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Case Report

Adenoid Hypertrophy in an Adult: An Entity to Remember

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Abstract

Introduction: The adenoids (or the pharyngeal tonsils) is a lymphoid tissue. It occupies the posterosuperior surface of the nasopharynx. Regression of the adenoid occurs rapidly after 15 years of age. The adenoid was found to be present in 2.5% of the adult population.

Case Report: A 26 year-old male patient, presented to the out patient department with the chief complaints of bilateral nasal obstruction, left more than the right, since childhood. Computer tomography (CT) scans revealed a soft tissue mass, occupying the nasopharynx. Intraoperatively, using 0° nasal endoscope, bilateral choanae were seen to be obstructed by adenoid tissue. The patient underwent microdebrider assisted adenoidectomy under general anaesthesia.

Conclusion: Enlarged adenoid should be considered in the differential diagnosis of adult patients suffering from nasal obstruction. Endoscopic visualisation assisted removal of adenoids using powered instruments like the microdebrider or coablation helps remove the adenoid tissue completely, with good hemostasis and no injury to the eustachian tube.

Keywords: Adult; Adenoid; Microdebrider; Adenoidectomy

Introduction

The adenoids (or the pharyngeal tonsils) is a lymphoid tissue. It occupies the postero-superior surface of the nasopharynx. This lymphoid tissue along with several others form the Waldeyers ring [1]. Growth of adenoid continues rapidly during infancy and plateaus between 2 and 14 years of age. This is known as physiological hypertrophy. Regression of the adenoid occurs rapidly after 15 years of age [2].

However, it has been demonstrated that adenoid hypertrophy is also seen in the normal adult population and may cause nasal obstruction. The adenoid was found to be present in 2.5% of the adult population [3]. Rout et al. in 2013 showed that the most frequently involved age group in adults is 16- 25 years, and males more commonly than females, attributable to exposure to outdoor pollutants [4].

Al-Juboori et al. in 2014, concluded that adult patients with adenoid hypertrophy complained of snoring, most patients suffered from nasal discharge and around 50% patients had headache and/or pain over face. Others also had sneezing, itching, or hearing impairment. Some reported impairment of olfaction. Recurrent acute infections and allergic episodes are reported as the most common causes of adenoid hypertrophy [5].

Case Report

A 26 year-old male patient, presented to the out patient department with the chief complaints of bilateral nasal obstruction, left more than the right, since childhood, and left frontal headache on and off since 3 years.

He also gave a history of recurrent episodes of sneezing, watering of eyes and mucoid nasal discharge, aggravated on exposure to dust. There was also an associated history of snoring as well as mouth breathing.

The patient was not a known smoker, and had no co-morbidities. On examination, he had a left sided deviated nasal septum, right inferior turbinate hypertrophy, pale nasal mucosa and mucoid nasal discharge was noted in both nasal cavities. Computer tomography (CT) scans revealed a soft tissue mass, occupying the nasopharynx (Figure 1, 2), a deviated nasal septum with spur and features suggestive of bilateral maxillary sinusitis.

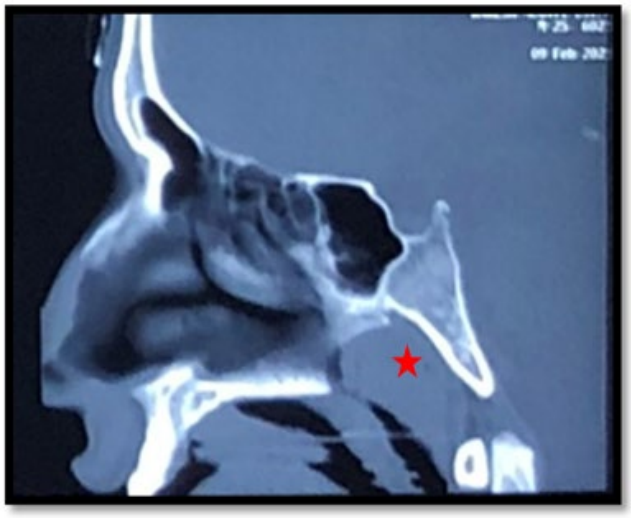

Figure 1: CT PNS (Sagittal view) – Showing a soft tissue mass (starred) in the nasopharynx, almost completely obstructing the choana.

Figure 2: CT PNS (Coronal view)- Showing a soft tissue mass (starred) in the region of the nasopharynx.

All routine investigations were done and patient was taken up for surgery. Intraoperatively, using 0° nasal endoscope, bilateral choanae were seen to be obstructed by adenoid tissue (Figure 3) and the patient underwent septoplasty, functional endoscopic sinus surgery (FESS) and microdebrider assisted adenoidectomy under general anaesthesia. Haemostasis was achieved by packing the nasopharynx with hydrogen peroxide soaked gauge for 10 minutes. The anterior nasal pack was removed 24 hours after the surgery and patient felt a significant improvement in his symptoms postoperatively.

