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Visual Case Discussion

The face is a dangerous space

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A 58-year-old female with a history of asthma and hypertension presented to the emergency department for evaluation of acute onset nasal swelling, pain, and erythema. She reported a three-day history of rhinorrhea, congestion, and subjective fevers. On arrival, she was febrile to 100.9 °F and tachycardic. The patient was comfortable appearing with significant edema and tenderness to the nasal bridge and ala bilaterally. Nasal mucosa edema was appreciated with no active drainage.

Bloodwork revealed a marked leukocytosis with 95% neutrophil predominance. A CT maxillofacial scan with intravenous contrast demonstrated bilateral enhancing collections in the nasal septum measuring 1.5 × 1.1 × 1.2 cm (Fig. 1, red arrows) indicative of nasal septal abscess. The otorhinolaryngology (ENT) service performed a bedside incision and drainage and the patient was admitted for intravenous antibiotics. Her hospital course was complicated by persistent leukocytosis and subsequent reaccumulations of purulent material requiring nasal endoscopy and repeated drainage. Abscess cultures grew Methicillin-resistant Staphylococcus aureus and a peripherally inserted central catheter (PICC) line was placed for long term therapy with intravenous vancomycin.

Nasal septal abscess is an uncommon clinical entity that usually develops in the setting of facial trauma. Untreated septal hematomas can become secondarily infected leading to abscess formation. Other etiologies include nasal surgery, sinusitis, and dental infections. Prompt recognition and early management with drainage and antibiotics are imperative. Without treatment, the abscess can destroy the nasal septum and result in subsequent permanent saddle nose deformity. Extension of localized infection can lead to significant intracranial pathology such as meningitis, intracranial abscess, and cavernous thrombosis.[1,2]

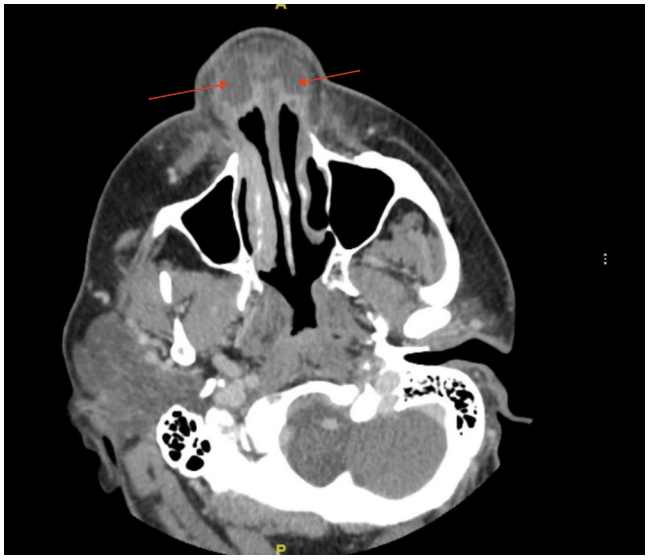

Fig. 1. Arrows: enhancing fluid collections in nasal septum. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.visj.2019.100601.

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Questions

1. The most common etiology for nasal septal abscess formation is which of the following?
   a. Meningitis
   b. Facial trauma
   c. Hematologic spread
   d. Sinusitis
2. Untreated nasal septal abscesses can result in saddle nose deformity.
   a. TRUE
   b. FALSE

Answers

1. Facial trauma. Retained septal hematomas following facial trauma constitute the most common etiology for nasal septal abscess formation.

2. TRUE. Nasal septal abscesses, left untreated, can cause significant local destruction of the nasal septum. This can have devastating cosmetic consequences including a saddle nose deformity.