

Adenoids in Adults

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ABSTRACT

Background: it was observed during treating the patients with nasopharyngeal mass in adults that in some cases adenoids were found in adults as nasopharyngeal mass. So, this study was conducted to find out the frequency of adenoids in adults.

Objective: To find out frequency of adenoids in adult patients. **Study Design:** Retrospective study. **Settings:** Five years from June 2015 to June 2020. **Duration:** ENT department Allied Hospital, Faisalabad Pakistan. **Methodology:** The patients were admitted through OPD who fulfilled the selection criteria and informed consent was obtained. All the basic demographic information of each patient (Name, age, sex, address and contact) was also recorded. **Results:** The frequency of adenoid hypertrophy among adult patients was (1%). Majority of patients were males (67%). Majority of cases were seen between 17 to 20 years of age (33%). The most common symptom was nasal obstruction (100%). According to endoscopic grading majority were in grade IV (67%). Most common associated rhinological condition was Allergic Rhinitis (23%).

Conclusion: Adenoids are prevalent in adults and can cause nasal obstruction.

Keywords: Adenoids, Adults, Nasal obstruction, Naso-pharynx.

INTRODUCTION

The adenoids (nasopharyngeal tonsils) are part of Waldeyer's ring of lymphoid tissue located in the posterosuperior wall of the nasopharynx, they hypertrophy physiologically in children between the ages of 6 and 10 years, then atrophy by the age of 16 years. The adenoids indicates non-physiological enlargement of the nasopharyngeal tonsils and is the most prevalent cause of nasal obstruction in childhood. Symptoms of Adenoids include rhinorrhea, obstructive sleep apnoea, snoring, hyponasal speech and open-mouth breathing. Adenoidectomy is one of the most frequently performed operation in children. It has been observed that Adenoids are seen in the adult population and may cause nasal obstruction. Adenoids can causes an atypical appearance of the face, often referred to as adenoid facies. Features of adenoid facies include high arched palate, elevated nostrils, short upper lip, hypoplastic maxilla, prominent incisors, elongated face and mouth breathing. Adenoids occurs in children between the age of 6-10 years, then atrophy at the age of 16 years.¹

The cases of adenoids in adults shows that proper diagnosis of adenoids was not performed or they were not considered in differential diagnosis. The fact that adenoids usually atrophy after adolescence but in certain cases they may persist in adults.²

Adenoids are caused by infection, allergic rhinitis, malignancy, human immunodeficiency virus, smoking

and other factors in adults.³ Adenoids are often neglected in adults presenting with nasal obstruction and is often misdiagnosed as a nasal or sinus pathology. Also, being prevalent in the paediatric age group is another reason for its underestimation.⁴ Majority of cases are not diagnosed properly and are maltreated.⁵

Adenoids are physiologically enlarged in size from birth up to the age of 6 years, and after that it gradually regresses in size to disappear completely at nearly 16 years of age, but it may persist into adult life.⁶

Cowan in 1982 described the persistence of adenoid tissues in the non-paediatric age Group.⁷ Theobald in 1948 and Heffner in 1987 also reported marked hyperplasia of adenoid tissues in adults. Adenoids can present in many shapes in adults; it should be suspected when facing a case of nasal obstruction, especially if presented with purulent nasal secretions; also, other possible presentations can be a change in voice or adult obstructive sleep apnea.⁸

The symptoms can vary in severity according to the size of the adenoids and the naso-pharynx; the smaller the naso-pharynx, the more severe the symptoms.⁹

The research conducted by Al-Juboori et al. shows all patients complained of snoring, wherein most of the patients suffered from nasal discharge and around half of the patients had headaches and/or pain in the face.¹⁰

Others had sneezing, itching, or hearing impairment; also, some patients reported impairment of their smelling

sensation. Recurrent acute infections and allergic episodes are reported as the most common causes of adenoid hypertrophy.¹¹ The common causes of adenoids in adults are smoking, Pollution, allergy and chronic infection.¹²

