

Foreign Body in the Nostril: A Nigerian Case Report

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Abstract

Background: Nasal foreign body (NFB) refers to an object which lodges into nasal cavity. A case of 11 years old boy who presented at our clinic with a three year history of nasal bromhidrosis and discharge from the nostrils was reported by the parents, and added that it was persistent since one year ago. **Methods:** A dark object was visualized at the turbinate of the right nostril. The visible object was sounded with a forceps extractor to confirm the nature of the object. The nose was swabbed; debris cleaned and with the forceps extractor a gentle traction was carried out as the forceps grabbed the object. There was little or no resistance but two attempts to grab the object failed. On the third attempt, the forceps was able grip the object firmly and on pulling, the object was gently extracted from the area of impaction behind the right turbinate. **Conclusion:** The NFB was observed to be a stone embedded with purulent nasal discharge. This case emphasizes the need for parents and caregivers to be aware of the complications associated with presence of NFBs and need to seek prompt medical attention.

Keywords: Nasal foreign body, nasal bromhidrosis, upper respiratory tract infection, foul-smell, nasal discharge.

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INTRODUCTION

Foreign body in the nostril also called nasal foreign body (NFB) is a common health emergency, especially in children [1-4]. A foreign body is an object or piece of exogenous material that has entered the body unintentionally or on purpose and is there to do harm if prompt medical assistance is not sought [5]. The nose is the second most common site for foreign body insertion [1, 5]. NFB refers to an object which lodges into nasal cavity. NFBs are commonly lodged in the right nostril [1, 6] and mostly located in the floor of the nose or immediately anterior to the middle turbinate [3, 6].

NFBs are either animate or inanimate [1, 3]. Pebbles, bullets, beads, marbles, beans, safety pins, washers, nuts, sponges, chalk, rubber erasers, plasticine,

metal hooks, door handles, bits of wood, coins, corks, iron bolts, shrapnel, thimbles, and paper wads are examples of inanimate NFBs [3, 6 -10]. Animate NFBs include fly maggot, screw worms, myiasis of the nose, larvae of other flies like those of aestrous, hypoderma, and dermatobia, wohlfahrtia magnifica and ascaris lumbricoides [3]. These infestations are more frequent in ozaena and nasal syphilis patients [3, 11]

NFBs are implanted voluntarily or accidentally for a plethora of reasons, such as curiosity to explore orifices, simulation, weariness and playfulness, availability of the objects and absence of watchful caregivers. Other common reasons for NFB placement include mental retardation, insanity, and attention deficit hyperactivity disorder [5]. Children under 10 years old are more likely to insert foreign objects in

their nostrils [1, 5, 6, 12-15] and it is more common in the males [1, 5, 13, 15]. Kamran *et al.*, documented a male preponderance, males outnumber females by a ratio of 1.17 to 1 [5].

Foreign bodies in the nostrils are mostly benign, however, they can irritate the nasal mucosa, cause bleeding and infection [3]; more so, a dislodged NFB can move into the airway and may result in acute respiratory obstruction [3, 4]. NFBs have been linked to the transmission of the organisms that cause diphtheria and other infectious disorders [3]. Larger, more severe lesions as well as more complications such as epistaxis, sinusitis, otitis, meningitis, rhinoliths, nasal septum perforation, intranasal adhesions, and external nasal deformities have been linked to un-excised NFBs [1, 5, 6, 16 - 19]. NSBs that present acutely may be visible or will need a high index of suspicion because it may go unnoticed for weeks, months, or even years after implantation [1, 4]. In most cases it was the parent that noticed the incident and consulted a doctor [1]. Self-report of a child, nasal congestion, bleeding, and offensive odor are further justifications for a hospital visit to evaluate for NFB [1].