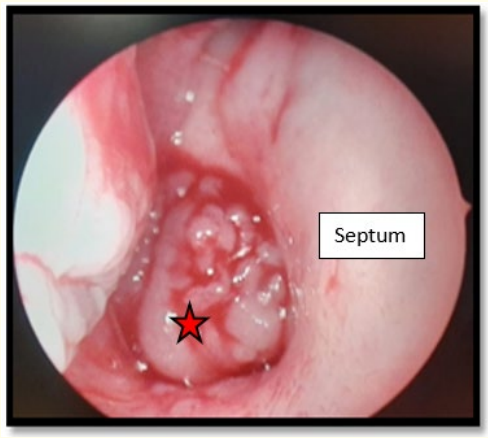

Figure 3: Intraoperative 0oNasal Endoscopic image showing hypertrophied adenoid tissue (starred) completely occupying the right choana. Similar findings were noted on the left side.

Discussion

Adenoid enlargement occurs most commonly between the age of three and seven years. Atrophy usually begins after 10 years of age and is complete before the age of 20 [6].

Adenoid enlargement is uncommon in adults and because examination of the nasopharynx by indirect posterior rhinoscopy is inadequate, many cases of enlarged adenoid in adults are misdiagnosed and subsequently maltreated [7].

Hamdan et al. in 2008, stated that adenoid hypertrophy is often underestimated in adults with nasal obstruction, because it is overlooked by underlying sinus and nasal pathology in adults since it is a disease of children [8]. At our institution, in the last four years, this is the fourth case of adenoid hypertrophy presenting as nasal obstruction in an adult.

Presence of lymphoid hyperplasia in the adult nasopharynx, including the persistence of childhood adenoids is associated with chronic inflammation. Regressed adenoidal tissue may re-proliferate in response to infections and irritants. Adenoid hypertrophy in adults is most probably multifactorial and due to infection (bacterial or viral) with reactive immunological hyperplastic changes related to the infection and/or external irritants (e.g. dust and smoking). The inhaled air stream, after passing through the narrow nasal cavity, is suddenly released and changes its direction downwards. As a result, the speed of the air stream becomes slower and the dust, bacilli or poisonous gases adhere or stimulate the nasopharyngeal wall more easily thus causing inflammation [9].

It may also be due to compromised immunity, especially those receiving organ transplants and those having human immunodeficiency virus (HIV) infection [10]. The adenoid can also hypertrophy from chronic irritation from infected or inflamed nasal secretions being swept back over it. There may be some adenoidal enlargement occurring with chronic allergic states [4].

The adenoids may cause nasal obstruction, hyponasal speech, snoring, mouth breathing, and nasal discharge. Adenoidectomy is helpful in relieving all these symptoms.

A study conducted by Yildrim et al. in 2008 showed etiology and pathological characteristics of adult and childhood adenoid hypertrophy (AH). Clinical and morphological features and accompanying otolaryngological pathologies were recorded in 40 adults and 23 children undergoing adenoidectomy for obstructive adenoid hypertrophy. Both adenoid hypertrophy forms were similar in terms of symptomatologies and associated inflammations. There were, however, significant differences in otitis media rate, with effusion and dullness, and retraction in the eardrum both more prevalent in childhood adenoid hypertrophy. Adult adenoid hypertrophy was associated with nasal septum deviation in 25.0% of patients. These results underline the importance of considering adenoid hypertrophy as a cause or contributing factor in nasal obstruction and related pathologies in adults and support the theory that it represents a long-standing inflammatory process [11].

Microdebrider is a powered instrument that provides precise dissection of soft tissues, and is relatively atraumatic. When coupled with endoscopic visualization, these instruments provide an excellent alternative to conventional adenoidectomy as the advantage of direct visualization prevents damage to adjacent structures like the eustachian tube opening and also helps to ensure adequate removal of adenoid tissue and proper haemostasis [12].

Conclusion

Enlarged adenoid should be considered in the differential diagnosis of adults with nasal obstruction, discharge, and headache or presenting with a nasopharyngeal mass with aural problems. Nasal endoscopic examination of the nasal cavities and the nasopharynx is a very important tool in the clinical assessment of patients with nasal obstruction. Adenoidectomy in adults is safe and reliable. Endoscopic visualisation assisted removal of adenoids using powered instruments like the microdebrider or coablation helps remove the adenoid tissue completely, with good hemostasis and no injury to the eustachian tube.

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