Adenoids are graded in to I-IV grades by examiners subjective perception. Grade I causing up to 25% obstruction of choanae, Grade II causing 25% to 50% block, Grade III-50% to 75% block Grade IV- 75% to 100% choanae obstruction. Relationship with structures such as (a) vomer (b) torus tubaris and (c) soft palate are critical in grading of adenoid. Adenoid enlargement not in contact with any of the above structure is grade I, in contact with torus is grade II, contact with torus tubaris and vomer bone grade III and in contact with all above three organs even in rest is grade IV. With the advent of nasal endoscopes,¹³ CT-Scan, MRI adenoids are easy to be diagnosed in adults.

METHODOLOGY

Study Design: Retrospective study.

Settings: Department of ENT Allied Hospital, Faisalabad Pakistan.

Duration: Five years from June 2015 to June 2020.

Sample Technique: Non-probability consecutive sampling technique

Sample Size: 30 patients.

Inclusion Criteria: The inclusion criteria included male and female patients aged 17 years old and above being diagnosed with adenoids.

Exclusion Criteria: Age less than 16 years and patients already treated by adenoidectomy were excluded.

Data Collection Procedure: The patients were admitted through OPD who fulfilled the selection criteria and informed consent was obtained. All the basic demographic information of each patient (Name, age, sex, address and contact) was also recorded.

RESULTS

Table 1: Clinical symptoms of adenoids in adults (N=30)

Symptoms	No. of cases	%
Nasal obstruction	30	100
Headache	05	17
Bleeding from nose	05	17
Allergic symptoms	10	33
Rhinolalia clausa	15	50
Post nasal drip	25	83
Halitosis	05	17
Anosmia	00	00
Snoring	30	100
Mouth breathing	20	67
Deafness	00	00
Nasal discharge	15	50

Figure 1: Gender wise distribution of cases of adenoids in adults

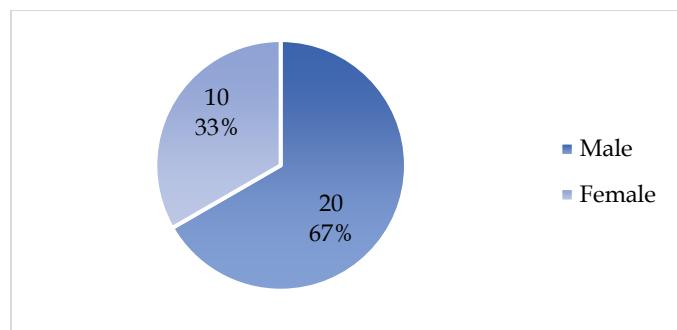


Figure 2: Frequency of Adenoids in adults presenting with nasal obstruction due to mass in nasopharynx

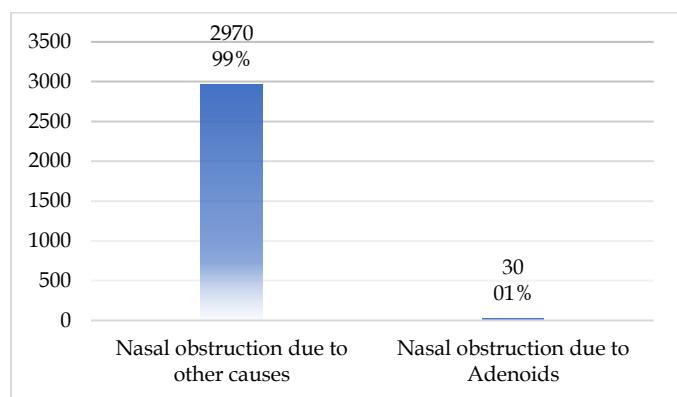


Figure 3: Age distribution of adenoids in adults (N=30)

