

Clinical Challenge | ENDOSCOPY

A Mysterious Odor After Nose Blowing

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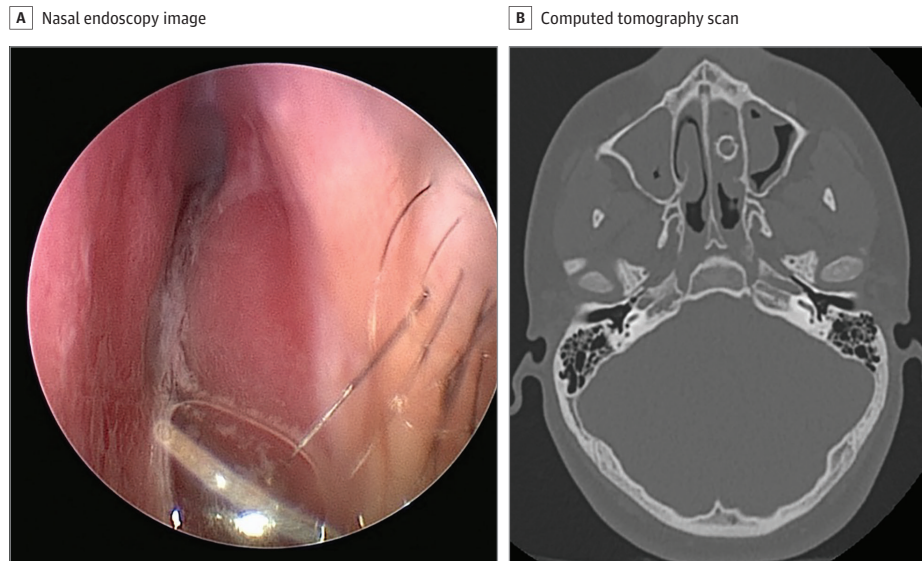


Figure 1. A, Nasal endoscopy showing bilateral and symmetric inferior turbinate hypertrophy without erythema, exudate, or ulceration; without mucoid rhinorrhea; and no intranasal masses, lesions, or polyps. B, Computed tomography of the sinuses showing a 9-mm spherical structure in the left inferior nasal cavity with surrounding spiculated calcifications and chronic dystrophic calcification.

A healthy 15-year-old male patient presented with several years of bilateral congestion and hyposmia. He and his family denied facial trauma, recent or recurrent sinusitis, rhinorrhea, difficulty breathing, pain, change in vision, and constitutional symptoms. He had never had allergy testing but did have occasional allergic symptoms, including sneezing and itchy eyes and nose. He did not report any drug, alcohol, or tobacco use. He was developmentally normal. On physical examination, the patient appeared healthy and had a normal-sounding voice. The tonsils were small, without crypts or tonsilloliths, and there were no neck masses.

A flexible fiberoptic nasal endoscopy was performed, and its findings showed bilateral and symmetric inferior turbinate hypertrophy without erythema, exudate, or ulceration, and without mucoid rhinorrhea (Figure 1A). There were no intranasal masses, lesions, or polyps. The patient was prescribed intranasal steroid spray, oral antihistamines, and sino-nasal saline rinses, and was instructed to return to our clinic in 4 to 6 weeks, but was subsequently lost to follow-up.

One year later, the patient returned to our clinic with the same concern. Examination findings, including those of a second nasal endoscopy, were the same. However, when he blew his nose, a pungent, foul odor filled the room. The patient reported that he did not feel he had bad breath, but he was embarrassed that every time he blew his nose there was a foul odor. A computed tomography fusion scan of the sinuses without intravenous contrast was performed (Figure 1B).

Diagnosis

D. Foreign body

Discussion

The results of the computed tomography scan showed clear sinuses, but a 9-mm spherical structure was noted in the left inferior nasal cavity with surrounding spiculated calcifications and chronic dystrophic calcification, suggestive of an intranasal foreign body.

