
Transfixing Penetrating Trauma of the Oropharynx Caused by an Unusual Strange Body

N'faly Konaté^{1,*}, Kassim Diarra¹, Kalifa Coulibaly¹, Boubacary Guindo¹, Youssef Sidibé², Fatogoma Issa Koné¹, Naouma Cissé¹, Siaka Soumaoro¹, Kadiatou Sinkare¹, Mohamed Keïta¹

¹ENT and Head and Neck Surgery Department, University Hospital Center "Gabriel Touré", Bamako, Mali

²ENT and Head and Neck Surgery Department, University Hospital Center "Luxembourg", Bamako, Mali

Email address:

Konatan2@gmail.com (N. Konaté)

*Corresponding author

To cite this article:

N'faly Konaté, Kassim Diarra, Kalifa Coulibaly, Boubacary Guindo, Youssef Sidibé, Fatogoma Issa Koné, Naouma Cissé, Siaka Soumaoro, Kadiatou Sinkare, Mohamed Keïta. Transfixing Penetrating Trauma of the Oropharynx Caused by an Unusual Strange Body. *International Journal of Otorhinology*. Vol. 8, No. 1, 2022, pp. 29-32. doi: 10.11648/j.ijo.20220801.16

Received: June 10, 2022; **Accepted:** June 23, 2022; **Published:** June 30, 2022

Abstract: Objective: Oropharyngeal trauma is a common emergency in children. Our work aimed to expose a case of transfixing trauma of the oropharynx caused by an unusual foreign body and to review our behavior in the management of these traumas. Observation: The authors report a case of trauma to the oropharynx caused by a long tip of a hair straightener that occurred in a 06-year-old child. the mechanism of occurrence was a fall during play while the child was holding the tip in his mouth. The initial symptomatology was marked by endobuccal bleeding, hypersalivation, limitation of mouth opening and corticollis. The entrance orifice was located on the left anterior pillar and the penetrating end of the tip protruded subcutaneously at the level of the left retroauricular region. Enhanced head and neck computed tomography revealed a metallic, serrated density body transfixing from the oropharynx through the pre- and retrostylian spaces in contact with and below the jugular vein and internal carotid artery and terminates in position subcutaneously in the mastoid region. The preoperative hemoglobin level was 13g/dl, the coagulation assessments were normal. As the child's vaccination schedule was not up to date, we administered a dose of serum and tetanus vaccine concomitantly. The exploratory cervicotomy allowed us to extract a tip approximately 20 cm long which grazed the jugulocarotidian bundle without detectable lesions. The postoperative course was simple, healing of the wound occurred around the 10th day.

Keywords: Penetrating Wound, Oropharynx, Unusual Foreign Body

1. Introduction

Penetrating trauma to the oropharynx is a relatively common emergency in children [1]. These lesions are most often underestimated and undervalued. The majority of cases occur without witnesses; and even in front of witnesses only cases with severe symptoms such as bleeding are reported [2]. While these traumas can be responsible for serious carotid lesions, the symptomatology of which can often be delayed, these are mainly symptoms such as dysphagia by a compressive hematoma, delayed cataclysmic hemorrhage, hemiplegia or even death [2]. Cervicofacial computed tomography with injection of contrast product, CT angiography or even magnetic resonance imaging are

essential tools for establishing an accurate lesion assessment [2]. Surgical management requires perfect mastery of the surgical anatomy of the different compartments crossed.

2. Observation

It was a 06-year-old girl, a student, received in the ENT emergency department of the Center Hospitalier Universitaire Gabriel Toure for a foreign body with a disentangling tip type penetrating into the oropharynx. The incident would have occurred during a game while the child was holding the disentangler tip in his mouth. There followed a fall with landing on his face causing the tip to sink into the pharynx with endobuccal bleeding, hypersalivation,

limitation of the mouth opening and corticilis.

The physical examination noted a good general condition with a stable hemodynamic state. He was conscious with Glasgow's score at 15.

Cervicofacial examination revealed that part of the foreign body was outside the oral cavity with a pointed end (figure 1). And when opening the mouth, the other part of the metallic foreign body was deeply embedded in the anterior pillar of the left tonsil with a vertical wound of the anterior pillar of about 2 cm. The penetrating end of the tip protruded subcutaneously at the level of the left retroauricular region (figure 1).

The remainder of the physical examination was unremarkable. The neurological examination was normal. There was no cervical emphysema or hematoma. The cervico-facial injected computed tomography revealed a body of metallic density, jagged, transfixing from the oropharynx through the pre and retrostylian spaces at the contact and below the jugular vein and the carotid artery and ends in a subcutaneous position. in the mastoid region (Figure 2). The preoperative hemoglobin level was 13g/d, the coagulation assessments were normal. As the child's vaccination schedule was not up to date, we administered a dose of serum and tetanus vaccine concomitantly. The exploratory cervicotomy was performed. We performed a Paul ANDRE "L" incision, the anterior and posterior flaps were lifted to fully expose the muscle sternocleidomastoid (Figure 3). We dissected the sternocleidomastoid muscle and the omohyoid to expose the jugular and carotid sheath, higher dissection and reclination of the spinal nerve. We visualized below and in contact with the jugulocarotidien axis a body of metallic nature, jagged and with an uneven end (figures 4-5). The vessel walls were not damaged. The extraction was made by cervical way after protection of the jugular vein and the carotid. Closure was performed layer by layer on a suction drain after washing with saline. Antibiotic therapy based on amoxicillin + clavulanic acid at a dose of 80 mg/kg in three doses and an analgesic treatment based on paracetamol were initiated for 10 days. The postoperative course was simple, healing of the wound occurred around the 10th day. A check was made on D10.



