Case report:

Antrochoanal polyp mimicking juvenile nasoangiofibroma

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Abstract

Antrochoanal polyp is a benign lesion, usually arising from the maxillary sinus extending posteriorly into the nasopharynx. Typically it presents as a unilateral nasal obstruction with mucopus rhinorrhea, sleep disturbance, postnasal drip, and mouth breathers. Epistaxis is an extremely rare complaint. Unilateral nasal mass presenting in a teenage boy will increase the suspicion of juvenile nasoangiofibroma. We report a teenage with extensive unilateral nasal mass with such presentation, which later turned out to be antrochoanal polyp.

Key words: antrochoanal polyp, juvenile nasoangiofibroma

Introduction

Antrochoanal polyp is a benign slow growing lesion. It usually originates within maxillary sinus, herniating through the maxillary sinus ostium into the middle meatus, extending posteriorly into the choana as well as nasopharynx. Typically, the patients with antrochoanal polyps presented with history of unilateral nasal obstruction. However it can be bilateral if the mass occupies the nasopharynx. In paediatric age group, sleep disturbances and mouth breathing are common, while in adult the symptom of nasal obstruction may be associated with snoring and headache[1].

Case Summary

A 13-year-old boy was referred by paediatrician for recurrent epistaxis since childhood. Over time, his complaint had increased in frequency. Besides that, he had been complaining of nasal obstruction. There was on and off nasal discharge, but denied any allergic history.

He was a mouth breather speaking with hyponasal speech. Examination of the oral cavity revealed a large, smooth-surfaced, reddish mass hanging behind the soft palate into the oropharynx. Bilateral palatine tonsils were normal in size (Fig. 1). Anterior rhinoscopy was normal and cold spatula test revealed a diminished frosting of the ipsilateral side. On rigid endoscopic examination of the nasal cavities, there was a smooth-surfaced reddish mass occupying the right nasal cavity and nasopharynx. There was no palpable lymph node upon palpation of the neck.

Computerized tomography (CT) of the paranasal sinuses demonstrated a large lobulated heterougenously enhancing soft tissue mass in the nasopharynx (Fig 2A & 2B) extended anteriorly to the right nasal cavity and right maxillary sinus with erosion of posteromedial wall of the right maxillary sinus. The mass also extend inferiorly to the inferior end plate of cervical vertebra C4.

Juvenile nasoangiofibroma (JNA) was strongly suspected. Preoperative angiography was performed in order to evaluate the feeding vessels and allows for embolization of JNA. Angiography findings showed the tumour is supplied by the branches arising from the right internal maxillary artery (Fig 2C). Based on these inputs, he was confirmed to have JNA and planned for endoscopic excision under general anesthesia.

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Pre-operation embolization was performed one day prior to surgery with 90% successful embolization of right internal maxillary artery. The patient was operated under general anesthesia, in the supine position with his head slightly elevated. Nasal cavity was packed with moffat's solution. Intraoperatively noted stalk of mass is arising from the right maxillary sinus. This give rise the suspicious of antrochoanal polyps rather than JNA. Microdebrider was used to remove the mass and the bigger part of it was rather removed via orally. Subsequently uncinectomy perfomed and maxillary sinus ostium widened using back-biting forceps. Antral washout was done through antrostomy of right inferior meatus followed by clearing of the remaining mass in the maxillary sinus to avoid recurrence. Bleeding was minimal and nasal packing was applied to secure bleeding. Blood transfusion was not required during surgery. Post-operatively, patient was admitted to ICU for one day for close observation and able to transfer out to general ward a day later. He was in good physical health and no bleeding seen. Nasal packing was able to be removed on second day post-operatively.

Histopathological examination showed features of an inflammatory polyp. On subsequent follow-up within 6 months, patient was in good physical health with no more episode of epistaxis and no recurrences of mass seen endoscopically.

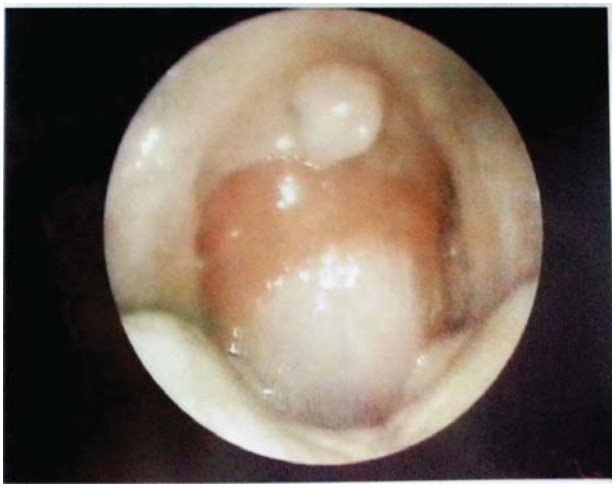

Figure 1: A large smooth-surfaced mass hanging behind the soft palate into the oropharynx (star marking the uvula).

