

PAPER DETAILS

TITLE: Glomus tumor of the nasal vestibulum: a rare clinical presentation

AUTHORS: Mehmet GÜVEN,Ayşe Öznur AKIDIL,Mahmut Sinan YILMAZ

PAGES: 112-115

ORIGINAL PDF URL: <https://dergipark.org.tr/tr/download/article-file/2156006>

Glomus tumor of the nasal vestibulum: a rare clinical presentation

Nazal vestibulumun glomus tümörü: Nadir bir klinik tablo

Mehmet Güven, M.D., Öznur Akıdil, M.D., Mahmut Sinan Yılmaz, M.D.

Department of Otolaryngology, Sakarya Training and Research Hospital, Sakarya, Turkey

Glomus tumor is an uncommon benign tumor rising from the glomus bodies. It is most often found on limbs and rarely involve the head and neck. In this report, we present the 31st documented case of an intranasal glomus (nasal vestibular) tumor, an extremely rare localization.

Key Words: Glomus tumor; nasal cavity; nasal vestibulum.

Glomus tümörü, glomus cisimlerinden köken alan nadir bir benign tümördür. Bu tümörler, çoğunlukla ekstremitelerde bulunur ve nadiren baş ve boynu tutar. Bu yazıda oldukça nadir bir yerleşim yeri ile 31. intranasal glomus tümörü (nazal vestibüler) olgusu sunuldu.

Anahtar Sözcükler: Glomus tümörü; nazal kavite; nazal vestibulum.

Glomus tumors are neoplasms of the normal glomus body. Glomus bodies can be found throughout the body but are most highly concentrated in the digits, palms, and soles of the feet.^[1] Glomus tumors are rare neoplasms that typically occur in soft tissues of the extremity, particularly the subungual region of the finger tip. They rarely occur in the nose^[2] and usually present as a small, painful nodule in the deep dermis or superficial soft tissues.^[3] To our knowledge we report the 31st documented case of an intranasal and third documented case of a nasal vestibule glomus tumor in the literature.^[4]

CASE REPORT

A 51-year-old woman attended our outpatient clinic with pain localized to the anterior portion of her nose, nasal obstruction for almost one year and a mass that emerged from her left nostril with palpation.

She had no systemic disease, history of trauma or surgery and was a nonsmoker. Anterior rhinoscopy revealed a bluish red 5x5 mm swelling arising from the superior aspect of the caudal end of the nasal septum and vestibule with crusting (Figure 1). Both nasal cavities were patent. The patient underwent excision, and histopathologic examination of the lesion revealed a tumoral structure localized in subepithelial stromal connective tissue. The round uniform nucleated, indefinite nucleolated tumor cells had narrow cytoplasm, showed no atypia or mitosis and were arranged like aggregates around vascular structures. On immunohistochemical staining the tumor cells stained diffusely with smooth muscle alfa-actin (α SMA) and vimentin (Figure 2a, b); only the vascular endothelium stained with CD34. The histopathological diagnosis was glomus tumor. One year following surgery there were no signs of recurrence.

Received / Geliş tarihi: December 7, 2011 Accepted / Kabul tarihi: December 25, 2011

Correspondence / İletişim adresi: Mehmet Güven, M.D. Sakarya Eğitim ve Araştırma Hastanesi Kulak Burun Boğaz Hastalıkları Kliniği, Korucuk Kampüsü, 54100 Sakarya, Turkey. Tel: +90 264 - 255 21 05 Fax (Faks): +90 264 - 295 52 19 e-mail (e-posta): guvenmehmet28@yahoo.com

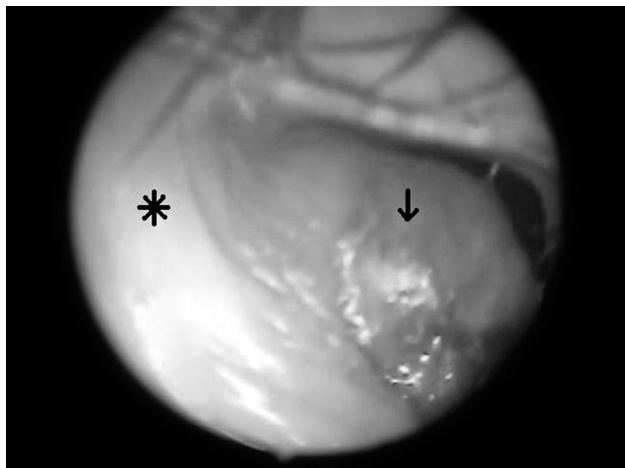


Figure 1. Tumoral mass localised in nasal vestibulum (arrow shows tumoral mass; asteriks shows nasal vestibulum).