The patient was taken to the operating room for a bilateral nasal endoscopy, turbinate reduction, and removal of a foreign body from the left nasal cavity. The inferior turbinate was medialized, and there was friable granulation tissue inferomedial to the inferior turbinate. This tissue was gently suctioned, and bleeding was encountered. After continued suctioning and application of a topical decongestant with an oxymetazoline-soaked pledget, a metallic foreign

WHAT IS YOUR DIAGNOSIS?

- A.** Sinusitis
- B.** Granulomatous disease
- C.** Malignant neoplasm
- D.** Foreign body

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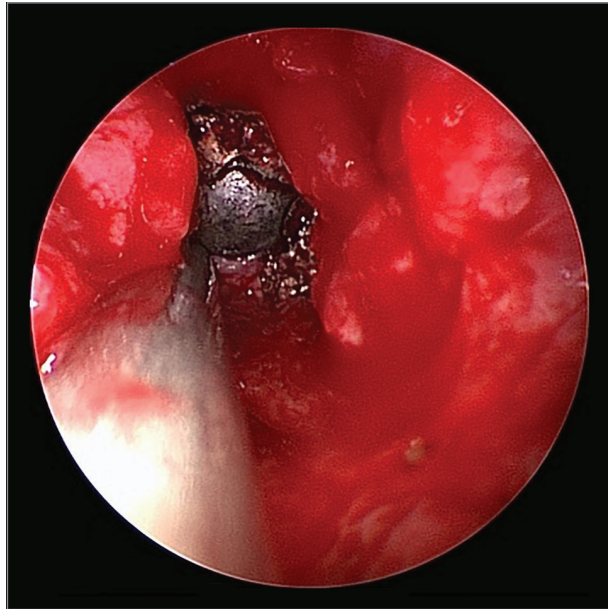


Figure 2. Nasal endoscopy after suctioning of friable granulation tissue inferomedial to the inferior turbinate and application of a topical decongestant with an oxymetazoline-soaked pledget showed a metallic foreign body in the left nasal cavity.

body was visualized (Figure 2). This body was removed and epistaxis was controlled.

During postoperative discussion with the patient and his family, the patient reported having been shot in the nose with a pellet gun when he was approximately 8 or 9 years old. The parents recalled this event, but because there had been no significant symptoms at the time, they had not sought further evaluation. At the first postoperative visit, nasal endoscopy showed normal mucosa and tur-

binates bilaterally, and the patient reported resolution of the foul odor.

Foreign bodies are a common cause of urgent care and otolaryngology office visits in children. Typically, this occurrence peaks in early childhood because older children are usually more reliable historians and are less likely to intentionally place intranasal foreign bodies. Common symptoms of an intranasal foreign body include epistaxis, rhinorrhea, foul odor, snoring, and, when long-term as in this case, purulence. Most often, the foreign bodies found in children are organic objects, such as pebbles, beads, and nuts.¹

Pellet guns fire small metal or plastic pellets at speeds of up to 1000 feet per second.² Injuries from the use of pellet guns are common in adolescents, with more than 90% occurring in those younger than 19 years.² There are numerous examples of traumatic injury to the eyes, mouth, and sinuses owing to accidental or intentional firing of pellet guns¹⁻⁴; however, this case was unique given its remote history and lack of symptoms of traumatic injury. Delayed onset of presentation with nasal foreign body is more common in young children and less frequent in older children and adults.⁵

Nontraumatic nasal pellet inhalation appears to be extremely rare in adolescents with no history of trauma. Patients with a history of recurrent rhinorrhea, congestion, and putrid nasal discharge or odor warrant careful examination for foreign bodies, regardless of age or history. With long-term nasal foreign bodies, there may be complete mucosalization over the foreign body, making diagnosis more difficult, as in this case.

Cases of sinonasal injury with a pellet gun may result in the foreign body being lodged in an area of the nasal cavity or sinus that is not visible on nasal endoscopy (ie, within the maxillary or sphenoid sinus, the inferior or middle meatus, or high intranasally). Therefore, imaging may be required to further evaluate. Although a rare cause and presentation, the late onset of symptoms and the metallic properties of the pellet could have resulted in toxic effects and spread of infection in this patient.

ARTICLE INFORMATION

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