

Nasal leiomyoma

Gurung U,¹ Gurung B,² Jha A³

¹Department of ENT-HNS, Institute of Medicine, ²Department of Anatomy, Kathmandu Medical College, ³Department of Pathology, Institute of Medicine, Kathmandu, Nepal

ABSTRACT

Leiomyoma is a benign tumor showing smooth muscle differentiation. Leiomyoma in the nasal cavity is a rare entity which can present with common nasal symptoms. We report a case of 19 years old male patient with nasal leiomyoma. The patient presented with recurrent episodes of nasal obstruction and epistaxis. On nasoendoscopy, there was a single grayish polypoidal mass in the right middle meatus which bled on touch. CT-scan of nose and paranasal sinus showed homogenous opacity indistinguishable from the right middle turbinate. The mass was excised endoscopically. There is no recurrence a year after the endoscopic excision of the nasal leiomyoma. Nasal leiomyoma carries a good prognosis after complete excision.

Key words: endoscopic excision, leiomyoma, nasal cavity

INTRODUCTION

Leiomyomas are benign tumors with smooth muscle differentiation. Their common sites are the uterus, skin and the gastrointestinal tract. They are rarely found in the head and neck region and the nasal cavity is even rarer site.¹ A review of literature shows reports of only 26 cases of nasal leiomyoma.² Here we present one such case.

CASE REPORT

A 19 years male presented with recurrent episodes of right nasal obstruction and spontaneous right nasal bleeding of one year duration. The nasal bleeding used to stop on its own. He had no other nasal, aural or throat complaints. Anterior rhinoscopy and nasoendoscopy showed a single grayish polypoidal mass in the right middle meatus which bled on probing. CT-scan of nose and paranasal sinus showed homogenous opacity indistinguishable from the right middle turbinate lying superior to the right inferior

turbinate (Figure 1). The mass was excised endoscopically and sent for histopathological examination.

Grossly, the tumor was grayish white measuring 3x2.5 cm. The entire specimen was sent for the pathological examination. Microscopically, sections showed polypoidal mass covered partly by respiratory and partly by squamous epithelium with no encapsulation (Figure 2). There were interlacing bundles of moderately cellular smooth muscle cells with oval to elongated nuclei with blunt end with no mitosis. Necrosis was absent (Figure 3).

DISCUSSION

Leiomyomas are benign smooth muscle tumors, frequently found in the uterus (95%), skin (3%) and gastrointestinal tract (1.5%). Less than 1% has been associated with head and neck region.¹ In addition, leiomyomas in the nasal cavity is even less commonly encountered. The first case of intranasal leiomyoma was reported by Maesaka et al in 1966.³ Since then, 26 cases have been reported in

Correspondence:

Dr. Urmila Gurung
Department of ENT-HNS
Institute of Medicine, Kathmandu, Nepal
Email: doc_urmila@yahoo.com
Phone: 9841470057



Figure 1. Nasal leiomyoma : CT scan showing homogeneous opacity in right nasal cavity.

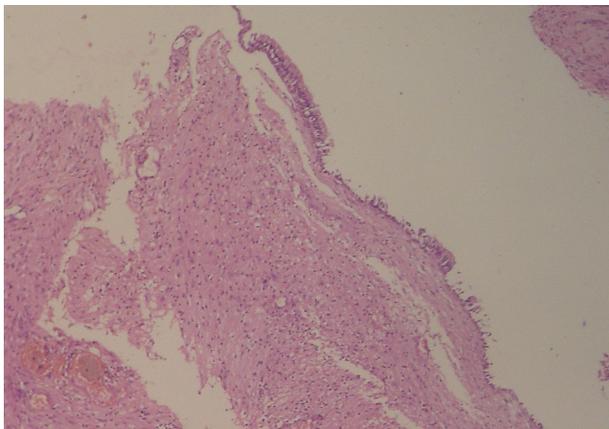


Figure 2. Nasal leiomyoma: Unencapsulated smooth muscle tumor under the nasal mucosa. (H&E, 5X10)

