

Nasal Septal Hematoma Following Common Cold: A Rare Presentation

Soğuk Algınlığı Sonrası Nazal Septal Hematom: Nadir Bir Olgu Sunumu

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ABSTRACT

Nasal septal hematoma (NSH) is relatively uncommon otorhinolaryngology emergency. Children is more prevalence due to the softer cartilage and loosely adherent of its mucoperichondrium. Nasal or facial trauma is the most common etiology while NSH following common cold is extremely rarely reported. Urgent management is needed to prevent serious complications like saddle nose deformity, nasal tip depression, abscess formation and subsequently intracranial sequalae like cavernous sinus thrombosis. We present a case of 11-year-boy presented with NSH following an episode of common cold.

Keywords: Nasal septal hematoma, common cold, incision and drainage, nasal packing

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ÖZET

Nazal septal hematom (NSH) nispeten nadir bir kulak burun boğaz acilidir. Kıkırdağın daha yumuşak olması ve mukoperikondriyuma gevşek yapışması nedeniyle çocuklarda görülme sıklığı daha fazladır. Burun veya yüz travması en yaygın etioloji iken, soğuk algınlığını takiben NSH çok nadiren bildirilmektedir. Semer burun deformitesi, burun ucu çökmesi, apse oluşumu ve buna bağlı olarak kavernoöz sinüs trombozu gibi kafa içi sekeller gibi ciddi komplikasyonları önlemek için acil tedavi gereklidir. Soğuk algınlığı atağı sonrası NSH ile başvuran 11 yaşında bir erkek çocuk vakasını sunuyoruz.

Anahtar Sözcükler: Nazal septal hematom, soğuk algınlığı, insizyon ve drenaj, nazal tampon

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INTRODUCTION

Nasal septal hematoma (NSH) is an otorhinolaryngology emergency and prompt management are crucial to prevent serious complications like saddle nose deformity, nasal tip depression, abscess formation and subsequently intracranial sequalae like cavernous sinus thrombosis. It is more prevalence in children due to the softer septal cartilage and loosely adherent of mucoperichondrium (1,2).

The most common cause is trauma with incidence of 0.8% to 1.6% following nasal trauma (1,2). It is usually occurred following minor trauma to the nose, secondary to motor vehicle accident or non-accidental injury (3). Other recognized causes are iatrogenic as a complication of septal surgery and bleeding disorder (2). It is called spontaneous NSH when the etiology cannot be identified (4). To the best of our knowledge, NSH following common cold is extremely rarely reported.

CASE REPORT

An 11-year-old boy with no underlying medical illness, presented with progressive worsening of bilateral nasal blockage for 3 days duration. It was associated with swelling and pain over the dorsum of the nose. There were two episodes of bilateral spontaneous epistaxis on the day of presentation, which resolved with cold compression. In addition, he had a history of fever, clear mucoid nasal discharge and cough for 5 days. There was no history of falls or trauma to the nose and denied frequent nose pricking or any foreign body insertion. The patient had no other bleeding tendency and no family history of hematological disorder. There was no history of frequent rhinitis symptoms or recurrent epistaxis previously.

Upon examination, the patient was appeared mouth breathing, but not in respiratory distress. He was pink, afebrile, had no active epistaxis and all vital signs were stable. There was present of generalized swelling over the dorsum of the nose with erythematous skin at the rhinion region, which was tender on palpation (Figure 1). Cold spatula test revealed an absence of air misting bilateral, while anterior rhinoscopy revealed swelling of the anterior part of the bilateral nasal septum which extended laterally and touched on the lateral nasal wall (Figure 2). There was no epistaxis or purulent discharge seen. Other head and neck, including cranial nerves examinations, were unremarkable and signs of cavernous sinus thrombosis were absent. Needle aspiration was performed over the left septal swelling site and 3ml of blood was aspirated. All blood investigations including full blood count and coagulation profiles were normal.

Subsequently, the patient was subjected to examination under general anaesthesia and incision and drainage of the septal hematoma. Intra-operatively, the hematoma was involved bilateral anterior part of the nasal septum, while the posterior part of nasal septum and nasopharynx were normal. Hemitransfixion incision was performed at the anterior part of the septal hematoma bilaterally; blood collection was drained and subsequently washes with saline. No abscess formation and septal cartilage was healthy. Merocel nasal packing covered with a sterile glove (to reduce trauma to surrounding mucosa and easy removal later) (Figure 3) was inserted into bilateral nasal cavities to prevent recollection of blood and devascularization of septal cartilage. In addition, the patient was started on broad-spectrum third-generation cephalosporin antibiotic (intravenous ceftriaxone) to cover for infection as it involved danger area of the face and as nasal packing was inserted. The nasal packing was removed after 48 hours, however unfortunately hematoma recurred on the next day. He was subjected again for examination under general anaesthesia and evacuation of the hematoma. The intra-operative findings were similar to the first operation. Previous hemitransfixion incision was re-opened and blood collection was evacuated. At this time, we decided to keep Merocel nasal packing longer (72 hours), and the hematoma was gradually resolving after removal of the nasal packing. He was discharged home after 10 days of hospital admission and the hematoma was completely resolved after 2 weeks of follow up (Figure 4). There was no saddle nose deformities or nasal tip depression.



Figure 1. Generalized swelling over the dorsum of the nose with erythematous skin at the rhinion region (arrow).