DISCUSSION

A glomus body is a neuromyoarterial body found within the reticular dermis that functions as a specialized form of arteriovenous anastomosis that serves as a thermal regulator. Glomus tumor is a distinctive benign neoplasm that shows histological resemblance to the normal glomus body.^[3] They are rare tumors, occurring most frequently in the extremities and are most commonly described in the subungual area of the digits. In a study of fifty-six extra-digital glomus tumors, most tumors (91%) arose on the extremities, and only one case had an intranasal glomus tumor (1.8%).^[5]

Glomus tumors rarely occur in the head and neck region.^[6] Like all benign intranasal tumors, nasal glomus tumors produce nasal obstruction,

pain and epistaxis. There is no characteristic symptomatology from intranasal glomus tumors. Glomus tumors are often bluish red firm nodules and range in size from 0.2 to 0.4 cm though most are less than 1 cm in diameter as in our case.

Glomangioma is a vascular neoplasm consisting of several nodules that grow in continuity with arteries or veins surrounding them.^[7] Histologically they are composed of branching vascular channels enclosed within a stroma bearing nests or larger aggregates of glomus cells, which are round to cuboidal and regular in size and shape with central dark nuclei and pale eosinophilic cytoplasm.^[8] Immunohistochemistry reveals positivity with vimentin and smooth muscle actin.^[9]

To date 30 intranasal glomus tumors have been reported in the literature.^[10] Our case is the 31th reported case. Seventeen of those cases were female and twelve of them originated from the nasal septum. Including our case there are only three reports of glomus tumors located in the nasal vestibule (Table 1).^[4,7,8,10-30]

The treatment is complete excision of the tumor. The reported recurrence rate is 10%.^[19] Recurrence is usually secondary to incomplete excision. Hayes et al.,^[18] reported a case with six recurrences attributed to incomplete excision. In our case, no recurrence occurred through one-year follow-up.

In conclusion, we presented a glomus tumor of the nasal vestibule. Glomus tumor must be in the clinician's mind when a solitary or nodular lesion is present around the nostril and vestibule.

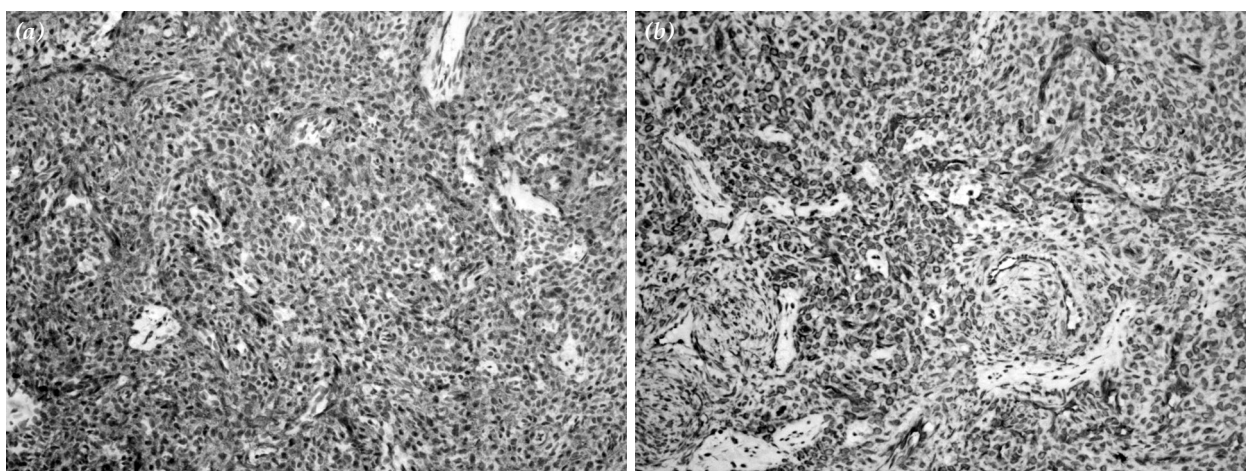


Figure 2. (a) Tumoral cells stained with smooth muscle alfa-actin (x 200). (b) Tumoral cells stained with vimentin (x 200).

