A Rare Cause of Resistant Epistaxis: Lobular Capillary Hemangioma Arising from the Inferior Turbinate

Original Image

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Histologically hemangiomas are classified in three groups, namely as capillary, cavernous, or mixed type. Lobular capillary hemangioma (LCH) or pyogenic granuloma is commonly seen on the skin or in oral cavities. LCH in the nasal cavity is rare. Although LCH can occur at every age, it is more prevalent in the third decade of life and among women than men (1). Its etiology is attributed to traumatic and hormonal factors. LCH commonly presents as a red-colored, ulcerous, pedunculated or broad-based lesion prone to bleeding and can vary in size from a few millimeters to several centimeters (2). Non-specific symptoms such as epistaxis, nasal obstruction and purulent rhinorrhea have been reported in most patients (3). Endoscopic excision and cauterization are the preferred modes of treatment (4).

A 34-year-old male patient was referred to our clinic by a secondary health center with left-sided severe epistaxsis. The referring physician indicated that there was a sharp septal spur on the anterior base of the left nasal cavity, and the bleeding emanated from behind this spur which precluded examination of the posterior of the nasal passage. Furthermore, bleeding had not stopped for a whole week and had required packing three times with the most recent application. Examination of the patient showed one merocel tampon and one posterior packing with Foley catheter in the left nasal cavity. His right nasal cavity was normal. Until referral to our department, no blood transfusion had been made and the patient's complete blood count showed a hemoglobin level of 14.4 g/dL and hematocrit level of 43.2%. Considering the possibility of severe bleeding, it was planned to remove the nasal packs in the operating room under general anesthesia. A contrast-enhanced computed tomography (CT) scan of paranasal sinuses was performed preoperatively to eliminate the possibility of a mass. CT scanning revealed an image of extensive soft tissue in the left nasal cavity and unclear borders with the inferior turbinate, raising suspicion of a mass lesion, for which contrast enhanced magnetic resonance imaging (MRI) was performed. On the MRI scan, a lesion of approximately 36x18 mm in the largest axial section was identified at the inferior turbinate level of the left nasal cavity. The lesion showed soft tissue intensity on T1 weighting and hyperintensity on T2 weighting, suggesting a homogeneous and intensely enhanced vascular mass after gadolinium injection (Figure 1).

After providing written informed consent, the patient was taken to surgery under general anesthesia for septoplasty and endoscopic mass excision. Endoscopic nasal examination showed that the septal spur on the left anterior base was touching the inferior turbinate and the bleeding emanated from the area immediately behind this contact point. The bleeding area was packed, and septoplasty performed. After the spur was excised and the septum brought to the midline, a bleeding mass was exposed arising from the site where the spur touching the inferior turbinate had filled the left cavity (Figure 2a). The mass was excised together with the inferior turbinate mucosa (Figures 2 b, c).

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Cite this article as: *Yıldırım U, Kemal Ö, Can B. A Rare Cause of Resistant Epistaxis: Lobular Capillary Hemangioma Arising from the Inferior Turbinate. Turk Arch Otorhinolaryngol 2018; 56: 58-60.*

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Received Date: 06.10.2017
Accepted Date: 13.11.2017

