CASE REPORT

Intermittent Respiratory Obstruction Secondary to an Antro Chonal Polyp: A Rare Late Presentation

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SUMMARY

We describe a child who presented with intermittent respiratory obstruction especially in supine position. Examination revealed a fleshy post nasal mass extending up to the oropharynx. The mass was removed surgically and histopathology revealed an antrochonal polyp. Patient was relieved of his symptoms and has been well ever since.

KEY WORDS:
Antrochonal Polyp, Children, Intermittent respiratory obstruction, Endoscopic sinus surgery

INTRODUCTION

Antrochoanal polyps represent approximately 4 to 6 percent of nasal polyps in general population. It has a much higher prevalence in children. The presentation of antrochonal polyps in children may rage from nasal obstruction, unilateral polypoidal mass, epistaxis, dysphagia and weight loss. In this case report we present a child whose rare presentation was intermittent respiratory obstruction due to an antrochonal polyp.

CASE REPORT

An 11-year-old boy presented to our clinic with symptoms of shortness of breath on lying down for the one month duration. He gives a history of intermittent nasal obstruction for two months duration. The patient's mother also noted that he has been snoring every night for the last six months. There were no symptoms of running nose, itching, sneezing or epistaxis.

Examination showed that the patient was a mouth breather with an absent airway over the right nostril and a significantly reduced airway over the left nostril. Anterior rhinoscopy revealed a fleshy pale lesion seen in the right nasal fossa, which was nontender and did not bleed on touch. Oral cavity examination revealed the uvula was push anteriorly by a smooth reddish mass, extending to the oropharynx.

CT scan of the para nasal sinuses revealed a hypo dense mass occupying the right maxilla and the right nasal cavity, right postnasal space extending up to the oropharynx just above the tip of the epiglottis (Figure 1 and 2). A provisional diagnosis of right antrochoanal polyp was made.

The child was put under general anesthesia and endoscopic examination and a rigid nasal endoscopic excision of the polyp was performed. Intraoperatively it was noted that the patient had a right polypoidal mass arising from the right maxillary accessory ostium, which was widened naturally. The polyp extended into the choana posteriorly and nasopharynx. Functional endoscopic sinus surgery was performed. The uncinate process was removed using a sickle knife. The polyp was avulsed from its base using a straight Blaskesley's forcep and delivered via the oral cavity. The natural right maxillary ostium and the accessory ostium were made into one with a Stammberger's backbiting forcep. Using a 30^0 rigid nasal endoscope, the right maxillary diseased mucosa was cleared. The left nasal cavity was clear.

Histopathology sections showed polyp covered by pseudostratified ciliated columnar epithelium in certain places and stratified epithelium in other places. A diagnosis of benign inflamed antrochonal polyp was made. The post-operative recovery was uneventful and the child was discharged well on second post-operative day. On one year follow up it was noted that the child was symptom free and had no recurrence.

DISCUSSION

Choanal polyps were first reported by Killian in 1906. Antrochoanal polyps have been defined as a solitary polyp originating from the mucosa of the maxillary sinus or the posterior edge of the maxillary ostium, protruding in a backward direction into the choana and the nasopharrynx[1]. Antrochonal polyps represent approximately 4 to 6% of nasal polyps in the general population. Children with antrochoanal polyp most commonly present with nasal obstruction followed by purulent nasal discharge, epistaxis, dyspnoea, dysphagia or weight loss[2].

Histology it is lined by respiratory epithelium. Long standing antrochoanal polyps may ulcerate or have metapalstic changes to squamous epithelium. The antrochonal polyp is subject to secondary stormed changes where there may be prominent fibrovascularity, neovascularization and

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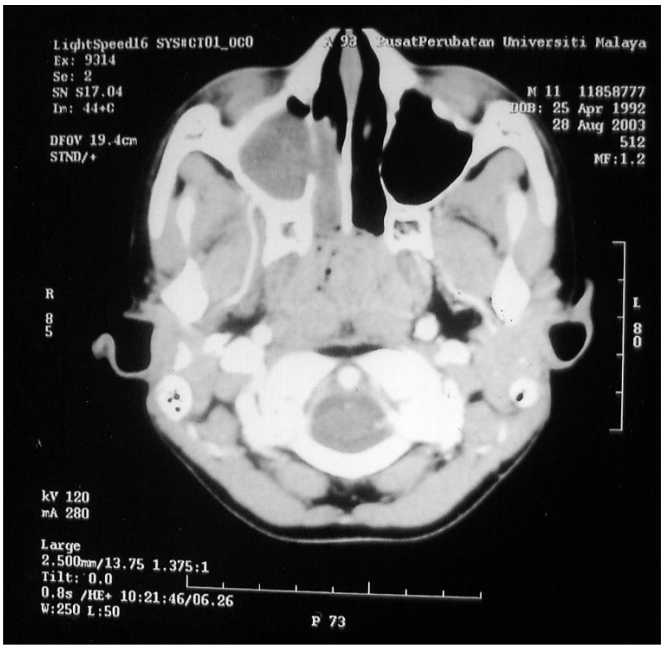

