

## Case Report

# Massive epistaxis secondary to an impacted rhinolith in mentally disabled patient

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**Received:** 28 December 2019

**Accepted:** 13 January 2020

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## ABSTRACT

Foreign body nose commonly seen in paediatric age group. In mentally disable patient this may occur and become asymptomatic for many years. We reported mentally disable patient presented with massive epistaxis and history of multiple episodes of foul-smelling discharge from his right nose for the past 20 years. After epistaxis resolved during nasal endoscopy noted impacted rhinolith foreign body in between the septum and the right middle turbinate. Rhinolith successful removed using bent tip of Jobson-Horne probe in otorhinolaryngology, head and neck clinic.

**Keywords:** Epistaxis, Rhinolith, Mental disable, Jobson-Horne probe

## INTRODUCTION

Foreign body in the nose is commonly seen in the paediatric age group of two to eight years and also in mentally disabled patients.<sup>1</sup> The foreign body can be impacted and can remain asymptomatic for years.<sup>2</sup> In both groups of patients, it is an arduous task in obtaining proper and complete history and examination as well as the procedure to follow in removing the foreign body especially in a clinical setting. Epistaxis is one of symptoms and sign of foreign body nose and it is due to trauma or infection. Treatment is aimed to address the epistaxis and to remove the causative agent which is the foreign body.

## CASE REPORT

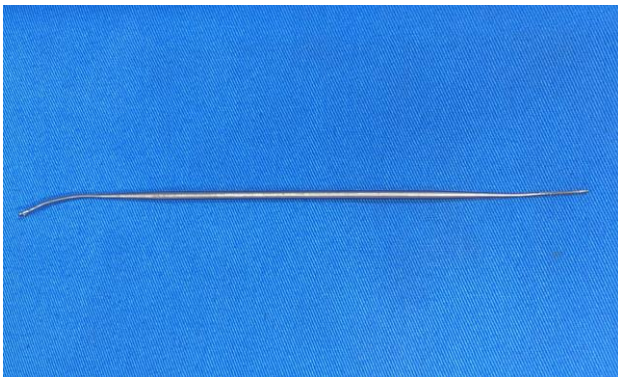
A 39 years old mentally disabled Malay male presented in the emergency department with a massive epistaxis from his right nostril. The bleeding occurred suddenly and earlier that day and did not subside with nose pinching at home. His mother to whom he was taken care

claimed, soaked at least three face towels (12×12 cm) while trying to stop the epistaxis. According to the mother, he had multiple episodes of foul-smelling discharge from his right nose for the past 20 years. The symptoms and sign usually resolved after a course of oral antibiotics prescribed by the general practitioner. Beside the foul-smelling discharge patient did have episodes of minimal epistaxis which usually stopped spontaneously. Prior to the presenting complain, patient had two days history of foul-smelling nasal discharge more on the right nostril which was associated with mild to moderate grade fever. His mother denied any history of taking conventional or traditional medications and any history of recent trauma.

In the emergency department the vital signs were within normal range and he was afebrile. A Trotter's method of stopping nasal bleeding applied but failed which lead to the nose being packed with merocel (non-absorbable nose packing) and ribbon-gauze. The left nose was packed with a 5 cm merocel but a 10 cm soft ribbon gauze was gently inserted into the right nostril due to a high

suspicious of foreign body that might pushed and dislodge it posteriorly to the nasopharynx.

The epistaxis successfully subsided within 5 minutes of insertion of the nasal packs. His haemoglobin level was 12.1 mmHg with no leucocytosis and thrombocytopenia. The renal profile and blood coagulation profile were within normal range. The patient was admitted and started with intravenous augmentin 1.2 g total dissolved solids TDS and intravenous tranexamic acid 500 mg TDS. Bolster charting showed no bleeding and the nasal packing was removed after 48 hours. Endoscopic examination revealed a blackish foreign body in between the septum and the right middle turbinate. The patient was calmed down by having his mother sat at his side throughout the procedure of removing the foreign body. Minimal yellow coloured discharge with streak of blood was seen and cleared from the area surrounding the foreign body.



**Figure 1: Bent tip of Jobson-Horne probe.**



**Figure 2: The picture showed bead coated by rhinolith.**

The foreign body was felt as a hard object with a gritty rough surface. There were spaces superior and inferior to the foreign body. The patient calmly sited on a reclined (20 degree) treatment chair, with the head stabilised by the staff nurse. The nostril was sprayed with two puffs of

lignocaine spray and the foreign body was successfully removed by using a Jobson-Horne probe (Figure 1) which was bent at its tip. The mucosa underlying the foreign body was raw with minimal bleeding. The foreign body examined to be a rhinolith coated bead (Figure 2). Nasal endoscopy done noted the is hyperaemic and congested nasal mucosa. The septum was not perforated, and the patient was later discharged well on the following day. He was advised to complete his antibiotics and to do nasal irrigation at least three times per day for a week.

