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## Nasal Foreign Body Presenting as Unilateral Rhinosinusitis with Nasal Polyposis

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### ABSTRACT

Although nasal foreign bodies (FB) are common in pediatric Otorhinolaryngology, their long-term complications often go unrecognized. A witnessed nasal FB receives immediate intervention and often has no complications. However, an unwitnessed FB may persist in the nasal cavity and go unnoticed. This can cause chronic unilateral nasal discharge and a bad odor. In rare circumstances, it can present as rhinosinusitis with nasal polyposis. This case highlights an unusual polyp-forming scenario, underscoring the importance of considering such diagnoses. This is a case report of 6-years-old female patient who presented to our unit with history of progressive right nasal blockage and discharge of about a year duration. She had earlier received medical treatment without improvement. Nasal examination revealed reduced patency of the right nasal cavity, nasal discharge and nasal polyps. Computed Tomography (CT) scan revealed opacification of the right nasal cavity and maxillary antrum. Patient was evaluated and booked for Functional Endoscopic Sinus Surgery (FESS). Intraoperatively, upon removal of nasal polyps, FB was incidentally discovered and removed. Polyp sent for histology turned out to be inflammatory. Patient was seen four weeks postoperative with complete resolution of the symptoms. Long standing nasal FB can elicit inflammatory reaction leading to development of nasal polyps with eventual obstruction of the nose and maxillary ostium, thereby manifesting with features of rhinosinusitis.

### INTRODUCTION

Foreign bodies in the nasal cavity are a common clinical problem in pediatric otolaryngology, particularly among children aged 1–5 years, with an incidence as high as 96.8% in this age group. They are slightly more common in females (53.4%) and occur more frequently in the right nasal cavity (74.1%). The majority of nasal FBs include organic materials such as seeds (32.1%) and synthetic items such as plastic beads, polyurethane foam, stones, and erasers.

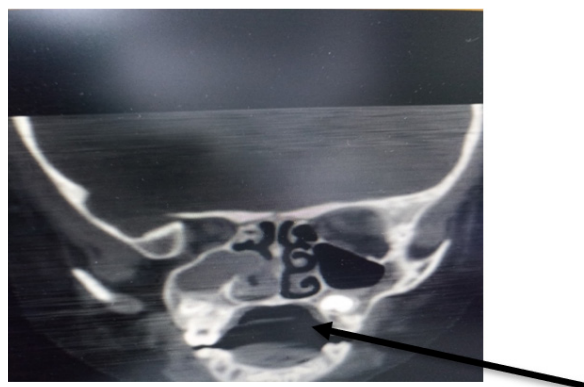
In most cases, FBs are inserted under parental observation and removed promptly. Complications are therefore minimal. However, in cases where the event is unwitnessed, the FB may remain undetected, leading to variable complications including persistent nasal discharge, foul odor, epistaxis, or nasal obstruction. Rarely, long-standing FBs can elicit chronic inflammatory changes, resulting in nasal polyposis or mimicking sinus tumors.

This report describes a case of a pediatric nasal FB that presented unusually as unilateral nasal polyposis and chronic sinusitis, emphasizing the diagnostic challenges and the importance of vigilance in unilateral sinonasal disease.

### Case Description

We present a case of a 6-year-old girl. She had a year-long history of progressive right nasal blockage and right nasal discharge. She occasionally complained of right-sided facial pain. There was no reported or witnessed history of FB insertion. She was given some medications earlier,

without improvement. Anterior rhinoscopy revealed reduced patency of the right nasal cavity, nasal discharge, and nasal polyps filling the right nasal cavity. Computed Tomography (CT) scan revealed opacification of the right nasal cavity and maxillary antrum.