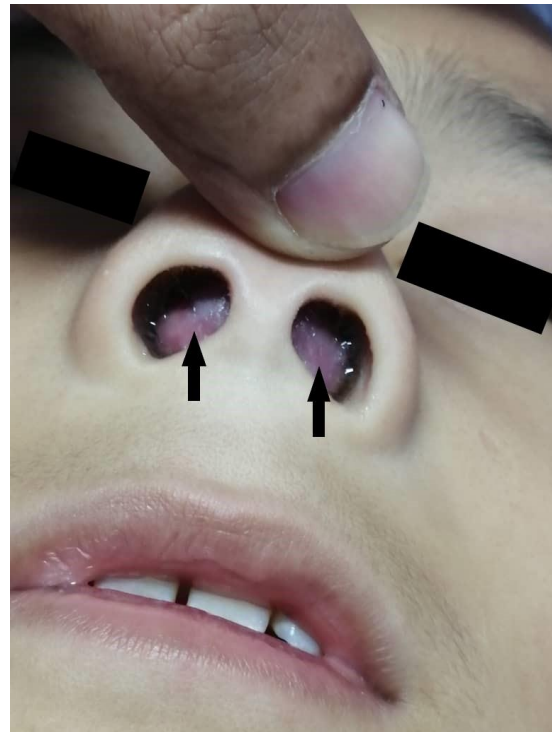


Figure 2. Swelling of anterior part of the bilateral nasal septum (arrow).



Figure 3. Merocel nasal packing (arrow) covered with sterile glove (arrowhead) inserted in bilateral nasal cavities.

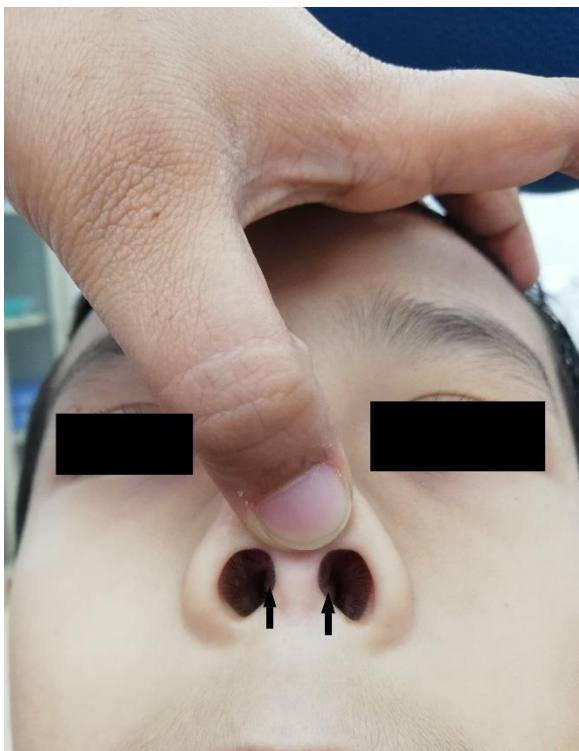


Figure 4. Nasal septal hematoma completely resolved (arrow).

DISCUSSION

NSH is defined as blood collection between septal cartilage and its mucoperichondrium (3.) It is relatively uncommon otorhinolaryngology emergency. Delay in diagnosis and treatment may result in the development of abscess and necrosis of septal cartilage. This is due to the cartilage being devoid of blood supply and depending on blood supply from mucoperichondrium.

Loss of septal cartilage may result in significant deformities like saddle nose and nasal tip depression. In addition, the collection of blood provides a good source for bacterial infection and subsequent nasal septal abscess formation may lead to intracranial complications like cavernous sinus thrombosis due to valveless venous drainage connection.

Various etiologies have been identified but the majority of cases are related to nasal or facial trauma (1,2). Although nasal trauma is extremely common in children and is the most common cause of NSH, the incidence is still considered low, less than 2% (1,2). Other common causes are complication of septal surgery, bleeding disorder and spontaneously occurring without identifying aetiology. Rarely reported cases are secondary frontal and ethmoid sinusitis, nasotracheal intubation, sphenoid ostia balloon dilatation, nasal insufflation, dentigerous cyst and dental caries (2). Common cold is a very common condition but hardly reported as the cause of NSH. As seen in the present case, inflammation and vasodilation of nasal mucosa that happened during the common cold may increase the risk of bleeding and predispose to NSH formation. The risk is higher in children due to the loosely adherent septal mucoperichondrium. The bleeding may occur spontaneously or is probably more common after picking or pinching the nose due to itchiness.

NSH is usually clinical diagnosis and imaging like computed tomography scanning is not required, except on certain conditions like abscess formation with intracranial complication, underlying aetiology is unclear, and lack of response to medical and surgical treatments (5).

The principle of management is evacuating the blood collection as soon as possible, providing a good contact between cartilage and its mucoperichondrium and preventing re-accumulation of the blood by compression. Evacuation of blood collection can be performed by aspiration, but usually, incision and drainage are required for proper drainage and examination under general anaesthesia. Nasal packing is commonly employed for compression and usually keep for 48 hours to 72 hours to stop bleeding and prevent re-accumulation of the blood. A duration beyond 72 hours is not advisable due to the risk of secondary infection. In addition, the administration of antibiotics is mandatory to prevent infection, particularly toxic shock syndrome. However, the blood may re-accumulate after removal of nasal packing and revision surgery is needed. As seen in the present case, repeated evacuation and longer compression were required. The other possible complication of nasal packing and septal surgery is synechiae formation due to present of raw area between nasal septum and lateral nasal wall. This should be observe during every follow up and synechiae release operation may be needed in symptomatic patient.

CONCLUSION

NSH is frequently associated with nasal or facial trauma while common cold is hardly reported as the cause. Early diagnosis and management are crucial to prevent serious sequelae.

Conflict of interest

No conflict of interest was declared by the authors.

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