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 dis-
turbance, 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 antro-
choanal polyp.

Key words: antrochoanal polyp, juvenile nasoangiofibroma

Introduction

Antrochoanal polyp is a benign slow growing lesion. It usually originates within maxillary sinus, herni-
ating through the maxillary sinus ostium into the mid-
dle meatus, extending posteriorly into the choana as
well as nasopharynx. Typically, the patients with
antrochoanal polyps presented with history of unilat-
eral 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
headache¹.

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 aller-
gic 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
derendoscopic examination of the nasal cavities, there
was a smooth-surfaced reddish mass occupying the
right nasal cavity and nasopharynx. There was no pal-
pable lymph node upon palpation of the neck.

Computerized tomography (CT) of the paranasal
sinuses demonstrated a large lobulated heterogene-
ously enhancing soft tissue mass in the nasophary-
ynx (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
cervical vertebra C4.

Juvenile nasoangiofibroma (JNA) was strongly sus-
ppected. 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 anes-
thesia.

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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 gave 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 performed 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: Sagittal view of paranasal sinus revealed the mass extending postero-inferiorly 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. 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 rhinorrhea, snoring, foreign body sensation, halitosis, headache, post nasal drip and loss of sense of smell.

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.

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. 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 antrochoanal 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 antrochoanal polyp as if a JNA would rather be a safer approach compared to the JNA which mimic a polyp.

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**References**


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