Figure 1. The two ends of the foreign body.

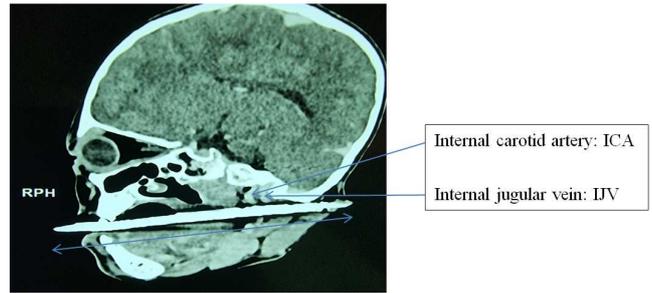


Figure 2. Cervicofacial CT: Visualization of a transfixing metallic density body passing in front of the jugulocarotidien axis.

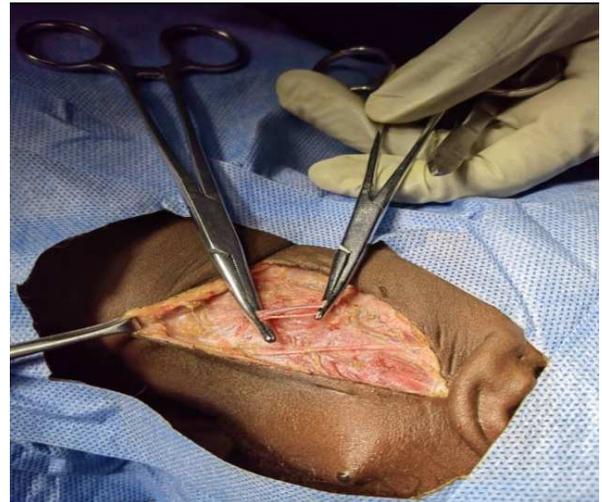


Figure 3. Incision and undermining of flaps.

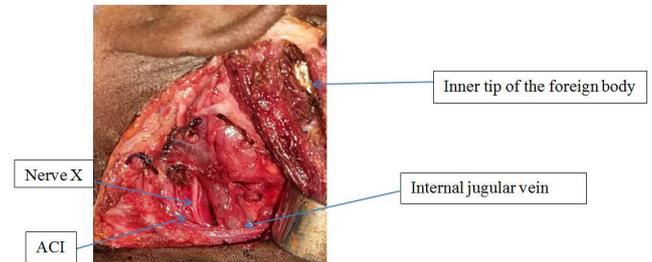


Figure 4. Jugular and carotid artery exposure.

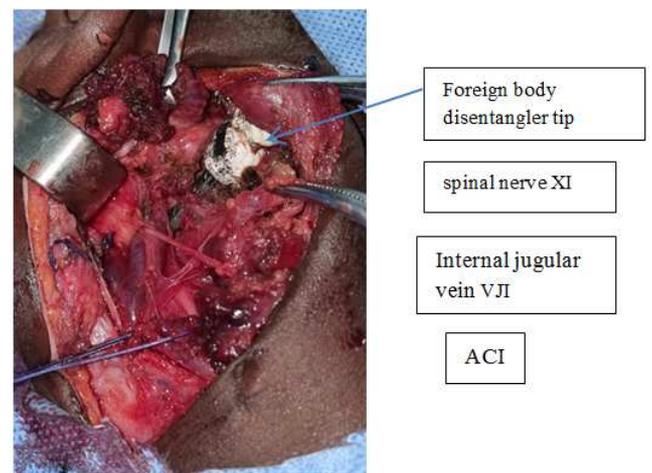


Figure 5. Visualization of the foreign body on the deep side of the jugulocarotidien axis.



Figure 6. Foreign body comb tip.

