



INCIDENTAL FINDING OF RADIOLUCENT FOREIGN BODY IN THE NASOPHARYNX OF CHILDREN UNDERGOING ADENOTONSILECTOMY IN NIGERIA: CASE SERIES

LUCKY OBUKOWHO ONOTAI, VICTOR IKENGA

UNIVERSITY OF PORT HARCOURT TEACHING HOSPITAL Nigeria

ABSTRACT

Foreign body (FB) in the nose and nasopharynx of children are frequently encountered among children and mentally challenged adults. In most cases when they are symptomatic there is associated foul smelling nasal discharge. However, a few may remain unnoticed for years. The aspiration of foreign body into the nasopharynx sometimes presents as an emergency to healthcare providers and its migration into the larynx constitutes an important cause of morbidity and mortality in our environment.

We present three cases of similar foreign bodies incidentally found in the nasopharynx of children undergoing adenotonsilectomy in Port Harcourt, Nigeria. To the best of our knowledge no case series of similar foreign bodies have been reported in our environment.

We shall also highlight their peculiarities and the dangers posed by these types of foreign bodies.

Introduction:

Foreign bodies' lodgments in the head and neck orifices are common occurrences especially in children^{1,2}. However, its lodgment in the nasopharynx is not common. It may either find itself into the nasopharynx after a child has inserted it into the nostrils or from retrograde movement of foreign body in the oral cavity and oropharynx. The later may occur from finger sweeping, violent cough or emesis of foreign materials in the oral cavity/ oropharynx².

Naso-pharyngeal foreign bodies could be metallic or non metallic objects. The metallic foreign bodies that have been reported included coins, needles, rail hooks, gold ring and safety pins ^{1, 3}. The non metallic foreign bodies included food particles, animal shell fragment, wood particles and glass marble ^{2, 4, 5, 6}. Asymptomatic foreign bodies in the naso-pharynx could be missed diagnosed for years. Furthermore, it may be discovered incidentally when plain radiographs of the naso-pharynx are taken during investigations. The peculiarities of these cases bother on the radiolucent nature of the foreign bodies and the complications that can arise if the foreign bodies dislodges into the larynx or tracheobronchial tree during adenotonsilectomy procedure unnoticed.

Case One:

A 1 year 3 months-old female child was referred to Kinx Medical Consultant Clinic (a referral centre for Ear, Nose and Throat cases in Port Harcourt Rivers State, Nigeria), from a private hospital within Port Harcourt as a case of adenoid hypertrophy causing obstructive sleep apnoea. Examination of the mouth and oro-pharynx of the patient revealed grade 2 tonsillar enlargements, the examination of the ears and nose appeared normal. Plain radiograph of the post nasal space of the patient further revealed a homogenous soft tissue shadow in the roof of the naso-pharynx obscuring the nasopharyngeal airway with no clue of any possible foreign body lodged in the naso-pharynx (figure 1).

She was worked up for adenotonsilectomy. The palpation of the post nasal space during the procedure did not reveal much apart from the normal consistency feeling of the adenoid tissue. We did not inspect the naso-pharynx using laryngeal mirror as being practiced in some centres within the country.

However, on curetting the post nasal space we incidentally found a whitish plastic tube like material measuring about 0.5cm in length among the adenoid tissue. Figure 2 shows the foreign body displayed with the adenoid and tonsil tissues. Post operatively, the patient was managed with antibiotics and analgesics and was discharged home the following day to continue management on outpatient basis.



Figure 1: Plain radiograph of the post nasal space showing soft tissue shadow in the roof of the naso-pharynx completely obscuring the naso-pharyngeal air way



Figure 2: Whitish tube like plastic object in the midst of the adenoid and tonsil tissues

Case Two:

A 4 years eight months-old male child was referred to Kinx Medical Consultant Clinic in Port Harcourt Rivers State, Nigeria, from a consultant Paediatric Hospital in Port Harcourt with complaints of mouth breathing, snoring at night and sleep apnoea. No associated fever and otological symptoms. Examination of the mouth and naso-pharynx revealed grade 3 tonsillar enlargements and the plain radiograph of the post nasal space done further revealed a soft tissue shadow in the roof of the naso-pharynx obscuring the naso-pharyngeal airway (figure 3).

He was worked up for adenotonsillectomy. The palpation of the post nasal space did not reveal much apart from the normal consistency feeling of the adenoid tissue. This time we inspected the naso-pharynx with the help of laryngeal mirror but we did not find any foreign body. Surprisingly, we incidentally found again a similar whitish plastic tube like material about the same length with the first case in addition to the adenoid and tonsillar tissues (figure 4 and 5). We went further to complete the procedure. Post operatively, the patient was managed with antibiotics and analgesics and was discharged home satisfactorily without complications after 2 days to continue management on outpatient basis.



Figure 3: Plain radiograph of the post nasal space showing soft tissue shadow in the roof of the naso-pharynx completely obscuring the naso-pharyngeal air way



Figure 4: Whitish tube like plastic object in the midst of the adenoid and tonsil tissues



Figure 5: Showing whitish tube like plastic object in the midst of the adenoid and tonsil tissues when they were removed from the piece of gauze.

Case three:

A 6 years 4 months old male child was referred to Kinx Medical Consultant Clinic in Port Harcourt Rivers State, Nigeria, from a private hospital in Port Harcourt with complaints of mouth breathing, snoring at night and persistent rhinorrhoea which was non offensive. There were associated occasional cough with nasal itching. No associated fever and otological symptoms. Examination of the mouth and oro-pharynx revealed grade 2 tonsils and the plain radiograph of the post nasal space further revealed a soft tissue shadow in the roof of the nasopharynx compromising the nasopharyngeal airway (figure 6).

