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A rare cause of tonsil mass in a child: Lymphoid polyp

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Abstract

Objective: Solitary mass lesions of the palatine tonsils are rare in children. While a tonsillar mass can be concerning for a neoplasm, benign conditions may present with a mass arising from the surface of the palatine tonsils in children. We describe clinical and histopathological characteristics of a lymphoid polyp in a child with unilateral tonsillar mass.

Methods: Retrospective chart review.

Results: A 6-year-old girl presented for evaluation of recurrent acute tonsillitis and a mass on the left palatine tonsil. A pedunculated mass with the base attached to the left palatine tonsil was observed. The mass was completely removed by tonsillectomy. The final diagnosis was lymphoid polyp.

Conclusion: Pediatricians, otolaryngologists, and pathologists should be aware of the occurrence of tonsillar lymphoid polyp in the pediatric age group.

Keywords

Lymphoid polyp, palatine tonsil, tonsillar mass, children

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Introduction

Palatine tonsils are symmetrical bodies of lymphoid tissue located between the arches of palatoglossal and palatopharyngeal muscles. Unilateral enlargement of the palatine tonsils requires otolaryngologic assessment. The etiology of unilateral enlargement of the palatine tonsils includes infections, anatomical variations, and neoplasms.[1–10] Solitary mass lesions of the palatine tonsils are rare in children. While a tonsillar mass can be concerning for a neoplasm, benign conditions may present with a mass arising from the surface of the palatine tonsils in children.[1–5] We describe clinical and histopathological characteristics of a lymphoid polyp in a child with unilateral tonsillar mass.

Case report

A 6-year-old girl was referred to a tertiary care children's hospital for assessment of recurrent acute tonsillitis and a mass on the left palatine tonsil. Symptoms during acute tonsillitis included sore throat, difficulty in swallowing, and fever. Six episodes of acute tonsillitis occurred, and treatment with oral antibiotic resolved acute tonsillitis. The mass on the left palatine tonsil has been present for a year. The birth history was unremarkable; the patient had never been hospitalized and had never undergone surgery. Past medical history included partial seizure and family history was unremarkable.

Physical examination revealed a well-appearing child in no respiratory distress, normal otologic, and nasal examination results. Size of the palatine tonsils was symmetrical. A pedunculated mass with the base attached to the left palatine tonsil was observed (Figure 1). Attachment of the mass appeared to involve the superomedial pole of the left palatine tonsil. The mass was approximately 8 mm long and 3 mm wide. The mass had a smooth surface the same color as adjacent mucosa. The mass was covered with normal appearing mucosa and did not appear to cause an obstruction to the

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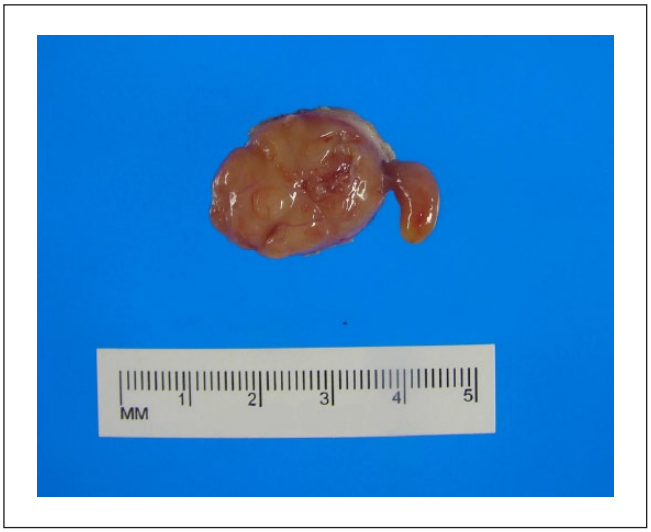

Figure 1. Polypoid mass originating from the left palatine tonsil.

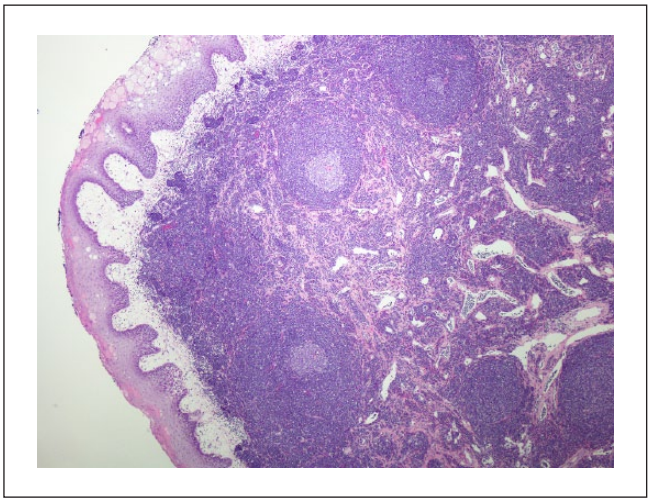

Figure 2. Photomicrograph of the polypoid tonsillar mass showing reactive lymphoid tissue and dilated lymphatic channels (hematoxylin and eosin, 4× total magnification).

oropharynx. No other abnormality was found in the oral cavity, oropharynx, and head and neck regions.