Patient Information

An 11-year-old male presented at our clinic for post-primary school admission health and fitness evaluation. At the time of presentation the foul-smell from the nostril was a thing of concern to the doctor. He felt no pain and there was no fever, but a very stench odor perceived from the right nostril. A three year history of foul-smell and discharge from the nostrils was reported by the parents, and added that it was persistent since one year ago. The parents believed the foul-smell was as a result of the nasal discharge. The parent administered a self-prescribed syrup ampiclox and syrup chlorpheniramine for upper respiratory tract infection and anti-malarial drug for fever. The self-prescribed medications were repeated each time the symptoms reoccurred, three to four times a year. The parents complained about the foul-smell from the right nose which was not relieved by the self-prescribed drugs.

Clinical Findings

The physician observed a unilateral foul-smell from the nostrils. On examination a nasal occlusion was observed; a mass was visualized in the turbinate of right nostril. The child didn't remember placing an object in his nose or any one doing so. The child played outside the house a lot when he was five years old and there was little or no supervision, the dad believes the object may have been implanted at this time.

Therapeutic Intervention

Mother and child were counseled on the need to examine the nose as part of school examination of the head and other orifices. The child was placed on a comfortable chair and asked to tilt his head backwards. With the aid of a pen touch and well-lit bulb overhead, and under aseptic measures the right nose was examined. A dark object was visualized at the turbinate of the right nostril.

Child was asked to blow his nose severally while blocking the unaffected contralateral nostril. This however failed to rid the nose of the foreign body (positive pressure technique). The visible object was sounded with a forceps extractor to confirm the nature of the object. The nose was swabbed; debris cleaned and with the forceps extractor a gentle traction was carried out as the forceps grabbed the object. There was little or no resistance but two attempts to grab the object failed. On the third attempt, the forceps was able grip the object firmly and on pulling, the object was gently extracted from the area of impaction behind the right turbinate (Figure 1 & 2). The NFB was observed to be a stone embedded with purulent nasal discharge (Figure 1-3). Patient had mild bleeding with few clots at the site of extraction. The nose was packed with adrenaline gauze for 5minutes after which homeostasis was achieved. Patient was initially placed on parenteral antibiotics (cephalosporin), later discharged on oral antibiotics (capsule cephalixin) and reviewed on an outpatient basis.

Table 1: Full blood count result

TEST	RESULT	UNIT	REFERENCE	REMARKS
White blood cell	6	10 ⁹ /L	5-17	Normal
Lymphocyte	2.64	10 ⁹ /L	1.5-11.1	Normal
Granulocyte	2.61	10 ⁹ /L	1.5-11	Normal
Lymphocyte%	48.0	%	45-70	Normal
Granulocyte%	47.1	%	20-45	Elevated
Red blood cell	5.13	10 ¹² /L	4-5.2	Normal
Hemoglobin	13.1	g/dl	10.2-15.2	Normal
Hematocrit	38	%	36-46	Normal
Mean corpuscular volume	74	fL	78-94	reduced
Mean concentration of hemoglobin	26	pg	23-31	Normal
Mean corpuscular hemoglobin concentration	344	g/L	320-360	Normal
Red cell distribution width	14.0	%	11.5-14.5	Normal

Platelet	209	10 ⁹ /L	150-450	Normal
PCT	0.20	%	0.16-0.36	
MPV	9.4	fL	8.3-12.1	Normal
PDWc	41.0	%	37.8-43.6	Normal



