

ADENOID HYPERTROPHY IN ADULT PATIENTS AND ITS RELATION WITH ALLERGY

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Abstract

Aims: To evaluate the clinical significance of adenoid hypertrophy (AH) in adult patients and its relation with allergy.

Study Design: Case series study.

Place and Duration of Study: This study was done in Al-Ramadi and Al-Fallujah Teaching Hospitals in Al-Anbar Governorate, Iraq, during the period from February 2003 to August 2012. **Methodology:** Adult patients (6538 patients) suffered from nasal obstruction, 12 of them found to have AH. The diagnosis was made in different ways, some were diagnosed preliminary by history and clinical examination, nasolaryngoscopy, and radiography, in others the diagnosis done by accidental finding during operations for septal and sinuses pathology. In above groups of patients adenoidectomy were performed, and in remaining patient, excisional biopsy was done for a postnasal space mass diagnosed provisionally as angiofibroma. Follow up continued for one year after surgery.

Results: Out of 12 patients aged between 18-36 years with AH, four patients were diagnosed preoperatively, another seven patients the diagnosis discovered peroperatively during operations for septal and sinuses pathology. The AH represented in 0.18% of the causes of nasal obstruction in adults. Allergic manifestations and positive skin test occurred in 66% of the studied patients.

Conclusion: From this study we concluded that, AH in adult patients was rare and there was significant relationship with allergy.

Keywords: Adenoid hypertrophy, adult, nasal obstruction, nasopharyngeal radiography

Introduction

There is no doubt that large adenoids can partially or totally obstruct nasal respiration (David, 1997). Adenoids are present at birth, continue throughout childhood and atrophy at puberty, although persistence into adult life is not uncommon (Maran, 1988), it appears that it can remain hypertrophied and become symptomatic in adulthood (Frenkiel, 1980). In general, the normal adenoids attain their maximum size between the ages of 3 and 7 years and then regress. It is certainly possible that recurrent acute infections are the sole cause of abnormally large adenoids, although it has been suggested that allergic episodes also result in adenoidal enlargement (David, 1997). Adenoid hypertrophy (AH) is often underestimated in adults with nasal obstruction. The presence of purulent nasal discharge should stimulate the caring physician to do nasal endoscopy for proper diagnosis (Hamdan, 2008).

To evaluate the clinical significance of adenoid hypertrophy (AH) in adult patients and its relation with allergy.

Materials and Methods

This study was done during the period from February 2003 to August 2012 in Al-Ramadi and Al-Fallujah Teaching Hospitals in Al-Anbar Governorate, Iraq. The diagnosis was made in different ways; a group of patients were diagnosed preliminary (preoperative). The patients were evaluated with respect to age, sex, complaints, findings of physical examination, computed tomography of the nasopharynx, and nasal endoscopy, two of those patients had an associated otitis media with effusion proved by tympanometry. Another group of patients, the diagnosis was discovered accidentally during operations for septal and sinuses pathology, here the AH was detected when there was persistence of nasal obstruction, during operation, even after correction of septal deviation or reduction of

turbinate size by turbinectomy. Adenoidectomy was performed under general anesthesia for both groups of patients. The tissues obtained were subjected to histopathological study revealing lymphoid tissue hyperplasia which supported the diagnosis. The remaining one patient the diagnosis was done after excisional biopsy of postnasal space mass provisionally diagnosed as angiofibroma by magnetic resonance imaging and computed tomography of the nasopharynx. The approach to the post-nasal space were both trans-nasal and trans-oral approaches, the mass was excised totally and subjected to histopathological study which proved the diagnosis.

Skin test for allergic rhinitis was performed to all patients, and the follow up persisted for one year later after adenoidectomy.

Results

A total number of 12 patients with AH aged between 18-36years old; the mean age with standard deviation was 21 years \pm 2.4 years, male: female ratio was 2: 1 as shown in table 1.

Table 1: Age and sex distribution.

Age (years)	Male	Female
18- 20	4	1
21-30	3	2
> 30	1	1
Total	8	4

The symptoms of those 12 patients were variable and more than one symptom presented in the same patients especially those who presented with other pathologies in the septum and sinuses, the main symptom was snoring, nasal discharge, headache and or facial pain, hearing impairment, sneezing, itching and impairment of smell, as shown in table 2.

Table 2: The symptoms of the adult patients with adenoid hypertrophy. (No. 12)

Symptoms	Number	Percentage
Snoring	12	100
Nasal discharge	9	75
Headache and or facial pain	7	58.33
Hearing impairment	2	16.66
Sneezing	2	16.66

Itching	2	16.66
Impairment of smell	1	8.33

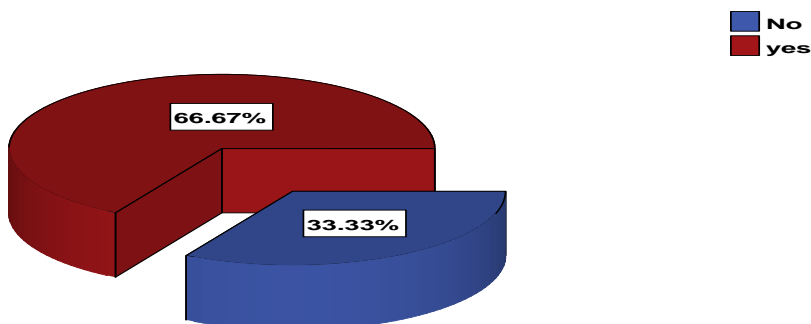
N.B. more than on symptoms presented in the same patient.

