

Assessing asymmetrical tonsils in children: an evidence-based review for primary care

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Clinical vignette

In a usual morning surgery, a 2-year-old child presents with a 2-week history of reduced oral intake. He has recently completed a 1-week course of antibiotics for tonsillitis, prescribed by a GP colleague. While the child is systemically well, you notice a striking enlargement of the right palatine tonsil. Concerned about the possibility of quinsy and impending airway obstruction, you decide to refer the child to the emergency department for further assessment and management by the Ear, Nose, and Throat (ENT) team.

Could this child have a quinsy?

Quinsy, characterised by the accumulation of pus between the tonsil capsule and pharyngeal constrictor muscle, typically presents with unilateral sore throat, odynophagia (pain on swallowing), and systemic upset. Key examination signs include trismus and unilateral palatal swelling with uvular deviation to the opposite side. It is important to note that an enlarged tonsil causing distortion of the soft palate can resemble a quinsy, but the absence of pain, trismus, and features of sepsis in this case indicate an alternative diagnosis for unilateral tonsil enlargement. While maintaining a heightened awareness of potential airway obstruction is crucial, the lack of stertor (low-pitch inspiratory noise caused by partial pharyngeal obstruction) and respiratory distress in this case negates the necessity for immediate emergency care.

Why should tonsil asymmetry cause concern?

Unilateral tonsillar enlargement is the most common clinical manifestation of palatine tonsil lymphoma, with approximately 73% of malignant cases presenting in this way in the paediatric population.¹ Tonsils are the most frequent site of involvement for extra-nodal non-Hodgkin lymphoma in the head and neck region, typically presenting with dysphagia, snoring/apnoea, cervical lymphadenopathy, and a visible lesion on the tonsil.¹ However, it is important to note that tonsil asymmetry does not necessarily indicate malignancy. The vast majority of tonsil asymmetry identified during oropharyngeal examination are not clinically significant when subjected to volumetric analysis after tonsillectomy.² This apparent asymmetry, attributed to benign causes such as variation in tonsil fossa depth, recurrent tonsillitis, or benign lymphoid hyperplasia,^{3,4} accounted for approximately 82% of cases of unilateral tonsil enlargement.⁵ Lymphoma was identified as the cause of tonsillar asymmetry in 18% of children.⁵ However, it is essential to be aware that lymphoma is an exceedingly rare culprit for clinically asymmetrical tonsils in the absence of additional concerning clinical

features. Several case series^{1,3,6} have not reported any cases of lymphoma within this group. In order to accurately identify the red flags in children with asymmetrical tonsils, a comprehensive clinical assessment is crucial.

How should a child with unilateral tonsil enlargement be assessed?

A comprehensive assessment begins with a focused history, paying special attention to rapid tonsillar enlargement. Non-Hodgkin lymphoma is the primary concern, making it crucial to inquire about B symptoms (fever $>38^{\circ}\text{C}$, weight loss $>10\%$, and night sweats). However, it is worth noting that these B symptoms are reported less frequently in the paediatric population, who present more often with obstructive symptoms such as dysphagia and snoring/apnoea.¹

