

Case Report

Case report of Nasopharyngeal Angiofibroma in a teenager female, a rare finding

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Author's Contribution

^{1,3,4,5} Conception of study

^{1,2} Experimentation/Study conduction

^{1,6} Analysis/Interpretation/Discussion

^{1,3,5} Manuscript Writing

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Abstract

Introduction: Angiofibroma is a rare histologically benign tumor that is an unencapsulated, highly vascular tumor.¹ It shows very aggressive behavior due to local invasiveness and is associated with various symptoms.² Angiofibroma is almost always seen in young adolescent males.² Along main pathogenesis is unknown, but it is considered to be associated with sex hormones mainly testosterone and estradiol.³ In a study conducted from 1995 to 2012 all patients were male.⁴ Major symptoms include nasal obstruction and epistaxis and surgical removal of the tumor as a whole is considered the treatment of choice.⁵

There have been very few individual case reports of angiofibroma in female⁶⁻⁹ which were confirmed with radiological testing and histopathology report of the samples taken.

Case presentation: We present a rare case of nasopharyngeal angiofibroma in a young female as confirmed by computed tomography scan findings and histopathology reports of the sample by well-qualified pathologists.

Conclusion: The case is being reported to increase awareness among medical professionals and encouraging further workup on the pathogenesis of angiofibroma.

Keywords: Angiofibroma, rare, young female, benign tumor, epistaxis, nasal Blockage, nasopharyngeal growth.

Introduction

Angiofibroma is a rare histologically benign tumor that is an unencapsulated, highly vascular tumor.¹ It shows very aggressive behavior due to local invasiveness and is associated with various symptoms.²

Angiofibroma is almost always seen in young adolescent males.² Although the main pathogenesis is unknown, but it is considered to be associated with sex hormones mainly testosterone and estradiol.³ In a study conducted from 1995 to 2012 all patients were male.⁴ Major symptoms include nasal obstruction and epistaxis and surgical removal of the tumor as a whole is considered the treatment of choice.⁵

Histologically it is always composed of a mixture of blood vessels and fibrous stroma. Microscopically, there are plump fibroblasts, ovoid to spindle-shaped, with a generous amount of connective tissue. In the compact stroma are blood vessels of different sizes and shapes lined by plump endothelial cells but with little or no smooth muscle or elastic fibers.¹⁰

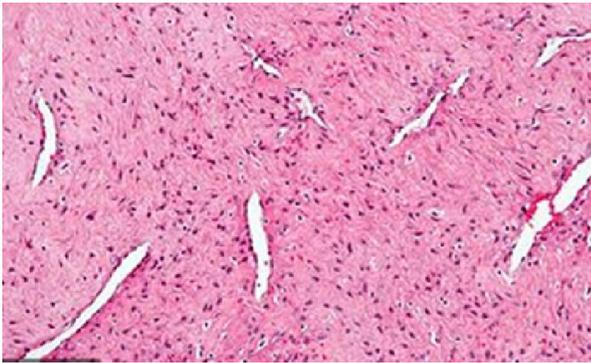


Figure 1: Histological appearance of nasopharyngeal angiofibroma

There have been very few individual case reports of angiofibroma in female⁶⁻⁹ confirmed by radiological findings (computed tomography, magnetic resonance imaging, and angiography) and histopathology. Some authors suggest sex chromosome studies in such patients.

Case Report

This is a case report of a female patient, 17 years of age who presented in an outpatient department of Holy Family Hospital, Rawalpindi, Pakistan in September 2020 with the complain of bilateral nasal obstruction for the past 1 year, bilateral nasal discharge for 1 year

and mild dysphagia for last 6 months. According to the detailed history, the patient had complained of nasal obstruction for the past 1 year which started from the right side but later involved both sides. The blockage was progressively increasing in nature and didn't improve with medications. The patient also complained of bilateral nasal discharge. Discharge was mucoid and continuous in nature and not associated with a foul smell. There was no history of bleeding from the nasal cavity or oral cavity. The patient also complained of difficulty in swallowing solids for the past 6 months which was associated with the feeling of a lump at the back of the neck.

On examination, the Patient had left-sided deviated nasal septum and grey polypoidal mass in the right nasal cavity, posteriorly almost at the level of posterior choana, insensitive to touch, and didn't bleed on probing. On oral examination, there was a pinkish mass extending from the nasopharynx into the oropharynx mostly on the right side.

The rest of the oral cavity was normal.

Systemic Examination: All other systems were normal on examination.

Radiological Investigations: A computer tomographic scan of the nose and paranasal sinuses was advised to the patient. According to the CT scan report (September 2020) large cystic/ Polypoidal lesion in the Nasopharynx, inclining to the right side, abutting the right posterior nares and right torus tubaris, is hanging down in the upper oral cavity adjacent to the soft palate and is significantly blocking the lumen. Measures 1.8cm * 2.6cm (AP*TR) in its visualized widest part. Findings were also suggestive of sinonucosal inflammatory changes in bilateral sinuses.