He was worked up for adenotonsillectomy. The palpation of the post nasal space revealed the normal consistency feeling of the adenoid tissue. Not only that, we went further to inspect both nasal cavities followed by the post nasal space but found nothing apart from the adenoid tissue. Incidentally again on curreting the adenoid tissue we found the same type of foreign body among the adenoid tissue (figure 7). Post operatively, the patient was managed with antibiotics and analgesics and was found fit for discharged after the 2nd day to continue management on outpatient basis.



Figure 6: Plain radiograph of the post nasal space showing soft tissue shadow in the roof of the nasopharynx completely obstructing the nasopharyngeal air ways



Figure 7: Whitish tube like plastic object displayed along with the adenoid and tonsil tissues

Discussion:

Foreign bodies in the naso-pharynx have been previously reported by various researchers^{1, 2, 3, 7, 8}. Foreign body in the naso-pharynx may be asymptomatic or present with vague symptoms such as snoring, sleep apnoea and halitosis¹. The clinical presentation in our case series was similar to that of obstructive tonsils and adenoid. There was no history of foreign insertion into the nasal cavity in all the cases seen and plain radiograph of post nasal space only showed soft tissue shadow in the roof of the naso-pharynx obscuring the naso-pharyngeal airway. If the foreign bodies were metallic in nature, it would have been obvious and can be easily differentiated from adenoid tissues³.

Intra-operatively both digital palpations could not reveal the presence of a foreign body in the naso-pharynx as seen in our series. This could be as a result of the foreign body being embedded in the adenoid tissue.

Several complications can arise from nasopharyngeal foreign bodies such as inhalation into the airway to cause acute upper airway obstruction, occlusion of the eustachian tube opening to cause otitis media and trauma to the adjacent structures^{2, 9}. However, none of these complications were seen in our series. The three cases reported have similar foreign bodies that are parts of children toys. These tube-like plastic foreign bodies are easily accessible to children while playing with their toys^{9, 10, 11}. The second case in our series presented to us 6 months after we found the first case and the third case presented to us a year after the second case. Interestingly, the foreign bodies were all discovered during routine adenotonsillectomy operations.

Moreover, the foreign bodies could aggravate the symptoms and signs of adenoidal hypertrophy, and may have been the cause of the adenoidal hypertrophy because of its prolonged presence in the naso-pharynx. To curb the menace posed by these foreign bodies, parents and care givers should pay attention to children particularly when playing with toys which they can easily dismantle^{9, 10, 11, 12}. In Europe and America, legislations regarding the use of toys by children have helped in reducing the incidence of foreign bodies' lodgements in the orifices of the head and neck region¹⁰.

Conclusion:

Otolaryngologist should consider the possibility of foreign body lodged in the naso-pharynx mimicking the symptoms and signs of adenoidal hypertrophy. Furthermore, during adenotonsillectomy, they should also give particular attention to the naso-pharynx of children and consider the possibility of finding a radiolucent foreign body lodged in it.

References:

1. Jagdish K A G S. Nasopharyngeal foreign body in a young child. *Indian J Otolaryngol Head Neck surg.* 2011; 63 (3): 285-286.
2. Fasunla AJ, Surajudeen O, Osukoya A, Akenroye MI. Foreign body in the nasopharynx mimicking obstructive adenoid. *Jos J Med* 2013; vol 7, no 2
3. Martins RH, Mano JB, da Silva EF. Foreign body in the nasopharynx : an accidental radiological finding. *Braz J Otorhinolaryngol* 2006; 72: 431.
4. Onakoya PA, Adoga AA, Adoga AS, Galadima C, Nwaorgu OG. An unusual rhinopharyngeal foreign body. *West Afr J med* 2005; 24 (1): 89- 91
5. Singh RK, Saurabh V, Sampan SB, Nitin G. A rare nasopharyngeal foreign body. *Online J Health Allied scs* 2008: 7 (1): 10
6. Gulati S, Anshu R, Wadhera. An impacted marble in the nasopharynx of an infant case report. *Inter J Otorhinolaryngol* 2008: 9(2)

7. Awty MD, Removal of a large shell fragment from nasopharynx. *Oral surg oral med oral pathol* 1972; 33 (4) 513-9.

8. Smith SA, Norris B. Reducing the risk of choking hazards: mouthing behavior of children aged 1 month to 5years. *Inj Control Saf Promot.* 2003; 10 (3):145-154.

9. Okoye B.C.C, Onotai L.O: Foreign Bodies in the nose *Niger J Med* 2006; 15(3):301-4.

10. Ibekwe M.U, Onotai L.O, Otaigbe B. Foreign bodies in the Ear, Nose and Throat in children: a five year review in Niger Delta. *Afr J Paediatr Surg*, 2012. 9 issue 1: 3-7.

11. Onotai L.O, Ebong M.E: Pattern of Foreign body impactions in the tracheobronchial tree in University of Port-Harcourt Teaching Hospital. *Port Harcourt Med J* 2011, vol 5(2): 130-135

12. Onotai L.O, Ibekwe M.U, George I. Impacted Foreign Bodies in the Larynx of Nigerian Children. *J Med Med Scs* 2012, vol3 (4): 217-226.