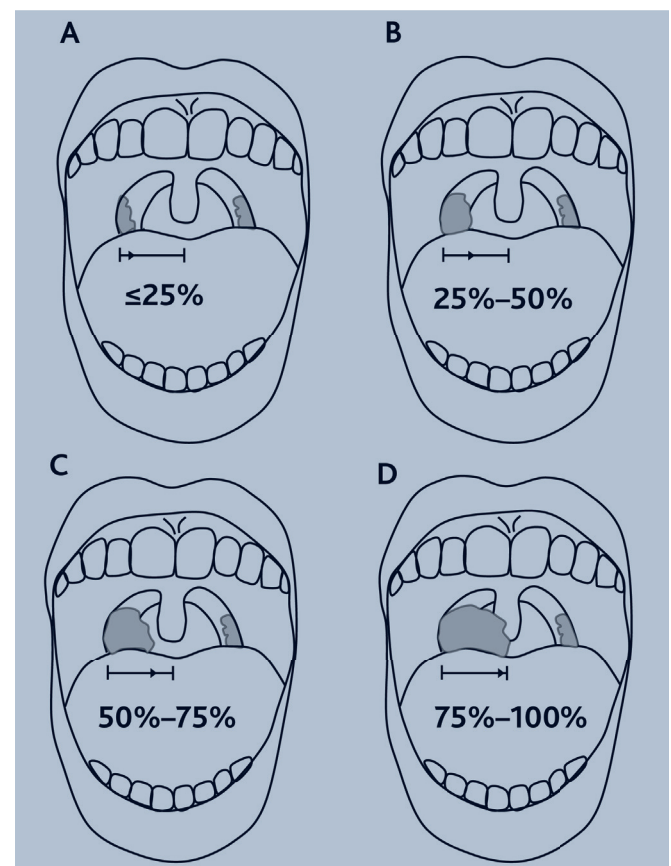


Figure 1. The Brodsky classification system characterises tonsil size based on the portion of the oropharyngeal space they obstruct with reference to an imaginary line drawn from the anterior pillar to the midline.⁷ A) Grade 1 corresponds to a tonsil obstructing $\leq 25\%$ of the oropharyngeal space; B) Grade 2 indicates 25%–50% obstruction of the airway; C) Grade 3 represents 50%–75% obstruction; and D) Grade 4 denotes 75%–100% airway obstruction.

Box 1. Red flags in a patient with asymmetrical tonsils^{1,8}

- Rapid enlargement
- Gross asymmetry (>2 degrees on the Brodsky scale)
- Concurrent persistent cervical lymphadenopathy
- Asymmetric consistency on palpation
- Changes in appearance or ulceration of tonsillar mucosa
- Constitutional symptoms (for example, unintended weight loss, night sweats, and persistent fever)
- Any history of malignancy

It is important to consider the possibility of a parapharyngeal mass (such as a parotid deep lobe tumour, paraganglioma, or neurofibroma) causing medial displacement of a tonsil. A high index of suspicion is required, given that significant tonsillar asymmetry may be the only early clinical sign. In advanced disease, parapharyngeal masses may present with a palpable neck lump and dysfunction of the lower cranial nerves IX–XII.

A general examination, including assessment of the work of breathing, audible stertor, lymphoreticular examination, and a complete ENT examination, is essential. The oropharyngeal examination should include inspection of the tonsils for mucosal irregularity, ulceration, and a comparison with the contralateral tonsil. The use of the Brodsky scale,⁷ as illustrated in Figure 1, provides a standardised method for documenting and monitoring tonsil size. Palpation of the neck to identify cervical lymphadenopathy and masses is obligatory.

What are the indications for referral to secondary care?

According to the Triological Society Best Practice guideline,⁹ the incidental finding of isolated tonsil asymmetry, without accompanying lymphadenopathy or associated symptoms, can be monitored closely in primary care for at least 6 months. Initially, assessments every 4 weeks for the first 3 months are advisable. However, primary care practitioners must remain vigilant for the development of red flags,^{1,8} as listed in Box 1. In confirmed cases of paediatric tonsil lymphoma, red flags were observed in the following frequencies: alternation in mucosal appearance (45%), cervical lymphadenopathy (30%), and B symptoms (16%).¹ The identification of red flags should prompt a fast-track referral to ENT on a suspected head and neck cancer pathway. It is important to note that unilateral tonsillar enlargement caused by an upper respiratory tract infection, coupled with reactive cervical lymphadenopathy, may inadvertently activate a fast-track referral. The Best Practice guideline⁹ anticipates this particular scenario, and recommends monitoring for these patients. If concerns remain, an ultrasound Doppler can serve as a valuable diagnostic tool to differentiate between reactive and malignant cervical lymphadenopathy.⁹

Conclusion

Unilateral tonsil enlargement in children can pose diagnostic challenges. While many cases reveal benign underlying causes, an astute clinical approach and vigilant monitoring of red flags are essential in the management of unilateral tonsil asymmetry in a young person.

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Funding

Faraz Mughal, Doctoral Fellow 300957, is funded by the NIHR.

Provenance

Freely submitted; externally peer reviewed.

Competing interests

Faraz Mughal is a member of the Royal College of General Practitioners Adolescent Health Special Interest Group.

DOI: <https://doi.org/10.3399/bjgp24X736377>

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