Figure 2: showing right sided mass in Nasopharynx +opacification of bilateral sphenoid sinuses

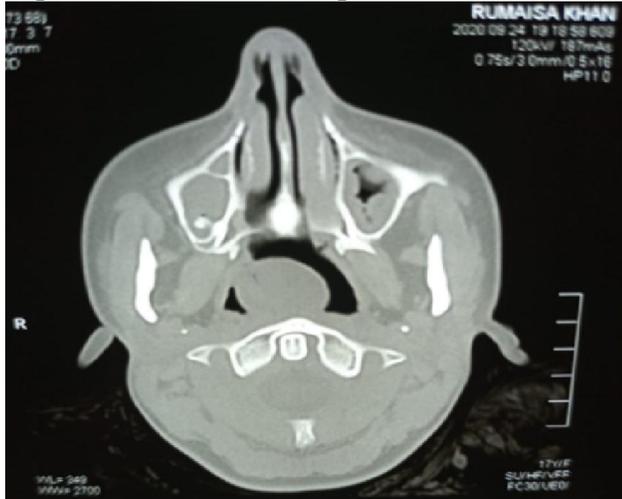


Figure 3: Mass in Nasopharynx inclining towards right side abutting torus tubaris

Investigations: Baselines investigations were done before planning a surgery including complete blood count, prothrombin time, partial thromboplastin time, and Hepatitis B and C serology. All the investigations came out within normal range with Hepatitis B and C non-reactive.

| | | |
|-------------|------------|-----------------------------|
| Hemoglobin: | 11.9 g/dl | (12-15g/dl) |
| WBCs: | 7,510/ul | (4,000 - 10,000u/l) |
| PLTs : | 282,000u/l | (1,50,000 - 4,10,000/ul) |
| PT : | 10.8 sec | (control= 11- 16 sec) |
| INR : | 1.0 | (less than or equal to 1.1) |
| ApTT : | 26 sec | (control = 26 - 40 sec) |

Management: Endoscopic Removal of the mass was planned via nasal endoscopy along with septoplasty on 3-11-2020. Surgery was performed by our senior doctor. There was minimal bleeding during surgery and the post-operative period also went unremarkable. The specimen was taken for biopsy and sent to Armed Forces Institute of Pathology Rawalpindi which was suggestive of nasopharyngeal angiofibroma.



Figure 4: mass removed in total from the Nasopharynx and sent for histopathology

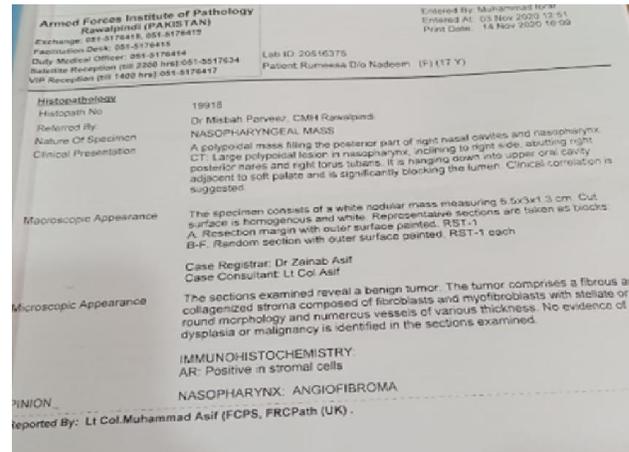


Figure 5: Histopathology report from AFIP indicating angiofibroma

Due to extremely low chances of presence of angiofibroma in females, the sample was resent to another very well qualified pathologist for review which demonstrated the same.

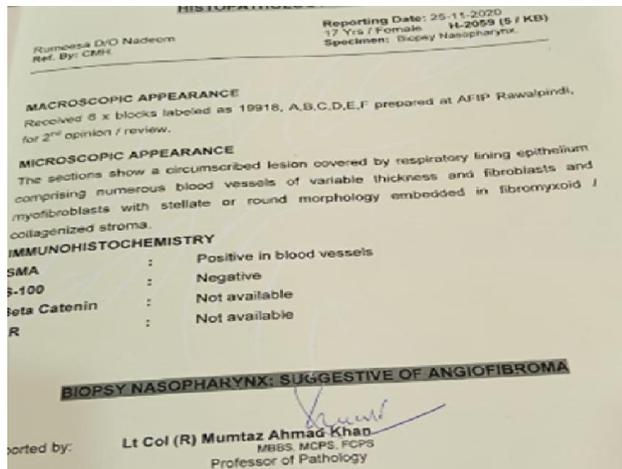


Figure 6: Histopathology from another private Laboratory suggestive of angiofibroma

Conclusion

A rare case of the presence of nasopharyngeal angiofibroma in a young female has been reported. This disease is thought to be almost always present in young adolescent males because of its likely association with sex hormones. Hence further studies regarding the pathogenesis of this disease are required and such patients should undergo a genetic study.

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