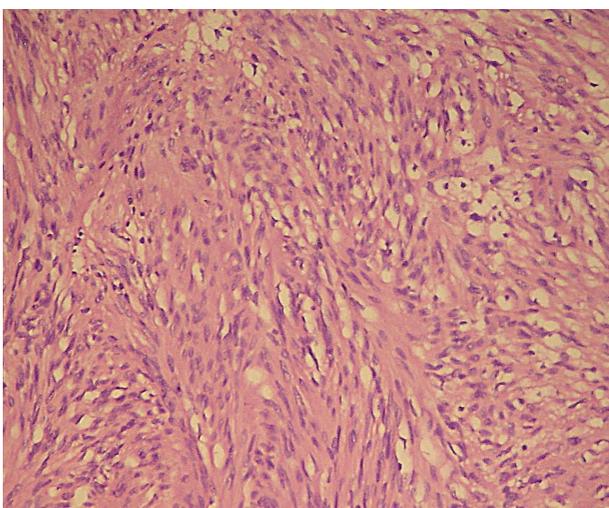


Figure 3. Nasal leiomyoma: Interlacing bundles of smooth muscles cells with oval to elongated nuclei.(H&E, 20X10)

the literature.² Presence of smooth muscle sparsely in the nasal cavity probably contributes to rarity of leiomyoma occurring in this site.^{1,2,4-6}

The exact origin is not known yet though most authors have accepted the vascular smooth muscles as their origin. The smooth muscle of hair erectile muscles and aberrant undifferentiated mesenchyme has also been speculated as their origin.^{1,6}

The inferior turbinate is a common site for nasal leiomyoma while septum, vestibule, floor of nasal cavity and sinuses are not. Barr et al explained this to be due to the presence of excess contractile vascular tissue in the inferior turbinate.⁷ In our case, the tumor arose from the ethmoidal bulla. Leiomyomas are slow growing tumors which persist for a long time.¹ Nasal leiomyomas can present with nasal obstruction, epistaxis, facial pain or headache.

They usually occur in the age between 42 to 76 years and have a female preponderance in ratio of 3:1.^{1,4-6} Some have considered their growth to be hormone dependent since sex steroid receptors for progesterone have been found in leiomyoma and hence the female predilection.⁹ However, our case was a 19 years male patient.

The histological typing of soft tissue tumors by WHO has divided leiomyoma into three groups– leiomyoma (solid leiomyoma), angiomyoma (vascular leiomyoma) and epitheloid leiomyoma (leiomyoblastoma).^{1,2,6,8} Leiomyoma of nasal cavity and paranasal sinuses are commonly of vascular type.^{2,4} In our case, it was solid usual type of leiomyoma. Vascular leiomyomas have to be differentiated histologically with hemangioma, angiofibroma, neurofibroma, schwannoma, leiomyoblastoma, angiomylipoma.^{1,2,6,8}

At times, immunohistochemical markers such as muscle specific desmin, actin, myoglobin, S-100, vimentin may be required for definite diagnosis.^{1,6} Malignant counterpart of this neoplasm i.e. leiomyosarcoma have been reported.^{1,2,5}

Histologically the tumor must be differentiated from leiomyosarcoma. An assessment for high cellularity, nuclear atypia, mitosis and necrosis must be done to rule out leiomyosarcoma.

In the present case, leiomyoma was excluded as the tumor was moderately cellular and lacked nuclear atypia, mitosis and necrosis.

Radiological investigations such as CT scan or MRI have limited role in diagnosis though they help in assessing the extent of lesion and also in planning the treatment.¹ The treatment of choice is surgical resection. There is good prognosis with only few reports of recurrences after complete excision.^{2,6} A year after the endoscopic excision of the nasal leiomyoma now, our patient has no recurrence.

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