

Obstructive Adenoid Hypertrophy in the Adult: A Case Report

By

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SUMMARY

Case definition: Adenoidal enlargement is a common paediatric problem. The adenoid vegetation most usually involutes between the ages of 10-12 years, and rarely persists into adult life.

Objective: To highlight the significance of adenoid vegetation as a differential diagnosis of nasal obstruction in adults.

Case Report: This paper presents a case of persistent symptomatic obstructive adenoid vegetation in a 23 year old Nigerian adult female student.

Conclusion: Although adenoidal tissue normally undergoes involution during late childhood period, it may persist into adult life and present as a cause of nasal obstruction.

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INTRODUCTION

Adenoids are normal sub mucosal lymphoid aggregates located at the posterosuperior wall of the nasopharynx. Reports indicate that they are normally present at birth though small and rudimentary and only become radiologically demonstrable from the age of 3 months^{1, 2}. Variation in the size of the adenoids occurs in an individual as he/she grows up. In general, normal adenoids attain their maximum size between the ages of five and seven (5-7) years, and then gradually begin to involute from the age of 9 years³.

Obstructive adenoid hypertrophy is an ailment that is commonly encountered in the paediatric age group and rarely present in adult life. Only few cases of adenoid hypertrophy in healthy adults have been reported in the literature⁴⁻⁸ and to the best of our knowledge, none has been reported in Nigeria. The aim of our report is to highlight the occurrence of obstructive adenoidal hypertrophy in a 29 year old Nigerian adult female. This may be of clinical significance when considering the differential diagnosis of nasal obstruction as well as nasopharyngeal mass in adults.

CASE REPORT

C.O is a 23 year old student from South Eastern Nigeria who was referred to the Otolaryngology clinic of the University of Nigeria Teaching Hospital, Enugu in December 2003 at the age of 17 years with a history of nasal obstruction, snoring and mouth-breathing that dated back to the first month of life.

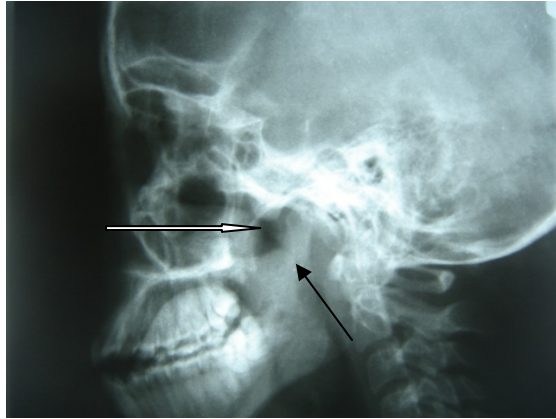
On further enquiry during the initial presentation, her medical history indicated that she snored loudly during sleep as well as breathing noisily even when awake. By the age of one year, she developed

obstructive apnoeic episodes during sleep which was initially infrequent but became worse as the years went by. A year prior to presentation, the apnoeic episodes became so frequent that she was always struggling to breathe during sleep most times. For the above symptoms, our patient received several antibiotics and systemic decongestant medications from many peripheral physicians and paediatricians she visited prior to her presentation. She had only transient periods of relief of symptoms from her medications. On clinical examination during her first visit in December 2003 she was seen to have stertorous breathing with an open mouth posture and hyponasal speech. She had very prominent tonsils which were pitted on their surfaces. Postnasal examination was not tolerated. However, there were no abnormal findings noted on otological examination. A plain lateral soft tissue X-rays of the nasopharynx was obtained and revealed huge adenoid shadow that significantly narrowed the nasopharyngeal airway. A diagnosis of obstructive adenotonsillar disease was made and she was advised on the propriety of adenotonsillectomy as the treatment for her problem. She was however lost to follow up only to re-present to our clinic 6 years after she was first seen, on account of persistence of nasal obstruction and hyponasal speech. However, obstructive sleep apnoea was no longer present.

A repeat plain lateral soft tissue x-ray of the nasopharynx was obtained at her second presentation. This showed lobulated soft tissue opacity in the nasopharynx (white arrow); similar to the initial radiological finding, that significantly narrowed the nasopharyngeal airway (black arrow), figure 1.