A bilateral tonsillectomy was performed using microscope-assisted bipolar cautery technique. Bilateral palatine tonsils were submitted for histologic examination. Bleeding occurred 7 days after tonsillectomy, and physical examination did not reveal active bleeding or blood clot. The patient was admitted for observation and had no further bleeding. Histopathologic examination showed mildly fibrous stroma containing dilated lymphatic channels and abundant lymphoid tissue with scattered small germinal centers (Figures 2 and 3). Lymphoid polyp was filled by lymphoid tissue within the stroma. The lymphoid tissue was composed of sheets of small lymphocytes with scattered plasma cells and histiocytes. There were scattered primary follicles and small

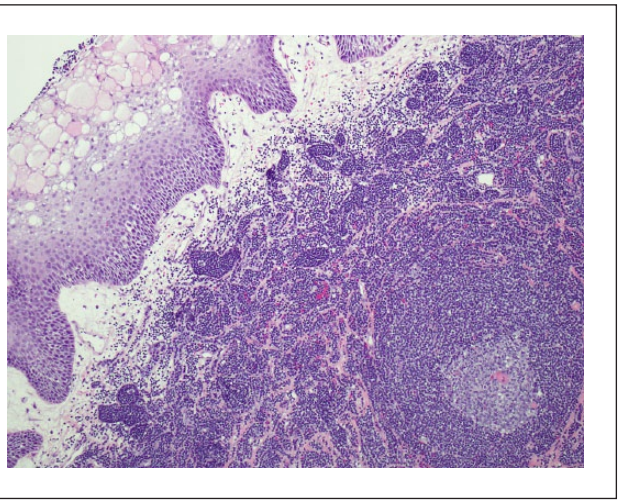

Figure 3. Photomicrograph of the polypoid tonsillar mass showing a reactive germinal center and mildly edematous stroma underlying the squamous epithelium (hematoxylin and eosin, 20× total magnification).

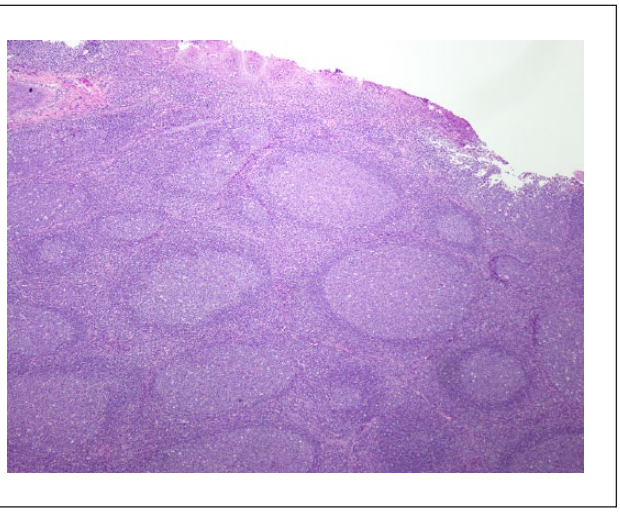

Figure 4. Photomicrograph of the underlying tonsil shows markedly reactive lymphoid tissue with abundant large well-formed germinal centers with polarized mantle zones (hematoxylin and eosin, 4× total magnification).

germinal centers. The background stroma was mildly edematous with abundant dilated lymphatic channels. The overlying stratified squamous mucosa showed patchy thickening but was otherwise unremarkable. In comparison to fibroepithelial polyp, the underlying tonsil showed markedly reactive lymphoid tissue with abundant large, well-formed, polarized germinal centers with well-defined mantle zones (Figure 4).

Discussion

We presented the case of a child with unilateral tonsillar mass which lead the pediatrician refer the patient to otorhinolaryngological assessment. Clinically, the majority of

Table 1. Reported cases of lymphoid polyps of the palatine tonsils in children and adults.

Reference	Age (years)	Gender	Symptoms (duration)	Size (cm)	Histopathology	Treatment
Dias et al.[1]	16	Female	Odynophagia; dysphagia (8 years)	3.5 × 2.5 × 2	Lymphoid papillary hyperplasia	Tonsillectomy
Barreto et al.[6]	14	Female	Recurrent tonsillitis (unreported)	1.0	Lymphoid polyp	Tonsillectomy
Barreto et al.[6]	17	Male	Recurrent tonsillitis (unreported)	1.2	Lymphoid polyp	Tonsillectomy
Barreto et al.[6]	27	Male	Dysphagia; mass (7 months)	1.5	Lymphoid polyp	Polypectomy
Barreto et al.[6]	56	Male	Dysphagia; mass (4 months)	4.0	Lymphoid polyp	Polypectomy
Barreto et al.[6]	20	Female	Dysphagia; sore throat (40 days)	2.0	Lymphoid polyp	Polypectomy
Barreto et al.[6]	28	Male	Mass (unreported)	0.8	Lymphoid polyp	Polypectomy

children with tonsillar mass present with dysphagia or chronic tonsillitis.[1–3] Dysphagia, if present, did not necessarily correspond to the size of the lesion.[4] Our patient had a history of recurrent acute tonsillitis; however, it is important to emphasize that recurrent acute tonsillitis did not instigate the tonsil mass. Tonsillar masses in children are similar in appearance and have no defining physical examination characteristics which can be used to distinguish benign lesions from malignant ones.[5] Tonsillectomy is indicated for definitive diagnosis. In this study, tonsillectomy was performed to remove the mass, and histopathologic examination confirmed the diagnosis of lymphoid polyp.