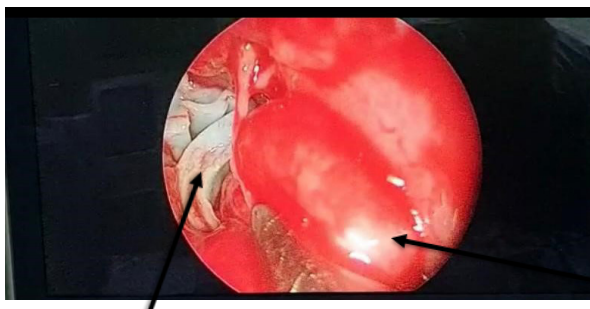


**Figure 1:** CT scan showing opacification of the right nasal cavity and maxillary antrum

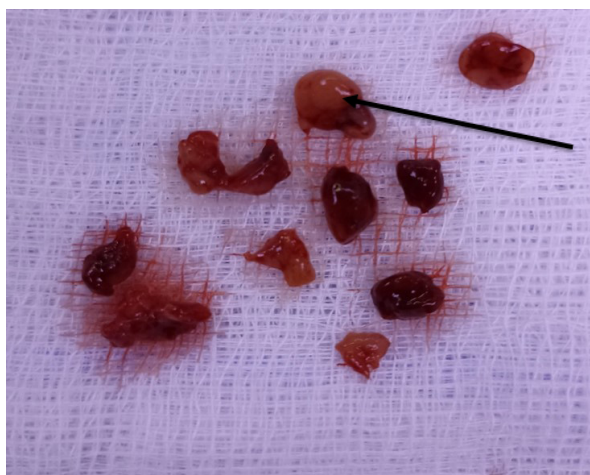
The patient was booked for Functional Endoscopic Sinus Surgery (FESS). Intraoperatively, extensive multiple nasal polyps were found. These arose from both the septum and the lateral wall. On removing the most anterior polyps, an FB was incidentally discovered in the middle meatus. It was embedded within the nasal polyps and removed. The polyps in the nasal cavity and maxillary antrum were removed and sent for histological examination. The

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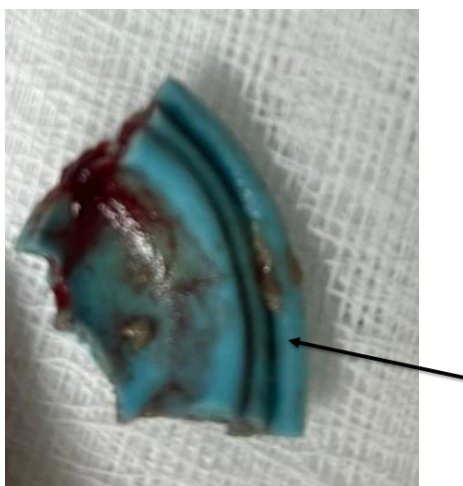
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**Figure 2:** Showing nasal polyp and FB embedded deep within the nasal cavity



**Figure 3:** Multiple polyps removed



**Figure 4:** FB (large piece of rubber) removed

patient was reviewed 24 hours postoperatively. The nasal pack was removed, and she was discharged. She was seen in the outpatient clinic at 2 and 4 weeks postoperatively and had complete symptom resolution. Histology revealed an inflammatory polyp.

### Discussion

Foreign bodies in the nasal cavities are common incidents in children, the various clinical presentations are history

of insertion of foreign bodies in 85.8% and 14.2% with no history of insertion, mucopurulent nasal discharge 51.7%, foul nasal odour 9.4%, epistaxis 5.7%, nasal obstruction and mouth breathing 2.8% and 1.9% cases respectively<sup>1</sup>. This is similar to a case we presented as there was no history of FB given by the patient or witnessed by any third party. The duration of symptoms ranges from an hour to 4 years with 69.8% presenting within 24 hours and 25.5% presenting after 24 hours. Diagnosis is often made with anterior rhinoscopy, but sometimes nasal fibroendoscopy and imaging may be useful. The majority of nasal foreign bodies (99.1%) located were in the antero-inferior portion of the nasal cavities and could be removed with simple instruments. Extraction was performed in consultation room in 84.5% of cases and in the operating room in 15.5% of the cases<sup>1</sup>. Most of the foreign bodies are inert and do not cause any local tissue reaction but some of these can cause serious complications. Nasal FB in accordance with the literature leads to complications in 9.05% of the cases, epistaxis 17.24%, nasal infections 13.6% and purulent maxillary sinusitis in 1.9%<sup>1</sup>. Cases of nasal FB slipping into the alimentary canal were also reported.

The histological study included the standard sample processing followed by paraffin embedding of the material and staining of the micropreparations with hematoxylin and eosin. It was shown FB in the nasal cavity or maxillary sinus can cause marked structural reorganization of the mucous membrane usually with the predominance of hypertrophic and polypous changes<sup>8</sup>.

### CONCLUSION

Undoubtedly, unwitnessed and unrecognized nasal FB could prove difficult for clinicians to diagnose. Clinicians should recognize the underlying causes that are responsible for the symptoms of chronic sinusitis especially in children, and a unilateral nasal discharge should be assumed to be caused by an intra-nasal foreign body until proven otherwise.

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