A Case of Organized Hematoma of the Nasal Septum

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Introduction

An organized hematoma is a rare benign disease which can be formed by variety of reasons with angiogenesis and fibrotic organizing process in hematoma. Most hematomas dissolve and are reabsorbed. However, some of them persist and slowly expand over time as chronic expanding hematoma. Sinonasal hematoma is caused by many reasons such as facial trauma, sinus surgery, vessel ruptures without specific causes and submucosal bleeding in nasal cavity. Hematoma cause mucosal swelling and bony thinning in the paranasal sinus or nasal cavity. However, the exact etiology and pathogenesis of organized hematoma remain unclear. It is hard to diagnose by physical examination or radiologic examination, therefore histologic study is essential for diagnosis. In the rhinologic field, an organized hematoma is often reported to appear in maxillary sinus, and there is no other case report of organized hematoma in nasal septum except one case in Korea. We recently experienced a case of organized hematoma of the nasal septum without history of trauma or coagulopathy. We present a case of organized hematoma of the nasal septum with review of literature. (J Clinical Otolaryngol 2016;27:340–343)

KEY WORDS : Organized hematoma · Nasal septum.

Case Report

A 75 year-old female patient was presented with a 2 months history of repeated nasal obstruction. She had no underlying systemic diseases or coagulopathy and no past history of trauma or surgery. Nasal endoscopy showed capillary-filled yellowish mass originating form antero-superior part of nasal septum in left nasal cavity (Fig. 1). On computed tomography, 2.0 × 1.4 cm-sized well-marginated mass with minimal bony change was present in the left nasal septum. Nasal septum was deviated to the right due to the mass effect of the tumor (Fig. 2). At the time of her initial evaluation, punch biopsy was performed to determine the histologic type of septal mass and it revealed as fibrosis with chronic inflammation. Preoperative evalu-
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In the case presented, complete blood count, blood chemistry, and coagulation tests were all within normal limits. The septal mass with mucosa was completely removed under nasal endoscope. The patient was discharged on the same day without any complications. The specimen was a 2.0 × 2.0 cm-sized mass with a clear yellowish margin. Histopathology showed fibrous encapsulated organized hematoma with red blood cell, angiogenesis, and fibrosis with surrounding inflamed mucosa (Fig. 3). The patient has remained disease-free for 2 months after the surgical removal (Fig. 4).

**Discussion**

An organized hematoma is a rare benign tumor as a form of mass resulting from many reasons, organization causing angiogenesis and fibrosis in hematoma. The tumor can occur anywhere in theory. Many cases were reported in intracranial, intraspinal, musculoskeletal system, adrenal gland, and lung. Although organized hematoma is not a true neoplastic lesion, it has the potential for progressive bony erosion with compression of adjacent structures. Maxillary sinus is the most frequent site of organized hematoma in sinonasal space, followed by sphenoid or frontal sinuses. However, nasal septal organized hematoma is very rare and to our knowledge, only one case was reported. Mechanism of organized hematoma is not completely understood. Lee et al. suggested that repeated hemorrhage in the semiclosed lumen forms a hematoma encapsulated by fibrosis, which prevents...

![Fig. 1. Preoperative endoscopic finding. The tumor has smooth mucosal surface with numerous small vessels.](image1)

![Fig. 2. Axial (A) and coronal (B) computed tomographic view. The 2.0 × 1.4 cm-sized mass was peripheral enhancement. The mass was originated in the left nasal septum.](image2)
the absorption of the hematoma and induces vascu-
larization, which causes rebleeding and increases
the pressure within the hematoma. Then expansile lesion
influence adjacent structures. In this case, only small
amount of subepithelial hematoma was found with
angiogenesis and fibrosis since it was developed in
the nasal septum. The subepithelial space of nasal
septum may be very tight compared with sinus mu-
cosa. And nasal septum is easily exposed to external
stimuli or trauma, often developing lobular capillary
hemangioma due to fine stimuli in anterior nasal sep-
tum. However, organized hematoma is not common-
ly developed in the nasal septum.10)

In patients with nasal cavity mass effect, history
taking, physical examination using nasal endoscope,
and radiologic examination such as CT scan should
be performed to determine the characteristics of the
nasal mass. The patients have various symptoms that
depend on the size and location of the mass. Orga-
nized hematoma is at first asymptomatic. As the mass
enlarges, patients suffer symptoms. The most frequent
symptom of sinonasal organized hematoma is nasal
congestion and rhinorrhea due to the obstruction by
mass and secondary inflammatory reaction by mass it-
self. Repeated epistaxis is also commonly developed.11)
The mass gradually enlarges and causes pressure re-
modeling of the adjacent structures. CT images show
non-enhancing heterogenous soft tissue mass with
bony erosion and local expansion. If organized he-
matoma is developed within the sinuses, it needs to
differentiated with malignant sinus disease however
in this case only bony erosion of nasal septum with
expansile mass was observed in CT. Although clinical
and radiographic findings gave the information to de-
fine the sinonasal mass, histologic diagnosis is often

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![Fig. 3. Gross and histopathologic finding of septal mass. The tumor was removed with the surrounding mucosa (A). Organizing hematoma showing fibrosis (black asterisk), angiogenesis (arrow) and old hematoma (white asterisk) (H&E stain, ×40) (B).](image)

![Fig. 4. Postoperative endoscopic finding. The operated site covered with mucosa without evidence of residual disease on 2 months after surgery.](image)
necessary. Histologic type could not confirmed with punch biopsy at outpatient clinic since tumor capsule was thick, preventing from acquiring enough tissue for diagnosis.

Complete removal of organized hematoma is the treatment of choice and the choice of surgical approach is not a matter of concern. To make final diagnosis, septal mass was removed endoscopically. Histologically, an organized hematoma appears as a mixture of red blood cells, angiogenesis, and amorphous fiber by fibrosis in hematoma surrounded by fibrotic membranes. In this case, neither cholesterol cleft with reactive foreignbody giant cells which is found in cholesterol granuloma nor spread lobular capillary vessel inside stroma which is commonly found in lobular capillary hemangioma, were present.

In case of patients visiting due to mass in nasal septum, an organized hematoma should also be considered with lobular capillary hemangioma, hemangioma, angiofibroma, papilloma and nasal polyp as differential diagnosis.

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