Five patients had nasal septal deviation (41.6%), The time of diagnosis and the number of the patients shown in table 3, four patients diagnosed preoperatively, and this diagnosis was proved by histopathology, seven patients diagnosed accidentally during operations for septal and sinuses pathology. One patient diagnosed after excisional biopsy, this patient had history of adenoidectomy since childhood. When we made an allergic reaction test for all adenoid cases, we found that, 67% of cases were experienced a positive allergic reaction, while only 33% were not experienced it. The obtained value of the test (Z Kolmogorov-Smirnov was 1.446) allowed to confirm this differences (P =0.031). (Figure 1)

Table 3: The time of diagnosis and the number of adult patients with adenoid hypertrophy.

The time of diagnosis of adult adenoid hypertrophy	Number	percentage
Preoperative	4	33.33
Operative	7	58.33
Postoperative	1	8.33
Total	12	100

Figure 1: Distribution of adenoid cases regarding to their experience with allergic reaction.



The results of follow up after one year revealed no recurrence of nasal obstruction in all of the patients. During the period of the study, the total number of adult patients with various types of nasal obstruction reached to 6550 patients, this means that the AH represented 0.18% of a causes of nasal obstruction in adults, see table 4.

Table 4: The number of adult patients suffered from adenoid hypertrophy with nasal obstruction as compared to the total number of patients with nasal obstruction from February 2003 to August 2012.

The adult patients suffered from nasal obstruction	No. of patients	percentage
Nasal obstruction not due to adenoid hypertrophy	6538	99.72
Nasal obstruction due to adenoid hypertrophy	12	0.18
Total	6550	100

Discussion

Although adenoidal tissue undergoes regression toward the adolescent period, it may present as the chief cause of nasal obstruction in adults (Frenkiel, 1980), (Bennett, 1993), (Yüce, 2007). Some adults have different sizes of adenoidal hypertrophy. This hypertrophy is different with children's under the pathologic microscope. Operative treatment especially the nasal endoscopic adenoidectomy and microwave treatment is a safe and

effective method (Dou, 2000). Adenoid hypertrophy is often underestimated in adults with nasal obstruction. The presence of purulent nasal discharge should stimulate the caring physician to do nasal endoscopy for proper diagnosis (Hamdan, 2008). Protasevich *et.al.* diagnosed AH in 127 patients aged between 15-48 years. Adenoids in the adults have some special clinical features, they frequently arise in the presence of nasal pathology (septal defect and turbinate hypertrophy) (Protasevich, 1999), (Khafagy, 2011), this fact was present in 58.3% of patients studied, whom were discovered accidentally during operations for septal and sinuses pathology. Septal deviation happened in 25% of the patients with AH in adults (Yildirim, 2008) which was 41.6% in our series. Adenoids in adults can simulate nasopharyngeal tumors (Protasevich, 1999). Frenkiel *et.al.* confirmed the diagnosis of hypertrophied adenoids in 12 adults investigated for nasopharyngeal mass (Frenkiel, 1980). Magnetic resonance imaging (MRI) was superior to computed tomography (CT) in distinguishing tumor from soft tissues (Dillon, 1984). Dillon *et.,al.* showed that MRI clearly differentiating mucosal and lymphoid tissue(adenoids) from others(10 of the 12 abnormal patients) (Dillon, 1984). In one of the patients studied, MRI and CT suspected that the mass was angiofibroma and it seems that both MRI and CT diagnosed the mass as angiofibroma and this means that MRI was not superior to CT in differentiation of soft tissue masses in the post-nasal space. There was clear relationship between enlarged adenoids and allergic rhinitis (Loesel , 1988), (Loesel, 1984), two third of the patients studied had allergic rhinitis diagnosed by history and skin test, but other tests that identify allergic rhinitis were not available, although it has been suggested that allergic episodes also result in adenoidal enlargement (David, 1997). Adenoids rarely regrow enough to cause symptoms of nasal obstruction after adenoidectomy (Buchinsky, 2000). Buchinsky *et.,al.* reported 26% of the patients who underwent adenoidectomy had nasal airway obstruction symptoms at follow-up due to re-growth of the adenoids (Buchinsky, 2000). In the present study, there was a single patient (8.3%) who had history of adenoidectomy before.

Conclusion

It is concluded that, AH in adult patients was rare and there was significant relationship with allergy.

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