## DISCUSSION

A study done by Abigi el al, showed that the commonest nasal foreign bodies were seeds 28.8%, foam 24.7% and beads 15.1%.<sup>3</sup> In our case report the impacted foreign body was a bead. Foreign body in nose can be further divided to organic and inorganic foreign body. The organic foreign body usually react with surrounding mucosa and the nasal discharge which sometimes causes local reaction that further complicated by inflammation and infection and the foreign body itself will start to swell up and causes nasal blockage. The inorganic foreign body commonly do not react with its surrounding and can be unnoticed by the patient for a long duration. Patient with inorganic and innate foreign body may remain asymptomatic for years. In our patient the foreign body might have been in his nose for nearly 20 years evidence by the history of occasional unilateral foul-smelling discharge given by his mother. The symptoms of a unilateral foul-smelling nasal discharge with/without epistaxis are hallmarks of nasal foreign body and safety can be diagnosed as such until proven otherwise. Although inorganic foreign body less frequently have immediate reaction and complication, but it may cause nasal mucosal irritation, laceration, ulceration and infection due to pressure effect to the adjacent mucosa. The fragile mucosa can cause bleeding which explain the patient's epistaxis. The nasal foreign body, if not removed especially the inorganic foreign body will most of the time become rhinoliths Rhinolith is formed by the gradual accretion of calcium and mineral salts around the foreign body which act as its nidus. Rhinolith may be either endogenous or exogenous in origin. Exogenous calculi appear to be more common. These can be beads, buttons, erasers, fruit seeds, wood fragments, sand, pieces of paper, fragments of bone and retained nasal packing. There is also a report of a deciduous tooth presented as rhinolith.<sup>4</sup> These foreign body were chemically infected and subsequently encrusted with the calcified tissue.<sup>5</sup> The expanding rhinolith causes nasal obstruction and indirectly causes obstruction in drainage in the nasal airway and sinuses which may also causes sinusitis. Rhinolith can be described as an irregular mass which feels gritty and bony hard.<sup>2</sup>

In paediatric and mentally disabled patient, incomplete history and examination due to poor historian and uncooperative patient, it's a challenge to establish the diagnosis of nasal foreign body. In this case, the history

was taken from the caretaker and throughout the examination the present of his mother was important to win the patients trust and to relieve his anxiety and stress of the examination and eventually the procedure of removing the foreign body. An option of removing the foreign body under general anaesthesia is always open in cases where patient is uncooperative and rather attempt of removing the foreign body will result in more complications.

In this case, the patient presented with a massive epistaxis, which is rare as a presentation of nasal foreign body. For any cases of massive epistaxis, a protocol of management should be followed where the main concern is to try to subdue the bleeding and at the same time making sure the vital signs of the patient within the acceptable range. The rapid assessment and stabilization are followed immediately by attempts to identify the source of bleeding and initiation of measures to control it. Blood factors or platelets should be administered to patients who have bleeding disorders that can be treated with such products. The remainder of the evaluation is undertaken after the patient is stabilized.<sup>6</sup>

The basic protocol in managing epistaxis, is to initially try to stop the epistaxis by compression i.e. Trotter's method. If the bleeding persists after continuous constant compression for 10 to 15 minutes, nasal packing can be considered either be anterior or posterior nasal packing. The non-absorbable nasal packing usually placed in the nose for 24-48 hours, failing this an examination under anaesthesia is warranted to identify the source of bleeding and directly stop the bleeding e.g. using cauterisation. Artery ligation including sphenopalatine artery, internal maxillary artery, anterior ethmoid artery and external carotid artery ligation may be employed if all above failed.<sup>7</sup> Embolization is also an option to be used if vessel ligation failed.<sup>6</sup>

There are a few methods for removing nasal foreign body in a clinical setting such as positive pressure (parent) also known the kissing technique, positive pressure with Ambu bag, saline washout technique. Instrumentation method using crocodile forceps, tilley nasal packing forceps, Jobson-Horne probe, Frazier suction catheter and "Hook-Scope" technique for endoscopic extraction of nasal foreign body.<sup>8</sup> In our case, Jabson-Horne was decided to be used to remove the foreign body, when we saw there was a space superior to the foreign body that we can assess with the probe. By bending the tip of the probe, we were able to place the tip of the probe posterior to the foreign body and able to pull it with one attempt. A good handlamp, and a local anaesthesia is important in this procedure. According to Tian-Tee Ng this method has a high successful rate. The nasal foreign body need to be carefully removal because it has the potential to be pushed posterior and down into the airway therefore putting the risk of partial or total airway obstruction. The

small foreign body may get impacted in one of the small bronchioles and can cause distal emphysema and super-added infection which would need time postoperatively to manifest and diagnose.<sup>9</sup>

## CONCLUSION

An innate nasal foreign body may remain asymptomatic for many years. The hallmark symptoms of unilateral foul-smelling nasal discharge must not be ignored. Epistaxis may be one of the symptoms and prioritize the situation to manage is important. In cases of mentally disabled patient the challenged is to gain a proper history and to be able to do an adequate examination. The patient must be calm enough during the removal of FB and a well-prepared procedure and a sound technique will reduce complications as well as ensuring a successful removal of the foreign body.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: Not required*

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**Cite this article as:** Umar NFB, Ramli RR. Massive epistaxis secondary to an impacted rhinolith in mentally disabled patient. Int J Otorhinolaryngol Head Neck Surg 2020;6:391-3.