



An Intranasal Pyogenic granuloma Masquerading an Unusual Long Standing Rhinolith in the Nasal Cavity of a Sane Adult: Case Report and Literature Review

Enica Richard Massawe^{1*}, Salim Mwambe¹, Daudi Ntunaguzi¹,
Perfect Kishevo² and Zephania Saitababu³

¹Muhimbili University of Health and Allied Sciences, Dar-es-salaam, Tanzania

²Muhimbili National Hospital, Dar-es-Salaam, Tanzania

³Dodoma University of Health Sciences, Tanzania

***Corresponding Author:** Enica Richard Massawe, Muhimbili University of Health and Allied Sciences, Dar-es-salaam, Tanzania.

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Abstract

Rhinoliths are generally painless and some of them have been reported to be present for years asymptotically. Though common among young children, rhinoliths are rarely reported in clinical practice among adults except among mentally retarded adults.

Unilateral foul smelling nasal discharge has been the commonest clinical presentation among children and when reported in adults, foul smelling discharge, recurrent episodes of epistaxis may be alarming but predominantly among mentally retarded patients. Generally, any patient with unilateral foul smelling nasal discharge should be considered to have a foreign body until proven otherwise especially children. Rhinoscopy remains to be the main stay in establishing the presence of a foreign body in the nose.

The aim of this case report is to report an unusual long standing rhinolith which was masqueraded by an intranasal pyogenic granuloma and review the few available literatures. Perhaps this is the first interesting case globally from the available literatures

Any patient who presents with a unilateral nasal discharge should raise the suspicion of a nasal foreign body and in children this must be regarded the case until proved otherwise. The physical examination of the nose involving anterior rhinoscopy and use of either a fiberoptic nasopharyngoscope or a 0 degree rigid endoscope will often reveal the foreign object. However on occasions mucosal oedema or granulations tend to hide it. In such cases the nose should be sprayed with a vasoconstrictor agent to shrink the mucosa before re-examination. Many times the foreign body becomes apparent with this maneuver. In younger or very apprehensive children it may be necessary for the search to be carried out under a general anaesthesia. The case is of an adult patient, not mentally retarded with long standing FB in the nose with complication of granuloma formation which was misdiagnosed as pyogenic granuloma.

Keywords: Epistaxis; Rhinolith; Sane Adult

Introduction

Rhinolith is not a common but a relatively rare condition especially in a sound adult [1] and is caused by gradual deposition and coating of different salts of calcium and magnesium from body fluids over an object inside the nasal cavity that could be endogenous (eg, thick mucus) or exogenous (piece of paper, seed or metallic object). Since it is an insidious and slow process symptoms gradu-

ally develop over period of months and years causing persistent or recurrent nasal infections and foul-smelling and sometimes blood-stained rhinorrhoea usually unilaterally. This may continue until someone or care giver discovers the rhinolith. We report this case of an 18-year-old girl who came with symptoms of recurrent unilateral nasal bleeding accompanied with nasal obstruction and purulent ipsilateral nasal discharge who was found to have a large

rhinolith. Its presentation in a sane adult warrants sharing with colleagues.

The foreign body finds its way into the nasal cavity almost always through the limen nasi. According to Denker and Brünings [2], such a situation was formerly most commonly observed in children and the mentally retarded, who “for a lark”, as it were, inserted such small objects as beads, small stones, coins, and suchlike into a nostril. Trauma, surgical operations and dental work, nasal packaging material, and plugs of ointment may also promote the development of a rhinolith. In addition, vomitus may enter the nose via the choana and remain there forming a foreign body. Finally, a rhinolith may develop spontaneously, for example in the case of a long-standing chronic polypoid sinusitis with accumulation of secretions followed by mineral deposition [3,4]. Provided that the endonasal mucosa is intact, any tiny particles that may enter the nose during inspiration are eliminated through the secretion of mucus and ciliary action. If the mucosa is damaged, such particles may remain in the nasal cavity and grow in size through accretion of mineral salts and incrustation. As the rhinolith increases in size, the symptoms to which it gives rise may range from unilateral nasal discharge, unilateral purulent rhinitis with or without consecutive sinusitis, facial pain, headache, epistaxis, impairment of nasal breathing ending in complete obstruction, dacryocystitis, otorrhea [5], foetor, anosmia, palatal perforation [4,6], and septal perforation [7]. The duration of the medical history may range from months to decades [8], and women appear to be more commonly affected than men [8]. Although most rhinoliths are detected in young adults, they may be found at any age (6 months to 86 years) [6,10,11]. The diagnosis is established on the basis of the medical history and endoscopic findings; an imaging modality may provide additional information.