Table 1. Sinonasal glomus tumors in the literature

	Age/sex	Location	Symptom
Pantazopoulos ^[11]	45/F	Inferior turbinate	Obstruction, pain, epistaxis
DeBord ^[12]	33/F	Posterior choana	Obstruction
Fu and Perzin ^[13]	71/F	Anterior nasal septum	Asymptomatic
Fleury and Basset ^[14]	24/M	Nasal septum	Obstruction
Potter et al. ^[15]	81/F	Nasal septum	Asymptomatic
Morais et al. ^[16]	66/M	Nasal vestibulum	Asymptomatic
Alarchos Liorach et al. ^[17]	55/M	Ethmoid sinus	Obstruction
Hayes et al. ^[18]	32/F	Nasal vestibulum	Obstruction
Arens et al. ^[19]	40/M	Inferior turbinate	Epistaxis
Shimono et al. ^[20]	55/M	Ethmoid sinus	Obstruction
Matschiner et al. ^[21]	9/F	Nasal septum	Epistaxis
	36/F	Nasal septum	Local pain, bleeding
	74/F	Nasal septum	Local pain, bleeding
Chu et al. ^[22]	74/F	Nasal region	
	57/M	Left middle turbinate	
Nakagawa et al. ^[8]	42/M	Sphenoid sinus	Obstruction
Constantinidis et al. ^[23]	66/F	Right middle meatus	Epistaxis
Cullen and Hana ^[24]	50/F	Inferior turbinate	Epistaxis
Battiata et al. ^[25]	19/M	Nasal cavity	Epistaxis
Duclos et al. ^[26]		Nasal septum	
Ahmed et al. ^[7]	56/F	Nasal septum	Epistaxis
Li et al. ^[27]	69/F	Nasal septum	Epistaxis
Keelawat et al. ^[28]	66/F	Nasal septum	Epistaxis
Gaut et al. ^[29]	87/F	Right posterior choana	Epistaxis
Cho et al. ^[30]	82/M	Nasal septum	Epistaxis
Wha Koh et al. ^[10]	66/F	Nasal cavity	Epistaxis
	92/M	Nasal septum	Epistaxis
Xu et al. ^[4]	38/M	Nasal septum	Obstruction
	14/M	Nasal cavity	Epistaxis
<i>Current case</i>	51/F	Nasal vestibulum	Local pain

REFERENCES

1. Fornage BD. Glomus tumors in the fingers: diagnosis with US. *Radiology* 1988;167:183-5.
2. Shek TW, Hui Y. Glomangiomyoma of the nasal cavity. *Am J Otolaryngol* 2001;22:282-5.
3. Tsuneyoshi M, Enjoji M. Glomus tumor: a clinicopathologic and electron microscopic study. *Cancer* 1982;50:1601-7.
4. Xu YY, Luo XM, Zhou SH, Zheng ZJ. CD34-positive expression in benign nasal glomus tumour: two case reports and a literature review. *J Int Med Res* 2010;38:2169-77.
5. Schiefer TK, Parker WL, Anakwenze OA, Amadio PC, Inwards CY, Spinner RJ. Extradigital glomus tumors: a 20-year experience. *Mayo Clin Proc* 2006;81:1337-44.
6. Van Geertruyden J, Lorea P, Goldschmidt D, de Fontaine S, Schuind F, Kinnen L, et al. Glomus tumours of the hand. A retrospective study of 51 cases. *J Hand Surg Br* 1996;21:257-60.
7. Ahmed A, Sheehan AL, Dugar J. Intranasal glomangioma. *Rhinology* 2003;41:58-60.
8. Nakagawa T, Takashima T, Tomiyama K, Takeda Z. Glomangioma in the nasal cavity and paranasal sinuses. *ORL J Otorhinolaryngol Relat Spec* 2000;62:164-6.
9. Kumar V, Cotran RS, Robbins SL. Diseases of blood vessels. In: Kumar V, Cotran RS, Robbins SL, editors. *Basic pathology*. 5th ed. Philadelphia: W.B. Saunders; 1992. p. 302.
10. Koh YW, Lee BJ, Cho KJ. Glomus tumor of the sinonasal tract-two case reports and a review of the literature. *Korean J Pathol* 2010;44:326-9.
11. Pantazopoulos PE. Glomus tumor (glomangioma) of the nasal cavity. *Arch Otolaryngol*. 1965;81:83-6.
12. DeBoard BA. Unusual presentations in otolaryngology. *Surg Clin North Am* 1972;52:473-83.
13. Fu YS, Perzin KH. Non-epithelial tumors of the nasal cavity, paranasal sinuses, and nasopharynx: A clinicopathologic study. I. General features and

