

# Case study

## Spontaneous bilateral nasal septal hematoma in a child.

### ABSTRACT

Nasal septal hematoma (NSH) is a relatively rare emergency in otolaryngology. The disease is more common in children due to softer cartilage and looser anchoring of the mucoperichondrium. Trauma to the nose or face is the most common cause, while NSH following a cold has been rarely reported. Urgent treatment is required to prevent serious complications such as saddle nose deformity, nasal tip deepening, abscess formation, and subsequent intracranial sequelae such as cavernous sinus thrombosis. We present the case of a 4-year-old child diagnosed with a spontaneous bilateral NSH .

*Keywords: septal hematoma, spontaneous, child.*

**Comment [MOU1]:** Write in alphabetical order

### 1. INTRODUCTION

Nasal septal hematoma (NSH) is defined as collection of blood between septal cartilage and mucoperichondrium or mucoperiosteum. The exact mechanism is not known; however, the bleeding from minor mucoperichondrial blood vessels after a trauma is generally regarded as the inciting event. [1]. Untreated NSH can progress to nasal septal abscess (NSA). We report an extremely rare and uncommon case of a 4 years old child with a spontaneous bilateral nasal septal hematoma.

### 2. CASE REPORT :

A 4 years old child, with unremarkable previous medical history, was presented to our ENT emergency department with 3 days' history of painless bilateral isolated nasal obstruction without epistaxis. Physical examination revealed a healthy-appearing boy, with no fever; weight was 20 kg and height 110 cm. On rhinoscopy, we have found a reddish mucosal swelling on both nasal cavities suggesting the presence of bilateral nasal septal hematoma. There was no medical history of trauma, child abuse, or any blood problems. The blood tests hadn't didn't shown any abnormalities. The parents couldn't afford an urgent facial CT scan. The patient had undergone immediately a surgical incision and drainage under general anesthesia (figure 1) with a bilateral nasal packing. Postoperatively, the patient was placed on oral antibiotics for one week. After 48 hours, while removing the nasal packing, we have noticed the recurrence of the nasal septal hematoma on the left side. So the patient had undergone for a second time a drainage under general anesthesia. The patient was doing well at 2 days, 1 week, 1 month follow ups. The patient was sent then to the hematology department for further investigations.

**Comment [MOU2]:** Mention bleeding parameter finding

**Comment [MOU3]:** It can be done in Local anaesthesia at second time .specify 2nd time indication of drainage under GA. Unnecessary GA should be avoided to the child

**Comment [MOU4]:** Is it from 1st or 2nd operation which is not mentioned



Figure 1: bilateral nasal septal hematoma: incision and drainage under general anesthesia

**Comment [MOU5]:** Marking of the topic is needed to understand pathology exactly. eyes should be covered .

### 3. DISCUSSION

A nasal septal hematoma is a rare but serious complication of nasal or facial trauma. It refers to the collection of blood under the mucoperichondrium or mucoperiosteum of nasal septal cartilage or bone. It may be unilateral or bilateral. It can occur at any age group. The exact incidence of septal hematoma remains unknown. However, it has been reported to occur in 0.8% to 1.6% of patients with nasal injury attending ear, nose, and throat clinic. Unfortunately, a large number of cases often remain undiagnosed, especially in children, until complications occur.

A septal hematoma usually occurs secondary to nasal trauma. The latter can be in the form of sports injuries, road-side accidents, falls, assault or occupational injuries. Even a minor injury can lead to nasal septal hematoma, especially in children. In fact a nasal septal hematoma without injury should raise the suspicion of child abuse, especially in infants and toddlers. Iatrogenic septal hematoma may arise as a complication of nasal surgeries like septal correction, endoscopic sinus surgery or turbinate surgery. A traumatic septal hematoma is rarely seen in patients with bleeding diathesis or as an adverse effect of antiplatelet/anticoagulant drugs. [2][3][4] we report the first case in the literature of a child with a spontaneous bilateral nasal septal hematoma to the best of our knowledge.

Larger hematomas are drained by incising the mucosa over the most fluctuant area. The incision is given in the anteroposterior direction parallel to the nasal floor. In the case of a bilateral hematoma, a staggered incision is made to avoid septal perforation. The clot is suctioned, and saline irrigation is carried out on an 18-Ga to 20-Ga catheter. The nose is packed on both sides for 2 to 3 days to prevent the re-accumulation of blood. Systemic antibiotics are prescribed to prevent serious, infective complications. Patients should be kept on regular follow up to prevent delayed complications. [5][6][7]

**Comment [MOU6]:** it should be better to keep at case report

### 4. CONCLUSION

Spontaneous nasal septal hematoma is an extremely rare condition in children. Missed or delayed diagnosis can lead to both local and systemic complications that carry high morbidity. ENT clinicians should keep in mind this diagnosis even though, there is no evidence of trauma.

### **CONSENT (WHEREEVER APPLICABLE)**

'written informed consent was obtained from the patient (or other approved parties) for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editorial office/Chief Editor/Editorial Board members of this journal.'

### **REFERENCES**

- [1] Alexander AA, Shonka DC Jr, Payne SC. Septal hematoma after balloon dilation of the sphenoid. *Otolaryngol Head Neck Surg* 2009;141:424Y425
- [2] Dąbrowska-Bień J, Skarżyński PH, Gwizdalska I, Łazęcka K, Skarżyński H. Complications in septoplasty based on a large group of 5639 patients. *Eur Arch Otorhinolaryngol*. 2018 Jul;275(7):1789-1794. [[PMC free article](#)] [[PubMed](#)]
- [3] de Gabory L, Sowerby LJ, DelGaudio JM, Al-Hussaini A, Hopkins C, Serrano E. International survey and consensus (ICON) on ambulatory surgery in rhinology. *Eur Ann Otorhinolaryngol Head Neck Dis*. 2018 Feb;135(1S):S49-S53. [[PubMed](#)]
- [4] Rodriguez DP, Orscheln ES, Koch BL. Masses of the Nose, Nasal Cavity, and Nasopharynx in Children. *Radiographics*. 2017 Oct;37(6):1704-1730. [[PubMed](#)]
- [5] Kim JS, Kwon SH. Is nonabsorbable nasal packing after septoplasty essential? A meta-analysis. *Laryngoscope*. 2017 May;127(5):1026-1031. [[PubMed](#)]
- [6] Agrawal N, Brayley N. Audit of nasal fracture management in accident and emergency in a district general hospital. *J Eval Clin Pract*. 2007 Apr;13(2):295-7. [[PubMed](#)]
- [7] Wang WW, Dong BC. Comparison on effectiveness of trans-septal suturing versus nasal packing after septoplasty: a systematic review and meta-analysis. *Eur Arch Otorhinolaryngol*. 2017 Nov;274(11):3915-3925.