Figure 1: Removal of Nasal Foreign Body

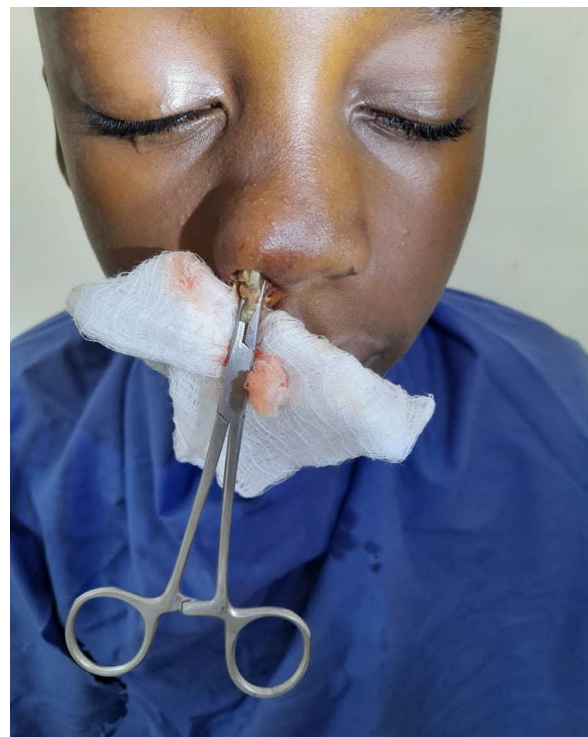


Figure 2: Removal of Nasal Foreign Body



Figure 3: Removed Nasal Foreign Body

Diagnostic Assessment

A nasal swab was taken from the right nostril and blood samples were taken for a full blood count.

Follow-up and Outcomes

He had no complaints of nasal bromhidrosis, bleeding and discharge, and didn't he have any respiratory symptoms in his subsequent follow-up visits.

DISCUSSION

NFB is a substance or item that was introduced into the nostril and may pose health concerns by being there if medical care is not sought. It is a common health emergency, especially in children [1-5]. NFBs are implanted accidentally or on purpose [5]. This case report reveals a NFB found in the right inferior turbinate of an 11years old boy and may have been implanted since age of 5years. Foreign bodies are more likely to be inserted into the nose or other orifices by children under the age of 10 years [1, 5, 6, 12-15]; during which they tend to explore the environment and play a lot [1]. Children may accidentally put small objects in their noses due to their inherent curiosity, and could result in things getting caught in airways [5] as observed in this case report.

A strong index of suspicion is required for NFBs because they could go undetected for weeks, months, or even years after implantation [1, 3, 4]. Parents and caregivers are of paramount importance in such a situation, in most reported cases, it was the parent who became aware of the situation that sought medical attention [1]. In this case the parents were totally unaware of the NFB in the right nostril of their ward, they never suspected the unilateral mucopurulent fetid nasal discharge instead they resorted to self-prescribed antibiotics for the treatment of bromhidrosis. This emphasizes the need for parents to seek prompt medical attention rather than indulge in self-prescribe medications at home.

NFBs are usually benign and patients rarely experience pain [1, 4]. The young boy in this report didn't experience pain and the NFB was unnoticed for several years. The NFB in this case report was found on the right nostril, the inferior turbinate. This is consistent with literature. NFBs are commonly found in the right nostril and have been attributed to handedness [1, 6, 20]. The NFB in this study was incidentally detected. The nasal bromhidrosis observed during the presentation may indicate a multitude of conditions other than an NFB. A careful examination however, revealed an NFB implanted in the inferior turbinate of the right nostril.

The retained secretion and the concretion formed around the NFB, and the accompanying ulceration and mucosal erosion may be responsible for the nasal bromhidrosis observed during the presentation. The result of nose swab microscopy sensitive and culture revealed a mixed growth of escherichia coli and staphylococcus aureus bacterial colonies which were sensitive to ciprofloxacin, chloramphenicol, streptomycin and rifampicin. The full blood count with platelets reveal increased GRA and a reduced MCV (Table 1).

The NFB in this case report was removed in an outpatient unit. The patient's cooperation, the doctor's expertise, and dexterity were vital. Alligator forceps, a curette, and an endoscope were utilized to remove the NFB without general anesthesia. Kamran *et al.*, opined "NFB removal is often a straightforward process, but because of its potential complications, an ENT doctor should be involved [5]. Several complications have been associated with the presence of NFBs such as epistaxis, sinusitis, otitis, meningitis, rhinoliths, nasal septum perforation, intranasal adhesions, and external nasal deformities have been linked to un-excised NFBs [1, 5, 6, 16-19].

NFB is a common health emergency, especially in children. This case emphasizes the need

for parents and caregivers to be aware of the complications associated with presence of NFBs and need to seek prompt medical attention.

Patients Perspective

He exhaled in relief and said “I can breathe better”.

Informed Consent

A verbal and written consent was obtained for foreign body extraction from the parent and child.

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