DOI: 10.5152/tao.2018.2905

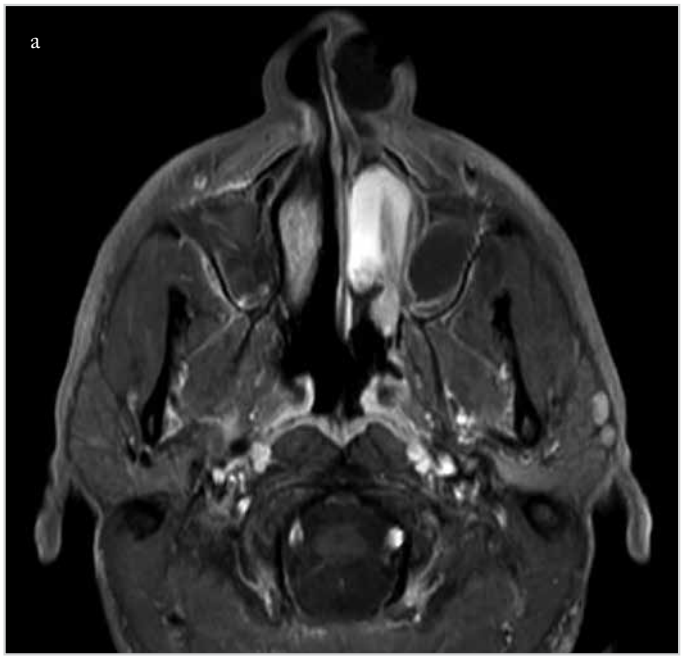
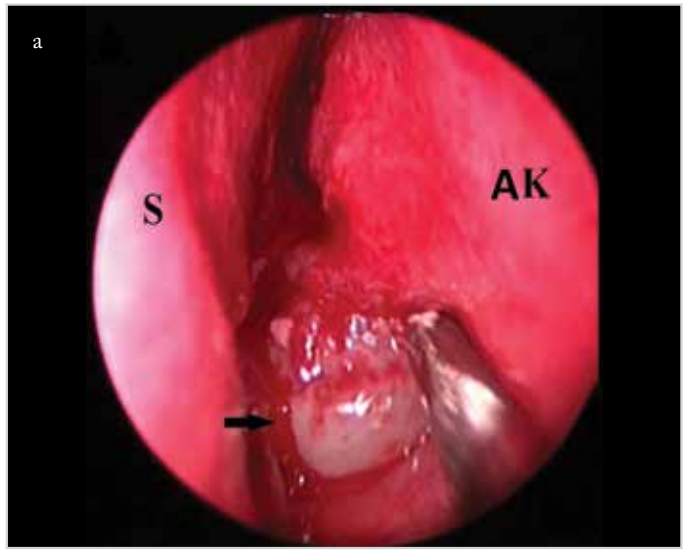


Figure 1. a, b. Mass showing intense contrast enhancement after gadolinium injection on MRI T1 sequence. (a) Axial section (b) Coronal section



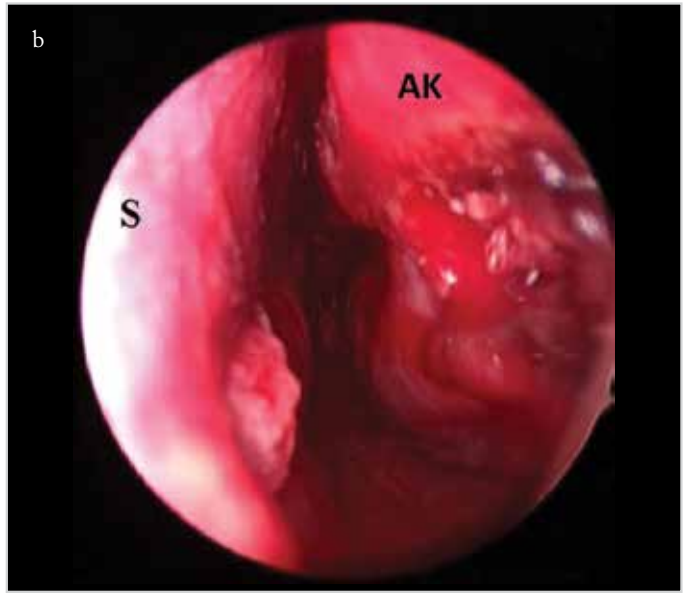


Figure 2. a-c. (a) View of the mass arising from the inferior turbinate after the septal spur which obstructed access to the posterior of the nasal cavity was excised with septoplasty. (b) View of nasal cavity after the bleeding mass arising from the inferior turbinate was excised and bleeding was controlled with bipolar cauterization (black arrow: mass, S: septum, IT: inferior turbinate). (c) Macroscopic view of the mass

In histopathological examination the mass was identified as a superficially ulcerated polypoid lesion with intense proliferation of small, thin uniform vascular structures in the edematous and inflamed stroma, and was thereby consistent with LCH (Figures 3). At the postoperative 9th month no complications or recurrence have been encountered.