- vascular tumors. *Cancer* 1974;33:1275-88.
14. Fleury P, Basset JM, Compère JF, Pansier P. Rare tumors of the septum. 8 reported cases (author's transl). *Ann Otolaryngol Chir Cervicofac* 1979;96:767-79.
15. Potter AJ Jr, Khatib G, Peppard SB. Intranasal glomus tumor. *Arch Otolaryngol* 1984;110:755-6.
16. Morais D, Rodríguez J, Velasco MC, Gil-Carcedo LM. Glomangioma or glomus tumor of the nasal vestibulum. *An Otorrinolaringol Ibero Am* 1986;13:471-9.
17. Alarcos Llorach A, Matesanz Sanz A, Alarcos Tamayo E, Ovelar Arribas Y. A glomus tumor of the nasal fossa and ethmoid sinus. *Acta Otorrinolaringol Esp* 1992;43:291-5.
18. Hayes MM, Van der Westhuizen N, Holden GP. Aggressive glomus tumor of the nasal region. Report of a case with multiple local recurrences. *Arch Pathol Lab Med* 1993;117:649-52.
19. Arens C, Dreyer T, Eistert B, Glanz H. Glomangioma of the nasal cavity. Case report and literature review. *ORL J Otorhinolaryngol Relat Spec* 1997;59:179-81.
20. Shimono T, Hayakawa K, Yamaoka T, Nishimura K, Takasu K, Mimaki S. Case report: glomus tumour of the nasal cavity and paranasal sinuses. *Neuroradiology*. 1998;40:527-9.
21. Matschiner F, Bilkenroth U, Holzhausen HJ, Neumann K, Tausch-Tremel R, Berghaus A. Glomus tumor of the nose. *HNO* 1999;47:122-5.
22. Chu PG, Chang KL, Wu AY, Weiss LM. Nasal glomus tumors: report of two cases with emphasis on immunohistochemical features and differential diagnosis. *Hum Pathol* 1999;30:1259-61.
23. Constantinidis J, Kiefer A, Reitnauer K, Iro H. Glomangioma of the nasal cavity and paranasal sinuses. *Rhinology* 2000;38:136-9.
24. Cullen RD, Hanna EY. Intranasal glomangioma. *Am J Otolaryngol* 2000;21:402-4.
25. Battista AP, Vander Ark W, Adair C, Mair E. Pathology forum: quiz case. Diagnosis: intranasal glomus tumor. *Arch Otolaryngol Head Neck Surg* 2001;127:329-30.
26. Duclos JY, Duffas O, Deminière C, Darrouzet V, Stoll D. Glomangioma or "glomus tumor" of the nasal cavity: apropos of a new case and review of the literature. *Rev Laryngol Otol Rhinol* 2001;122:119-23.
27. Li XQ, Hisaoka M, Morio T, Hashimoto H. Intranasal pericytic tumors (glomus tumor and sinonasal hemangiopericytoma-like tumor): report of two cases with review of the literature. *Pathol Int* 2003;53:303-8.
28. Keelawat S, Hirunwiwatkul P, Thanakit V. Recurrent epistaxis from an intranasal glomus tumor: the 22nd case report. *J Med Assoc Thai* 2004;87:442-5.
29. Gaut AW, Jay AP, Robinson RA, Goh JP, Graham SM. Invasive glomus tumor of the nasal cavity. *Am J Otolaryngol* 2005;26:207-9.
30. Cho KS, Koo HJ, Kim DH, Roh HJ. A case of glomus tumor in the nasal cavity. *Korean J Otolaryngol-Head Neck Surg* 2006;49:221-4.