to constriction by the edge of the half opened can. After removal of the can and copious irrigation, the edema resolved within one and a half hour (fig. 3). The challenge in the management of this case is that metal cutting facilities are not part of the regular surgical armamentarium and repeated attempts were made with different instruments to cut open the can. This type of problem is well illustrated in a tongue entrapped in a bottle in which a professional glazier was involved in the management<sup>11</sup>. This may lead to delay in the intervention unless an alternative is readily available. Early presentation and immediate intervention are important. This was the case of this patient who presented within 30 minutes of the incidence and this prevented the complications that could follow prolonged entrapment which include ecchymosis, lingual edema, ischaemia, gangrene and auto amputation<sup>7,10,15</sup>.

## **Conclusion**

Tongue entrapment though rare, is a cause of peri-oral injury which is preventable<sup>1</sup> but not without grave consequences. However, early presentation, immediate intervention and treatment can prevent these. This case highlights the result of careless and often dangerous play and misadventures of children and the challenge of management. It calls for vigilance and close supervision of children by caregivers at home and at school.

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