Although the pathogenesis of lobular capillary hemangioma has not yet been fully clarified; however, some etiological factors have been suggested. These include trauma, surgery, nasal packing, hormones, viral oncogenes, arteriovenous malformations and angiogenic growth factors (1). Since the lesion is often seen after cauterization and repeated nasal packing performed

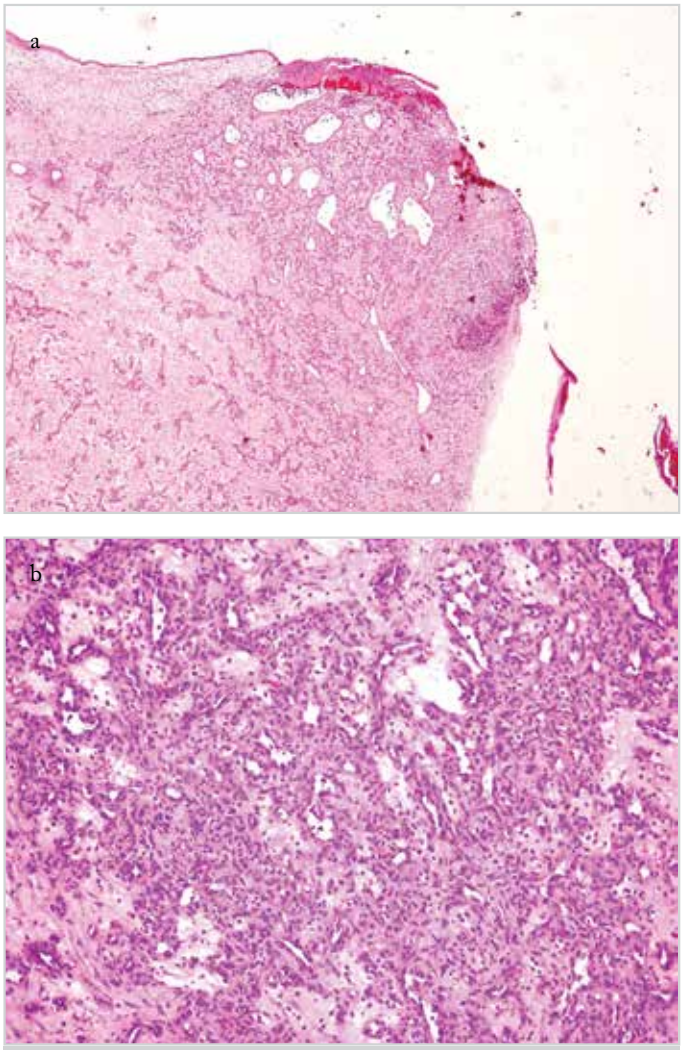


Figure 3. a, b. (a) Lobular pattern of vascular proliferation areas on superficially ulcerated polypoid mass (X10, H&E). (b) Variable proliferation of uniform thin-walled vascular structures (X20, H&E)

for nose bleeding, and mostly arises from the Little's area on the anterior nasal septum, trauma and nasal packing are accepted as the strongest etiological factors (2). Moreover, increased estrogen and progesterone levels are thought to play a role in the etiology because of the higher rate of LCH incidence among pregnant women and women who use oral contraceptives (5).

Resistant epistaxis is one of the top challenges otorhinolaryngologists frequently encounter. Additional imaging is not be necessary in cases which the source of bleeding is apperent, but in cases where a deviated nasal septum obstructs access to the posterior of the nasal cavity, the source of bleeding cannot be identified, so the possibility of a concomitant vascular mass should always be eliminated.

Informed Consent: Written informed consent was obtained from patient who participated in this study.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept - U.Y., Ö.K., B.C.; Design - U.Y., Ö.K., B.C.; Supervision - U.Y., Ö.K., B.C.; Resource - U.Y., B.C.; Materials - U.Y., Ö.K.; Data Collection and/or Processing - Ö.K., B.C.; Analysis and/or Interpretation - U.Y., Ö.K., B.C.; Literature Search - U.Y.; Writing - U.Y., Ö.K.; Critical Reviews - Ö.K., B.C.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study has received no financial support.

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