

## Unexpected Intranasal Foreign Body Inducing Refractory Rhinosinusitis in Adult Patient: A Case Report

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### Abstract

**Background:** Foreign bodies in nasal cavities and sinuses are unusual clinical conditions and they can cause chronic sinusitis by mucosal irritation. These findings are very known and documented of in pediatric population.

**Aims:** To report a rare case of foreign bodies in nasal cavity in adult patient without any memory of insertion of this body or facial trauma.

**Case Report:** A case of 41-year-old female patient with chronic nasal obstruction and purulent rhinorrhea revealing an unusual foreign body as cause of chronic sinusitis. The patient has no memory of insertion of this body or facial trauma and denied any facial trauma or psychiatric disorders. The diagnosis was suspected on endoscopic findings and confirmed by paranasal sinus computed tomography. The foreign body was removed via endoscopic approach and identified as a wood stick.

**Conclusion:** Nasal foreign bodies are an integral part of the differential diagnosis for rhinosinusitis, mainly when sinusitis occurs unilaterally. Psychiatric disorders must be considered in adult without any memory of insertion or facial trauma.

**Keywords:** Adult; Chronic Rhinosinusitis; CT Scan; Endoscopy Removal; Foreign Body; Wood Stick; No Memory of Insertion or Facial Trauma

### Introduction

Chronic nasal obstruction is a common affliction that can have a significant impact on a person's quality of life. It can affect anyone, from young children to the elderly, and can lead to a range of health concerns. It can also increase the likelihood of developing other serious medical conditions such as snoring, obstructive sleep apnea and recurrent sinus infections.

Chronic nasal obstruction can arise from a variety of influences, such as congenital abnormalities or environmental factors, alone or in conjunction with other medical disorders.

Common causes of chronic nasal obstruction include structural abnormalities, allergic rhinitis, nasal polyps. Diagnosis of chronic nasal obstruction is usually made based on medical history and physical examination findings.

Foreign body of the nose, as a cause of chronic sinusitis is very rare [1-3] and eighty percent of the nasal foreign bodies are commonly seen in children.

We present the case of a 41-year-old woman, with no medical or surgical history presented by chronic nasal obstruction and purulent rhinorrhea revealing an unusual nasal foreign body.

### Case Report

A 41-year-old female, who was seen repeatedly for 4 years in ENT consultation for management of nasal obstruction, initially isolated, the patient reported having difficulty with nasal breathing and sleep discomfort since childhood, with mouth breathing. She was in good health condition, mother of 2 children. No history of epistaxis or any history of foreign body insertion. She denied any psychiatric disorders, drug abuse, or maxillofacial trauma from her infancy. The somatic examination was unremarkable.

The patient was treated for allergic rhinitis based on antihistamines, intranasal corticosteroids, and sinus irrigation with hypertonic saline, without significant improvement. Recently the patient began to present with purulent rhinorrhea that was treated with antibiotics. CT scan to elucidate chronic and rebelled sinusitis was indicated.

CT scan on axial, coronal, and sagittal views showed the presence within the left nasal cavity at the inferior turbinate of an oblong formation of mixed density with a calcified wall, crossing the nasal septum towards the right inferior turbinate measuring 40 x 7 x 5 mm with thickening of the nasal mucosa and bilateral filling of the maxillary, sphenoidal sinuses, ethmoidal cells and left frontal sinus associated with a deviation of the nasal septum of 5 mm (Figure 1). Final diagnosis was unsuspected foreign body of the nose inserted through a willingly or accidentally.



**Figure 1:** Nasosinusual CT scan on bone windows on axial view (A) sagittal (B) and coronal (C) views showing the presence within the right nasal cavity at the inferior turbinate of an oblong formation of mixed density with a calcified wall, crossing the nasal septum (A) towards the right inferior turbinate measuring 40 x 7 x 5 mm with thickening of the nasal mucosa and bilateral filling of the maxillary, sphenoidal sinuses, ethmoidal cells with a deviation of the nasal septum of 5 mm. Foreign body (wood stick) in nasal cavity in adult patient.

Rigid nasal endoscopy showed the presence between the septum and the right inferior turbinate of a rigid, painful, immobile black large occlusive foreign body surrounded with a detachable crust, that obstructs the endoscope pathway. The object was difficult to characterize. Endoscopic removal at the operative room under general anesthesia was realized, and the foreign body was identified as a wood stick. The patient had no memory of inserting the object or precedent facial trauma.

The nasal packing was removed 48 hours after the surgery and the patient was discharged from the hospital 3 days after the procedure. No postoperative complication was seen with a two-year follow-up.

### Discussion

Our patient presented with chronic nasal obstruction and purulent rhinorrhea revealing an unusual foreign body as a cause of chronic sinusitis. The endoscopic and CT scan showed chronic inflammation around the foreign body. The patient has no memory of the insertion of this body or facial trauma. No psychiatric disorders were clinically documented. These findings are rare in adults and often seen in the pediatric population following craniofacial trauma or secondary to auto insertion of foreign bodies in the nasal cavity [4-6].

The presence of foreign bodies in paranasal sinuses remains rare, most often related to iatrogenic causes (60%) or accidents (25%). The maxillary sinus is the most commonly affected site (75%), followed by the frontal sinus (18%) [6,7].