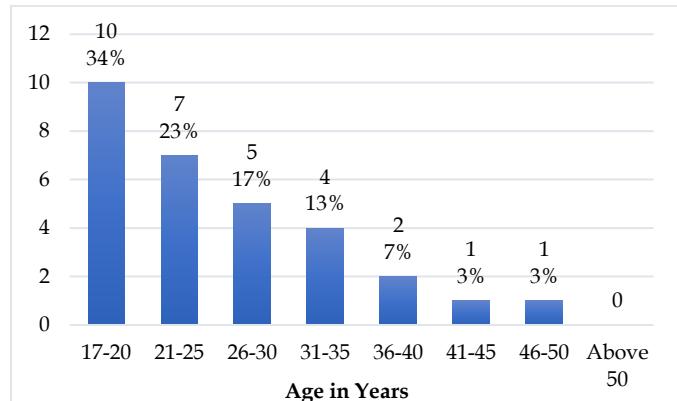


Figure 4: Grading of adenoid in adults as per nasal endoscopy (N=30)

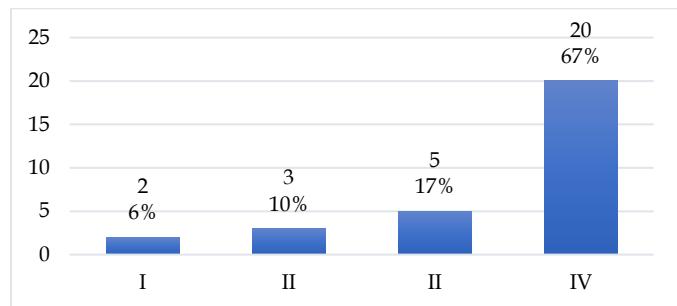


Figure 5: Associated Rhinological conditions in patients with adenoids in adults (N=30)

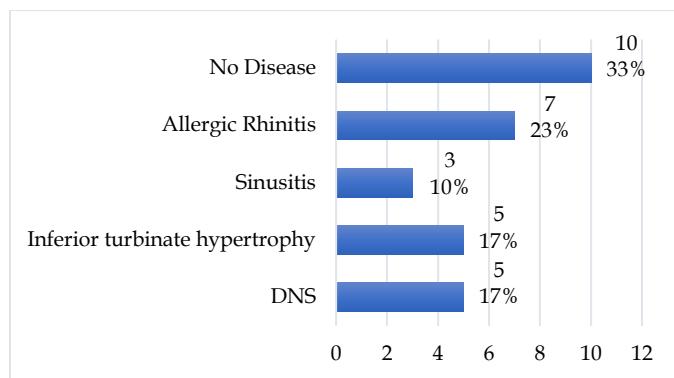


Figure 6: Adenoids in adults

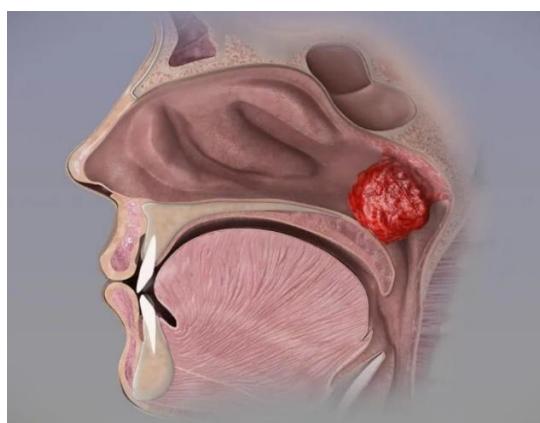


Figure 7: Grade-II adenoids in adults



Figure 8: Grade-III Adenoids in Adults



Figure 9: Grade-IV adenoids in adults



Figure 10: CT-Scan of adenoids in adults



Figure 11: X-ray of adenoids in adults



DISCUSSION

The common causes of adenoids in adults are smoking, Pollution, allergy and chronic infection. Sometimes it is associated with HIV infection, lymphoma and sinonasal malignancy.