3. Discussion

We have shared with the literature that oropharyngeal trauma is a frequent accident in children [3]. This could be explained by the fact that children tend to hold a wide variety of objects in their mouths during falls or violent games [3, 4]. The etiologies are very diverse, it can be children's toys, school tools, household objects and other blunt, pointed or sharp objects [1]. In our case it was a long detangler tip of about 20 cm. However, the lesion mechanism described remains uniform among most authors: falling forward while the child was holding an object in his mouth [1-4]. The main symptoms mentioned by the authors are presented by pharyngeal pain, odynophagia, dysphagia, haemorrhage, hemiplegia, impaired consciousness [1-4]. In our case trismus and torticollis were present. This could be explained by the fact that the foreign body crossed the masticatory spaces and the tranfixation imposed a vicious attitude, a torticollis, because any displacement of the body could be painful for the child. Some patients may present with cataclysmic bleeding, in which case measures to secure the upper airway should be undertaken at the same time as hemostasis [5]. The seat of oropharyngeal lesions varies according to the authors, the soft palate, the anterior pillar and the posterior wall of the pharynx are the most concerned, this is explained by the horizontal path taken by a body which penetrates through the oral cavity. In our case, the pharyngeal lesion was on the left anterior pillar. Given the danger represented by the great vessels of the neck, any body crossing the latero-cervical region must require careful exploration by more appropriate assessments. These assessments must include at least an injected CT scan or even a CT angiography or even an arteriography if a vascular lesion is suspected [2, 6]. Other assessments such as chest X-ray, pan-endoscopy and cervical ultrasound can be performed at looking for associated lesions [6-8]. We performed a cervico-facial computed tomography which allowed us to situate the body in relation to the noble elements of the neck and to decide on the surgical approach. Oropharyngeal trauma can be the cause of the formation of a thrombus in the

carotid artery, this is a formidable complication that must be mentioned each time there is compression or damage to the wall. arterial. Anti-thrombotic treatment then becomes essential. Our patient did not benefit from antithrombotic treatment because there was no macroscopically visible lesion of the vascular tunics or sign of compression. Other lesions may occur such as nerve and muscle lesions, temporomandibular joint injuries, infectious complications such as peripharyngeal suppuration [9-12]. The surgical indication is guided by the data from the imaging assessments [2, 4]. In our case, the surface of the foreign body was serrated and its penetrating end was uneven and dotted with sharp areas. A blind extraction could be dangerous because of the close relationship between the body and the jugulocarotidian vasculo-nervous bundle, hence the need to surgical exploration. However, surgery is indicated when the external end of the foreign body has completely migrated into the mucosa, when extraction by natural means involves a risk of injuring a noble element of the neck and finally whenever there are signs of neurovascular impairment [2, 4, 5, 9].

4. Conclusion

Trauma to the oropharynx is mostly seen in children; those caused by unusual foreign bodies are exceptions. The main danger is represented by carotid lesions, the symptomatology of which may be delayed, carotid thromboses and nerve lesions. An accurate lesion assessment is the only guarantee of efficient care.

References

- [1] A GOUÉTA, et al. Corps étranger insolite de l'oropharynx [Unusual foreign body of the oropharynx]. *J. TUN ORL* – 2020; 44 (13).
- [2] SOOSE RJ, SIMONS JP, MANDELL DL. Evaluation and Management of Pediatric Oropharyngeal Trauma. *Arch Otolaryngol Head Neck Surg.* 2006; 132 (4): 446–451. doi: 10.1001/archotol.132.4.446.
- [3] RATCLIFF DJ, OKADA PJ, MURRAY AD. Evaluation of pediatric lateral oropharyngeal trauma. *Otolaryngol Head Neck Surg.* 2003 Jun; 128 (6): 783-7. doi: 10.1016/s0194-5998(03)00091-3. PMID: 12825027.
- [4] THIAM A, LOUM B, NDIAYE M, ET AL. Corps étranger insolite de l'oropharynx [Unusual foreign body of the oropharynx]. *Méd d'Afr Noire.* 2012, 59 (6): 293-96.
- [5] WEALE R, MADSEN A, KONG V, CLARKE D. The management of penetrating neck injury. *Trauma.* 2019; 21 (2): 85-93. doi: 10.1177/1460408618767703.
- [6] Radkowski D' Penetrating trauma of the oropharynx in children *Laryngoscope* 103 '991-994, 199.
- [7] J.-F. Quinot, E. Kaiser Urgence devant une plaie cervicale [Emergency in front of a cervical wound]. *EMC-Médecine 1* (2004) 157–164.

- [8] Gyebre, Y. M. C., Goueta, A., Ouedraogo, B. P., Sereme, M., Zamtako, O. and Ouoba, K. (2016) Unusual Foreign Body of Oropharynx. *International Journal of Otolaryngology and Head & Neck Surgery*, 5, 189-194. <http://dx.doi.org/10.4236/ijohns.2016.55030>
- [9] SOOD S., MEHER R. Intraoral penetrating injury due to an unusual foreign body. *International Journal of Pediatric Otorhinolaryngology Extra*. 2007; 2: 45-47.
- [10] DOUMBIA-SINGARE K, TIMBO S, KEITA M, TOGOLA-KONIPO F, AG MOHAMED A. Corps étranger du pharynx de découverte fortuite [Incidentally discovered pharyngeal foreign body]. *Mali Med*. 2014, 24 (3): 66-67.
- [11] Marom T, Russo E, Ben-Yehuda Y, Roth Y. Oropharyngeal injuries in children. *Pediatric Emergency Care*. 2007 Dec 1; 23 (12): 914-918. <https://doi.org/10.1097/pec.0b013e31815f6fa8>
- [12] Hellmann JR, Shott SR, Gootee MJ. Impalement injuries of the palate in children: review of 131 cases. *Int J Pediatr Otorhinolaryngol*. 1993; 26: 157-163.