Common causes of chronic nasal obstruction include structural abnormalities such as a deviated septum or narrow nasal valves. Allergic rhinitis is a very common cause of chronic nasal obstruction. Allergic rhinitis occurs when the body's immune system over-responds to specific allergens, causing inflammation in the nasal passages and the production of excessive mucus. This leads to nasal congestion and other symptoms, such as a runny nose and sneezing. Allergies are associated with long-term swelling and inflammation in the nasal lining, contributing to the chronic nature of nasal obstruction in affected individuals. Nasal polyps are non-cancerous growths that can develop in the nasal passages and sinuses. Polyps can grow in size and number, leading to symptoms of nasal obstruction. Complete blockage of the nasal passages can occur if the polyps become large enough [1-4].

Diagnosis of chronic nasal obstruction is usually made based on medical history and physical examination findings. We ask about how long the symptoms have been present, whether there is any history of prior trauma or surgery, and if there are other associated medical conditions. CT scan or Magnetic resonance imaging (MRI) may be necessary to obtain more detailed anatomical information. Nasal endoscopy or rhinoscopy is another way of assessing the inside of the nose and can be performed in the clinic.

Symptoms of chronic nasal obstruction include difficulty breathing through the nose, nasal congestion, and a persistent stuffy or blocked feeling in the nose. The symptoms can significantly affect sleep quality and may lead to nighttime awakening or insomnia. Patients may also experience a reduced ability to smell or taste. This is because chronic nasal obstruction can affect the function of the olfactory nerves, which control the sense of smell. In children, chronic nasal obstruction may lead to behavioral changes such as being irritable or restless [7,8].

Chronic nasal foreign bodies are objects trapped in the nasal cavity for an extended period. This can be either accidental or deliberate, in children or adults. Although less common than in children, an adult with the rhinal foreign body can present special diagnostic and management difficulties. If left untreated for a long time, it can cause serious complications which in turn lead to an economic burden for the patient as well as the healthcare system. It has been suggested that foreign bodies produce chronic physical and chemical irritation of the mucosa, leading to a degree of ciliary insufficiency and secondary infection. It can cause chronic infection and mucopurulent discharge and stimulate the growth of granulation tissue, in which nasal polyps may form. This may eventually lead to the patient suffering from anosmia or severe visual loss.

Many foreign bodies have been reported, such as plastic beads, pieces of foam, sunflower seeds, or wooden sticks. Eighty percent of the nasal foreign bodies are commonly seen in children.

Nasal foreign bodies are an integral part of the differential diagnosis for rhinosinusitis, mainly when sinusitis occurs unilaterally.

Chronic nasal foreign bodies in the adult population are relatively rare. This is due to the nature of the condition itself, in which the symptoms will progress rapidly and cause early presentation which requires early intervention. Patients with learning difficulties, psychiatric illness, or other certain neurological disorders may have impaired capacity [5]. Careful evaluation and the involvement of the multidisciplinary team in care planning may be needed in those situations. Also, as this condition is not common, fewer researches have been done to look into the reason behind particular groups of patients developing this condition. These findings are known but rare and rarely reported. The diagnosis is well documented by sinonasal CT scan with bone view and MRI [8].

The removal of all foreign bodies is generally recommended, even when they do not produce symptoms. The most common technique is endoscopic sinonasal surgery allowing the removal of most foreign bodies.

### Conclusion

Foreign bodies in nasal cavities and sinuses are unusual clinical conditions and they can cause chronic sinusitis. These findings are very known and documented in pediatric population. Foreign bodies in nasal cavity in adult patient without any memory of insertion of this body or facial trauma is uncommon and very rare.

The foreign body must be removed to prevent chronic infections even if it is asymptomatic. Endoscopic sino-nasal surgery is the treatment of choice. Nasal foreign bodies are an integral part of the differential diagnosis for rhinosinusitis, mainly when sinusitis occurs unilaterally. Psychiatric disorders must be considered in adults without any memory of insertion or facial trauma.

### Conflict of Interest

The authors declare no conflict of interest.

### Patient Consent

The patient consent is obtained.

### Bibliography

1. Krause HR., *et al.* "Foreign body in paranasal sinuses". *Mund-, Kiefer- und Gesichtschirurgie* 6.1 (2002): 40-44.
2. Dann L., *et al.* "Nasal foreign bodies in the paediatric emergency department". *Irish Journal of Medical Science* 188.4 (2019): 1401-1405.
3. Hulse K., *et al.* "An unusual case of chronic nasal foreign body". *BMJ Case Reports* (2018): bcr2018225429.
4. Kelesidis T., *et al.* "An unusual foreign body as cause of chronic sinusitis: a case report". *Journal of Medical Case Reports* 4 (2010): 157.
5. Lima MM., *et al.* "34 self-inflicted foreign bodies in the maxillary sinus". *Brazilian Journal of Otorhinolaryngology* 74.6 (2008): 948.
6. Bahranifad H., *et al.* "Prolonged undiagnosed nasal foreign body case report". *Indian Journal of Otolaryngology and Head and Neck Surgery* 74.2 (2022): 1242-1245.
7. Gray ML., *et al.* "Management of an unusual intranasal foreign body abutting the cribriform plate: a case report and review of literature". *Clinical Medicine Insights: Ear, Nose and Throat* 12 (2019): 1179550619858606.
8. Kudo S and Takei T. "Computed tomography settings for optimal detection of wooden foreign bodies". *American Journal of Emergency Medicine* 34.11 (2016): 2237-2238.

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