Fig. 1: CT Scan paranasal sinuses axial view showing a hypodense mass occupying the right maxillary sinus, right nasal cavity and the nasopharynx.

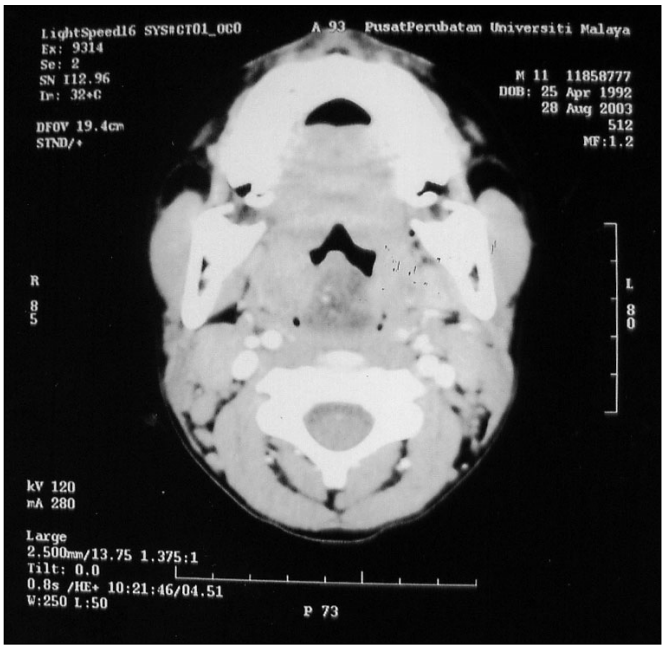

Fig. 2: CT Scan paranasal sinuses axial view showing a hypodense mass occupying the nasopharynx and pushing the uvula anteriorly.

thrombosis[3]. Although there is no literature available on the percentage of this occurrence these changes may result in a misdiagnosis. The polyp usually contains sparse mucous glands and a myxoid stroma with variable densities of inflammatory cells (eosinophils and plasma cells) concentrated near the mucosal surface[3].

CT scan images of antrochoanal polyp appears as a hyperattenuated mass arising from an opaque maxillary sinus extending through the middle meatus into the nasal cavity between the middle turbinate and lateral wall of nasal cavity[5]. In children, nasal polypoidal mass must be carefully evaluated to differentiate antrochoanal polyp from juvenile angiofibroma, nasal gliomas, encaphalocele, grossly enlarged adenoids and rarely nasopharygeal malignancies.

Surgery is the treatment of choice for antrochoanal polyps. The aim of surgery is to make a wide opening of the affected sinus and complete removal of disease mucosa[1].

Surgical options for antrochoanal polyps involve four different modes of removal:

1. Single avulsion of polyp alone which has a recurrence rate of up to 25%.
2. Cardwell Luc procedure ensures complete removal of polyp and antral mucosa but causes a risk in children as they have developing teeth and bone.
3. FESS allows endoscopic excision of polyp and treatment for obstructed Osteo Meatal Complex. It has been proven to be a safe and effective method for managing antrochoanal polyps[2].
4. Transcanine sinuscopy has been advocated for the removal of difficult or recurrent antrochoanal polyps. (Stammberger[4] has suggested that Transcanine sinuscopy is rarely indicated in children except for antrochoanal polyps. He also states that they do not apply transcanine sinuscopy in children under the age of nine because of immature dental development and maxillary sinus pneumatisation.)

No literature search could be obtained on the role of antral washouts in young children to dislodge the attachment of an antrochonal polyp from the inaccessible latero inferior wall of the maxillary antrum but the transcanine sinuscopy can be used together with FESS for difficult cases[4].

CONCLUSION

Antrochoanal polyps should be considered in the differential diagnosis of any child with nasal obstruction. There is a need for a careful history, nasal endoscopy and radiological workup to confirm diagnosis. Children may present in many ways and this case report highlights a child presenting with a late symptom of intermittent respiratory obstruction in supine position with unilateral nasal obstruction.

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