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Lessons to Learn

When the symptoms remain, the diagnosis may need a change: a missed foreign body

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Abstract The unilateral nasal symptom should trigger a treating physician to a certain diagnosis. The differential diagnosis includes foreign body, rhinolith and tumour. The chronicity of symptom helps a lot with the diagnosis. Foreign body for example, tends to present with positive history of insertion, mainly by children or the acute symptom of local infection. In the presence of prolonged symptom, rhinolith should be suspected especially when the patient presents with pathognomonic nasal obstruction with foul smelly discharge. A referral should be made for a nasoendoscopy evaluation whenever a rhinitis-like symptoms remain after a period of medical treatment for allergy. We share a case of a missed diagnosis of a rhinolith after six years of symptoms.

Keywords: nose, obstruction, rhinolith, unilateral.

Introduction

The diagnosis of nasal block is usually straightforward. The common ones include adenoid hypertrophy or inferior turbinates' hypertrophy secondary to allergic rhinitis. If it occurs in children with typical triad of early morning sneezing, obstruction and rhinorrhea, it is most likely the diagnosis until proven otherwise. A rhinolith however, should not be missed. The typical presentation is its unilaterality of the symptom and the foul smelly nasal discharge (Yaroko *et al*., 2014). We share a case, mistakenly diagnosed as allergic rhinitis in a child for 6-years until an endoscopy was carried out.

Case summary

A 10-year-old Malay boy presented with history of unilateral right-sided nasal discharge for 6-year duration. Nasal discharge was described as foul smelling and yellowish in colour. There was also history of occasional epistaxis. They had multiple visits to primary care clinics and were treated as an upper respiratory tract infection throughout this duration. There were also early morning history of rhinorrhea, nasal blockage and nasal discharge occurring 3 to 4 days in a week. Thus, he was treated for allergic rhinitis, with oral medications and nasal corticosteroid spray. After months of treatment, the symptom became bothersome with no improvement. A referral was made to the otorhinolaryngology department. A nasal endoscopy was performed as a part of the examination which showed an irregular mass surrounded with mucus and blood clots (Figure 1).

On probing, the mass was found to be mobile. There was no other foreign body seen and the nasal cavity on the other side was normal. He was admitted and planned for examination under anesthesia and removal under general anesthesia. Intra operatively, an irregular-surfaced hard mass was identified under the middle turbinate. It was covered with mucous and blood and was removed. It measured 1 x 1 cm in dimension (Figure 2). No other foreign body and other abnormalities were seen. The patient was observed in the ward and discharged well the next day. Follow up after 3 weeks showed a normal nasal passage mucosa (Figure 3). The patient is now symptom-free as well as medication-free.

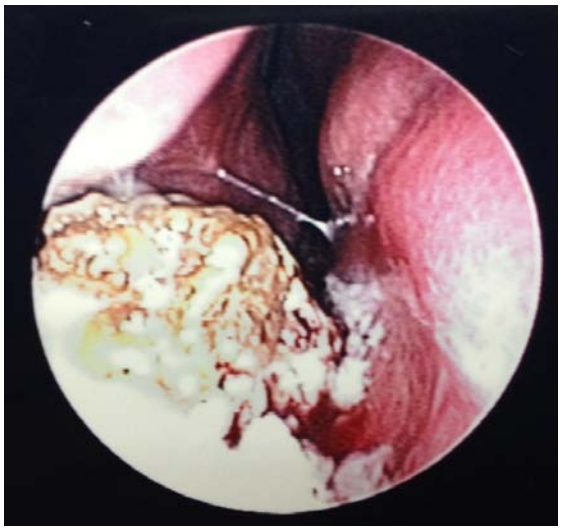

Fig. 1 An irregular mass seen under the middle turbinate in the right nasal cavity.

Fig. 2 The rhinolith removed

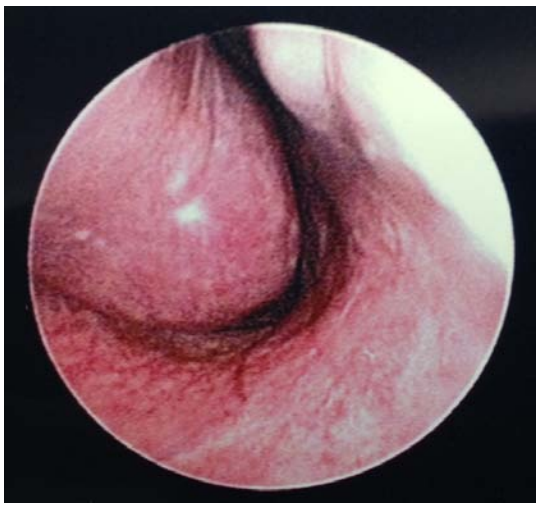

Fig. 3 A healthy nasal mucosa of the right nostril

Discussion

Once the patients come repeatedly with the same unresolved symptoms, a revision to the previously made diagnosis must be considered. In a careful history, the physician must be able to detect the probable rhinolith as the differential diagnosis, especially if there is a unilateral symptom, including in an adult (Irfan *et al*., 2012). If on follow up, the symptom still persisted, a nasal endoscopy is justified either at the primary care settings equipped with an endoscope, or at the otolaryngology clinic. In fact, in any patient with nasal or smell disorders which affect the quality of life and has no easily treatable cause, a referral to an otolaryngologist is warranted (Malaty *et al.*, 2013).

Limitation for not having an endoscopy should not prevent the timely diagnosis and prompt treatment. With the nose and paranasal sinus radiographs alone, this mass can be easily visible due to their calcification. However, other nasal pathology can appear as calcified masses on radiographs, for example, chondrosarcoma, chondroma, osteosarcoma, calcifying angiofibroma and calcifying polyps (Brehmer and Rieman, 2010). The mass can also be easily picked up on a computed tomography (CT) scans. However, even without radiograph and CT scan, the diagnosis of rhinolith can be established under direct vision using rigid nasoendoscopy, which is cost-effective, less radiation exposure and can be used for therapeutic purposes as well (Singh *et al*., 2007).

The most important step in the management is the high index of suspicion, especially if the patient demonstrates persistence of symptoms. Furthermore, in this case, the unilaterality of the symptoms should have ruled out allergic rhinitis earlier. A prompt referral is mandatory in unresolved symptoms.

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