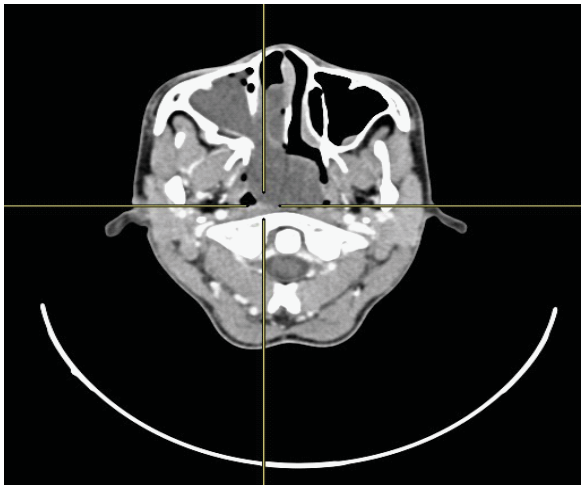

Figure 2A: The axial view CT scan shows the mass occupying the right maxillary sinus, nasal cavity and nasopharynx.

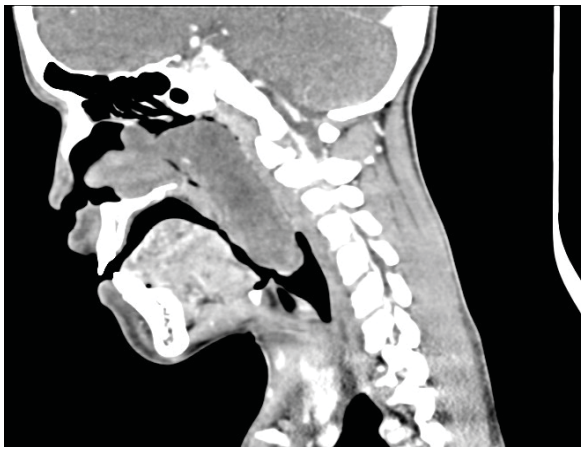

Figure 2B: Saggital view of paranasal sinus revealed the mass extending posteroinferiorly to the level of inferior plate of C4.

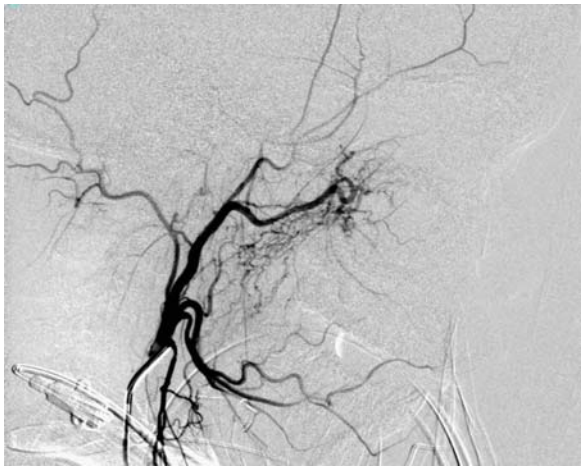

Figure 2C: Diagnostic angiogram done shows the tumour is supplied by the branches of right internal maxillary artery (arrow).

Discussion

Antrochoanal polyp has a characteristic dumb-bell shape originating from the mucosa of the maxillary sinus, herniates through the maxillary sinus ostium into the middle meatus and, thereafter, protruding posteriorly to the choana and nasopharynx[2]. The most common manifestation of antrochoanal polyps is unilateral nasal obstruction (especially during expiratory phase) but may sometimes be (20-25% of cases) bilateral, depending upon the blockage of the nasopharynx. Other clinical manifestations are rhinorrhoea, snoring, foreign body sensation, halitosis, headache, post nasal drip and loss of sense of smell[1-3].

On the contrary, epistaxis was the predominant symptoms in this case. Epistaxis is indeed a rare presentation of an antrochoanal polyp. Robson in 1990 reported a case of antrochoanal polyps presented with single episode of acute severe epistaxis that requiring nasal packing and admission, subsequently investigated and successfully treated surgically[4]. In our case, the episodes of epistaxis were recurring.

As the patient was a young male, the suspicion of JNA was high in the list. The classical triad of JNA symptoms (epistaxis, nasal obstruction, and a nasopharyngeal mass) were present in this case. Even though CT scan finding were not highly suggestive of angiofibroma we still need to rule out the vascular lesion. The typical features of JNA on CT are enlargement of the sphenopalatine foramen and erosion of its posterior bony margin, and anterior bowing of the posterior maxillary wall due to the presence of a mass in the pterygomaxillary space on axial CT slices known as the Holman-Muller's sign[5]. However these signs were not present in this case.

We requested an angiography study to confirm the clinical diagnosis. It turned out to be the lesion was suggestive of JNA. This was due to the mass was supplied by the branches of internal maxillary artery which a typical origin of the JNA. Because of these, he was diagnosed to have JNA and planned for endoscopic excision of tumour. However the final histopathological diagnosis in this patient was inflammatory polyps, which was completely removed.

In conclusion, an antrochonal polyp with recurrent epistaxis may mimic the presentation of a JNA, as epistaxis is a common feature of a JNA. CT scan showing the involvement or contribution of internal maxillary artery further increased the suspicion. Fortunately both of these diagnoses require the same treatment modality, which is a complete excision. Thus, treating the huge antrochaoanal polyp as if a JNA would rather be a safer approach compared to the JNA which mimic a polyp.

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