Sinister snoring in a child: a case report

Boon Chin Te*, Zhi Xiang Yeoh2, Rohaizam Japar Jaafar3, Bee See Goh1

ABSTRACT

Introduction: Snoring in a child is not uncommon and is frequently caused by adenotonsillar hypertrophy, or rarely, by some sinister lesions. High clinical suspicion for head and neck malignancy is warranted in a child with atypical snoring presentation associated with neck swelling.

Case: We present a case of parapharyngeal Lymphoma in a child who presented with progressively worsening snoring. Clinical examination revealed swelling on the left side of the neck, with medialization of the left lateral pharyngeal wall, suggesting a left parapharyngeal tumor. A subsequent biopsy confirmed the diagnosis of Lymphoma. Chemotherapy was initiated immediately.

Conclusion: The presentation of head and neck Lymphoma in a child can be vague. Early recognition and treatment are crucial to improve the survival of a child.

Keywords: Lymphoma, Parapharyngeal Space, Snoring, Obstructive Sleep Apnea


INTRODUCTION

As high as 59.7% of preschool children are reported to have snoring.1 Among the common causes of snoring in the pediatric group is obstructive sleep apnoea, which is secondary to adenotonsillar hypertrophy and can be managed medically or surgically with adenotonsillectomy. However, an atypical presentation of snoring should raise the suspicion of other possible diseases. Progressive snoring reflecting disease progression warrants detailed history taking and physical examination, including flexible endoscopic examination. Further investigation is vital to exclude rare but sinister conditions such as malignancy. A parapharyngeal tumor in the pediatric group is rare, of which the most common is Lymphoma.2,3 Lymphoma tends to grow rapidly and invade adjacent structures. Prompt diagnosis and treatment promise a better outcome and prognosis.4 We present a pediatric case with a large, parapharyngeal space mass, which was eventually diagnosed as Lymphoma.

CASE

A five-year-five-month-old Malay girl with no previous medical illness presented with progressively worsening snoring for a month. This was associated with two weeks of painless swelling on the left side of her neck. She had hyponasal speech but no worsening snoring for a month. This was associated with two weeks of painless swelling on the left side of her neck. She had hyponasal speech but no

DISCUSSION

Snoring is common among children. Prevalence of snoring was reported to be as high as 59.7% among preschool children, mostly due to habitual snoring. In comparison, obstructive sleep apnoea syndrome has been estimated to affect about 2-3.5% of children.5,6 However, snoring in a
are benign and reactive in the vast majority of cases, usually due to the upper respiratory tract infection. However, persistent nodal enlargement, particularly if painless and involving the posterior triangle or supraclavicular region, is of clinical concern given the possibility of malignant disease.

There are about 150–200 per 1 million children affected by cancer every year, in which about ten percent of cases are head and neck cancer, with the most common forms being Lymphoma and sarcoma. The non-specific presentation of the childhood cancer invariably causes delayed diagnosis of malignancy and treatments, which might lead to poor outcomes. Lilja-Fischer et al. reported only 6% of 78 cases of confirmed pediatric head and neck malignancy was correctly diagnosed primarily. In the study, 65% of cases was misdiagnosed as infection, 8% as benign tumor and 13% as other benign diseases during the first presentation. A systematic review by Riffat et al. identified 1,143 adults with parapharyngeal space tumors in 17 studies, in which a majority (82%) were benign, and 18% were malignant. Conversely, in a review for the pediatric group, 20 among 30 (67%) pediatric patients with primary parapharyngeal neoplasms were malignant. The ratio strongly contrasts with adult tumors, with only 20—30% of cases being represented by malignancy. This highlights the importance of the expedited approach in the management and workup of a pediatric parapharyngeal mass. In the case presented above, the patient was promptly admitted for facilitating workup and active observation for the potential airway compromise caused by the rapidly-growing mass.

The distinction of lymphoma from carcinoma and other benign or malignant lesions is critical, as the treatment approach for these two groups of the disease differs. There are no pathognomonic radiological features of parapharyngeal space lymphoma; however, imaging is useful in excluding other common tumors of the parapharyngeal space. In this particular case, we opted for a CT investigation given the atypical presentation and to help to narrow down the differentials in anticipation of surgical management. CT and magnetic resonance imaging (MRI) can help in differentiating hypervascular lesions from hypovascular lesions such as Lymphoma and salivary gland malignancy.

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Figure 1. Polysomnography showing an apnoea-hypopnea index (AHI) of 13.4 with the predominant obstructive component.

Figure 2. The CT scan images highlight the finding. (a) Axial view of computed tomography showing lobulated heterogeneously enhancing mass in the retropharynx (marked by thin arrow) and left parapharyngeal space (marked by arrowhead). (b) Coronal view of computed tomography showing a large mass spanning from the base of the skull superiorly (marked by arrows). (c) Sagittal view of computed tomography showing bulk of the mass in the retropharyngeal space (marked by arrows).
on imaging is impossible as both diseases share the similarity in radiological features. There are no definite radiological features in differentiating the two. Even a well-defined margin of a lesion in MRI cannot be a reliable sign of the benign disease.

Although imaging modality can narrow down the spectrum of differential diagnoses, the definite diagnosis highly depends on the histopathological examination of tissue biopsy. In a study by Takashi et al., fine needle aspiration cytology (FNAC) has achieved the correct diagnostic rate of 95.2% in differentiating benign and malignancy tumor among 63 patients. The sensitivity and specificity in diagnosing malignancy were reported as 66.7% and 100% respectively in the study.

However, limited studies were carried out in pediatric groups. In most cases, the histopathological examination of a surgical biopsy is required to achieve a definite diagnosis. We opted for a surgical biopsy for the case above to obtain the definite tissue diagnosis with minimal delay.

The management of a pediatric parapharyngeal tumor relies on multiple factors, such as type or grading of malignancy, staging of tumor, its locoregional extension with involvement of surrounding vital structures, distant metastasis, or the patient’s underlying co-morbidities. The treatment should be individualized and treatment plan is discussed in a multidiscipline meeting involving head and neck surgeon, pediatrician, nutritionist, and oncologist. It is crucial to consider various differential diagnosis during the workup of parapharyngeal masses and optimize the use of the radiological modalities and histopathological assessment to establish a definite diagnosis. Early diagnosis of the head and neck malignancy is paramount, as many of these cancers are readily treatable and often curable, with current oncological management strategies. Early treatment will improve the prognosis of the disease.

CONCLUSION

Acute onset of snoring with worsening airway obstruction should raise a high index of suspicion of tumor, despite head and neck malignancy in a child being rare. Early intervention with the appropriate investigations is crucial for detecting the sinister disease and improve its treatment outcome.

CONFLICT OF INTEREST

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AUTHOR CONTRIBUTION

All authors have contributed equally to this research, including preparation, data gathering, analysis, drafting, and approval to publish this manuscript.

PATIENT CONSENT

The authors had obtained consent from the parents (on behalf of the patient) before submitting this article. The family had agreed that the case could be published and available to the general public without revealing the patient’s identity.

REFERENCES