Epistaxis is a common medical condition and it is approximated that about 10% of the population have had a significant nose bleed at some time in their lives [10]. It is rarely life threatening but may cause significant concern, especially among parents of small children [11]. Nasal foreign bodies are usually seen in pediatric patients but can also be seen in those with psychiatric illness or developmental disabilities though mostly are benign but have tendency to cause mucosal damage, bleeding, infection and at extreme aspiration.

They usually present acutely but can be missed and remains for weeks, months or even years after insertion [11-13].

Pyogenic granuloma was a differential diagnosis due to recurrent nasal bleeding. These are lobular capillary haemangioma which are benign fibrovascular proliferative tumour that are commonly found on the face, fingers, lips, and nasal mucosa. In women pregnancy-induced pyogenic granuloma is not an uncommon entity and may result in torrential epistaxis if untreated. Deep seated and long standing foreign bodies in the nose can cause chronic irritation which can lead to granuloma formation which can present with recurrent unilateral nasal bleeding.

Case Report

An-18 years old girl presented at our otorhinolaryngology clinic with a history of recurrent unilateral epistaxis, nasal obstruction and yellowish nasal discharge for 10 years. She had no history of altered smell sensation, post nasal drip or headache and had no any otological complaints and the patient reported to have received various forms of medical treatment from some peripheral health facilities including intranasal corticosteroids, nasal decongestants and antibiotics without clear resolution of symptoms.

On examination, she was conscious, well kept, not dyspneic, not pale with no palpable peripheral lymph nodes. Rhinoscopy revealed a friable mass filling the entire nasal cavity and a provisional diagnosis of pyogenic granuloma was made and the patient was planned for endoscopic intranasal pyogenic granuloma excision under general anesthesia.



Figure 1: Picture of eighteen years old patient who presented at ENT clinic with history of recurrent epistaxis.

Procedure details

Under General anaesthesia using 0 degree nasoendoscope the finding was of a friable lesion, easily bleeding with a stony hard for-

eign body beneath the mass which was below the posterior aspect of inferior turbinate which was removed successfully together with granulomatous lesions (see Figure 2).



Figure 2: Pieces of Foreign bodies after removal under general anesthesia.

She did well postoperatively and the nasal pack was removed 24 hrs post operatively. She was discharged home in stable condition and the follow up at ENT clinic was done weekly for one month where nasal suctioning was done and she was thereafter discharged from the clinic. The histological diagnosis was pyogenic granuloma.

Discussion

Nasal foreign bodies are classified as inorganic or organic. Inorganic include most commonly beads, pieces of toys, foam, batteries or magnets. Organic foreign bodies include paper, sponge, nuts, and beans. Rarely parasitic or larvae infections can be present in the nose.

The foreign body produces local inflammation that can lead to pressure necrosis. Mucosal ulceration can then progress to erosion into blood vessels causing epistaxis. If the object becomes displaced posteriorly, it can enter the respiratory tract with secondary morbidities. Nasal foreign bodies can become calcified known as a rhinolith. They may be present for very long periods of time. Organic objects cause a brisk inflammatory response. In our case its so unusual for an adult person to stay with foreign body in the nose for more than 7 years without being recognized or reporting. The nasal symptoms which are the complication of long standing foreign body in the nose is what alarmed the patient although previously she had nasal bleeding which was managed conservatively with temporary relief.

Diagnosis as any other medical disorder is based on proper history taking and physical examination. This patient underwent rhinological examination endoscopically which assisted in diagnosis. Intraoperatively it was found to be foreign body with surrounding granulation tissues which was in contradiction with the initial diagnosis of pyogenic granuloma as it was not expected to find unreported/unattended foreign body in a sane adult.

Conclusion

Though foreign bodies are benign but can be missed and remain in situ for a long period of time, causing long time effect through local inflammation and pressure necrosis like in this case which later lead to mucosal ulceration and erosion of blood vessels leading to bleeding, depending on the severity of damage could be heavy bleeding leading to fatality, proper history taking, physical examinations can lead to make correct diagnosis.

Competing Interest

The authors declare that they have no competing interests.

Authors' Contributions

E. Richard performed surgery and prepared the manuscript and reviewed the literature. Salim Mwambei is the resident who prepared the patient and assisted during procedure. Other authors were involved in the literature review and reviewed the manuscript. All authors read and approved the submitted manuscript.

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