Adenoids are common in children. Adenoids undergoes spontaneous regression in adults but it may persist and cause nasal obstruction in adults.¹⁴

Nasal obstruction in adults is almost totally attributed to deviated nasal septum, turbinate hypertrophy and nasal

polyps whereas adenoid hypertrophy being the least likely causative factor in the minds of clinicians. Adenoid in adults is not uncommon and often it is underestimated.¹⁵

Zero degree 4 mm wide angle nasal endoscope is reliable, safe, and easily tolerated which gives 3 dimensional picture of well illuminated and magnified image and play important role in differentiation of adenoid from other post nasal space mass such as cyst, tumour etc.¹⁶

The etiology of adenoids in adults is not known but few theories have been proposed such as reactivation of atrophied adenoids, Persistence of childhood adenoids. Presence of adenoids in adults is associated with chronic inflammation.¹⁷

adenoid tissue may re-proliferate in response to irritants and infections.¹⁸ Finkelstein *et al* reported adenoids in 30% of heavy smokers¹⁹ but in another study percentage of smokers was not higher in males of the same age.²⁰

Finkelstein *et al* reported that obstructive adenoids in adults are more common in smokers.²¹

Viral infection is also a causative factor in adults especially in an immune suppressed like organ transplants or an immune compromised state for example HIV/AIDS.²²

All patients have nasal obstruction which may result in recurrent nasal infection, hyponasal speech and oral breathing.²³

In adults, adenoid hypertrophy causing nasal obstruction requires excision and a histopathological examination is required to rule out malignancy.²⁴

The adenoids in adults are due to re-proliferation of regressed adenoidal tissue in response to infection or irritants.²⁵ Frequency of Adenoids in adults in our study was 1% as compare to study conducted by Alexey Surov *et al*,²⁶ Zeliha Kapusuz *et al*,²⁷ Minnigerode B *et al*,²⁸ Muhammad Ahmed Khan *et al*²⁹ in which it was 18%, 26%, 2.5% and 4.31% respectively.

In our study majority of patients were between 17 to 25-year age group and males were affected more as compare to females which may be due to more exposure to outdoor pollutants Which is also proven by study conducted by Muhammad Ahmed Khan *et al*,²⁹ Rout *et al*,³⁰ Ashwini Shastry *et al*³³ Thimmappa TD *et al*³⁴ and Talal Althobaiti *et al*.³⁵ There is equal incidence of adenoid hypertrophy between male and females as per study by Shetty *et al*.³¹ The adenoid hypertrophy in adults is frequently co exists with other nasal pathology like septal defect, turbinate hypertrophy, nasal allergy and sinusitis in adults Muhammad Ahmed Khan *et al*,²⁹ Protasevich GC *et al*,³² Talal Althobaiti *et al*³⁵ which is also seen in our study deflected nasal septum (17%), sinusitis (10%), inferior turbinate hypertrophy (17%) and allergic rhinitis (23%). On endoscopic evaluation the majority of cases were in grade IV (67%) as also shown by the study conducted by Ashwini Shastry *et al*.³³ Another study conducted by

Thimmappa TD *et al*³⁴ the majority of cases were in grade II (48%).

The most common symptoms were nasal obstruction (100%) as also seen in study conducted by Ashine Shastry *et al*,³³ Talal Althobaiti *et al*³⁵ and Thimmappa TD *et al*.³⁴

CONCLUSION

Adenoids are important cause of nasal obstruction in adults with an increasing incidence now a days because of pollution, chronic infection and allergy. All the individuals presented with nasal obstruction and other rhinological symptoms; adenoids should always be kept in mind as a cause and the patients should be evaluated for adenoids.

LIMITATIONS

Single center-based with small sample size.

SUGGESTIONS / RECOMMENDATIONS

Such study should be conducted in future at other centers also to find out / elaborate the frequency of adenoids in adults. In adult patients presenting with nasopharyngeal mass, the adenoids should be considered in differential diagnosis.

CONFLICT OF INTEREST / DISCLOSURE

No conflict of interest and the approval was taken by ethical review committee.

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