Figure 1

Repeat Plain soft tissue x-ray of the subject's nasopharynx



We carried out an adenotonsillectomy surgical operation on our patient following her second presentation. The operative findings were: huge adenoid vegetation occupying greater than 50% of the nasopharyngeal space and grossly enlarged palatine tonsils.

Histology of the surgical specimens revealed marked hyperplasia of lymphoid follicles with formation of well developed germinal centres seen beneath the mucosa of stratified squamous epithelium. No cellular proliferation was seen. Diagnosis was that of reactive lymphoid hyperplasia.

Our patient's condition improved significantly during her postoperative follow-up evaluations with resolution of her nasal obstruction and mouth-breathing symptoms. However, the quality of her voice has only slight improvement. She remained symptom free as at 12 months follow up.

DISCUSSION

Finding of adenoid vegetations in an otherwise healthy adult is a relatively uncommon event. This may explain the

paucity of reports in the literature. Presence of adenoid vegetations in adults may raise a suspicion of immunodeficiency associated lymphoma⁶. It has been noted that adenoid vegetations in adults may have the special clinical feature of frequently arising in the presence of nasal pathology such as septal defects and hypertrophied turbinates⁴.

Yuce, Somdas, Ketenci, Cagli and Unlu⁵ called attention to the clinical significance of adenoidal vegetations which are often overlooked as a cause of nasal obstruction in adults and found that the most common symptom was snoring and nasal obstruction.

The patient presented in our present report had clinical and radiological diagnosis of an obstructive adenoidal enlargement that spanned from early childhood through adulthood. Our patient's condition was managed conservatively for so long by the Paediatricians with the hope of expected spontaneous remission in the later childhood. This did not happen and she was eventually referred to us at the age of 17 years. It is not uncommon for parents of children with clear clinical indications for adenoidectomy to refuse surgery and opt for non-surgical conservative management. However, in view of her persistent troublesome symptoms, it was worrisome that it took a long period of time for her to accept the surgical option. The apparent delay in her coming forward for surgery could be as a result of financial constraints. Her parents were artisans to whom the cost of the surgery, especially in the absence of a beneficial health insurance, may not be affordable. However, it is also possible that her symptoms were not significantly severe enough especially during her late childhood and adulthood so as to sway her decision for adenoidectomy earlier than she did. It has been shown that following initial rapid growth of adenoids relative to the

nasopharynx during early childhood, there is a subsequent reversal of the growth rate during late childhood and adulthood. During this period, the size of adenoid was shown to remain relatively constant whilst the nasopharynx increased in size so that the airway progressively enlarges².

Adenoidectomy with or without tonsillectomy has long been applied in the treatment of obstructive problems of enlarged adenoid vegetations in both children and adults⁷⁻¹⁰. Our patient derived significant benefit with resolution of her symptoms following the adenotonsillectomy we offered her. This is similar to the reports in other series⁴⁻⁹.

It has been reported that enlarged adenoid tissue in adults show histopathological feature of chronic inflammatory cell infiltration, which is different from enlarged adenoids in children that usually show numerous lymphoid follicles and prominent germinal centre. It was hence suggested that the enlargement of adenoid tissue in adults could represent a longstanding inflammatory process rather than being a novel clinical entity¹¹. In another report however, histopathological features of adenoid tissues in adults were varied. Non-specific inflammatory reaction was reported in 43%, while 6% had predominantly follicular hyperplasia, and 51% showed mixed pattern. In our study, the histology revealed reactive lymphoid hyperplasia similar to the published report¹⁰. It is possible that our patient had a recent acute infective/inflammatory episode within the adenoid tissue prior to the adenoidectomy, which could explain the histopathological finding of reactive lymphoid hyperplasia.

Conclusion

Persistence of adenoid vegetation is rarely seen in adults but when present, can become

significantly enlarged to cause obstructive airway symptoms. It should be considered in the differential diagnosis of chronic nasal obstruction in adults. Adenoidectomy is recommended as an effective treatment of the obstructive symptoms in such patient.

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