Tonsillar lymphoid polyp has been reported mostly in young adults and males.[6] Unilateral tonsillar involvement without site predilection occurs. Afflicted individuals commonly present with a mass or dysphagia. We report a rare presentation of the lymphoid polyp of the palatine tonsil. Our patient was a 6-year-old girl with unilateral lymphoid polyp of the palatine tonsil. Tonsillar lymphoid polyp did not produce dysphagia. Clinical assessment of tonsillar lymphoid polyp is comparable to the other polypoid masses of the palatine tonsils; therefore, tonsillectomy was performed for diagnostic purposes.

Differential diagnosis of a benign polypoid tonsillar lesion includes, but not limited to, lymphoid polyp, lymphangiomatous polyp, fibroepithelial polyp, lymphoepithelial cyst, and squamous papilloma. Polypoid tonsillar lesions may have variable amount of lymphoid tissue. The diagnosis of lymphoid polyp requires the presence of predominantly lymphoid tissue component.[7] Lymphoid polyp of the palatine tonsil is rare with only three cases reported in children (Table 1).[1,6] In previous studies, lymphoid polyp and lymphoid papillary hyperplasia were documented in a young teen[6] and two teenagers,[1,6] and our patient was a 6-year-old girl (Table 1). The effect of aging on the pathogenesis of lymphoid polyp is unknown. Compared to tonsil tissue, lymphoid polyp exhibits shorter and less branched crypts and complex architectural pattern characterized with the coexistence of lymphoid follicles with a fibrous stroma.[6]

Lymphangiomatous polyp is the most common entity documented in tonsillar masses with lymphoid component. To date, more than 30 cases of lymphangiomatous polyps of the palatine tonsil have been reported and at least 10 of the 30 cases occurred in children.[2,5,8,9] Lymphangiomatous polyp is characterized with dense pockets of lymphocytes, proliferation of submucosal dilated lymphatic vascular channels, fibrous connective tissue, no infiltration of the underlying stroma, and may show nested epitheliotropism of lymphocytes in the epithelium.[5] Submucosal dilated lymphatic channels in lymphangiomatous polyp are not as pronounced as in the typical lymphangioma. The stromal components are frequently more abundant than the vessels in lymphangiomatous polyp. A stromal adipose tissue component may be seen in some cases. Lymphangiomatous polyp is separated from the tonsillar parenchyma, whereas lymphoid papillary hyperplasia blends with the underlying lymphoid stroma. The majority of the lymphangiomatous polyps are pedunculated polypoid masses arising from the surface of the tonsil. Fibroepithelial polyp is characterized with a lesion lined by squamous epithelium with parakeratosis, fibrofatty tissue in the stalk, and mild infiltrate in the subepithelial region.[3] The pathogenesis of lymphoid polyp of the palatine tonsil has not been delineated. Reactive proliferation of tissues including lymphoid infiltrate, fibrous tissue, and lymph vessels has been suggested to cause lymphoid polyp. Microscopic examination features such as fibrous tissue, prominent vascularity, reactive germinal centers, multiplicity of cell types, and polyclonality are critical in the differential diagnosis with lymphoma. Our findings of mildly fibrous stroma, abundant lymphoid tissue with scattered small germinal centers, and lack of multiplicity of cell types supported benign process; therefore, polyclonality was not tested.

Lymphoid polyp of the tonsil has been treated by tonsillectomy or polypectomy.[1,6] Recurrence after polypectomy has not been reported. We preferred tonsillectomy for diagnosis and treatment because of the possibility of the origin of the mass located in the deeper portion of the tonsil as well as due to the previous history of recurrent tonsillitis.[6]

Conclusion

This case report emphasizes that lymphoid polyp should be included as one of the possible differential diagnoses in children with tonsillar mass. Considering the potential to grow and possibility of complications, the treatment of choice for

lymphoid polyp of the palatine tonsil is tonsillectomy. Pediatricians, otolaryngologists, and pathologists should be aware of the occurrence of tonsillar lymphoid polyp in the pediatric age group.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical approval

Ethical approval to report this case was obtained from University of Texas Southwestern Medical Center, Institutional Review Board (STU 022016-085).

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Informed consent

Written informed consent was obtained from the patient's mother for anonymized patient information to be published in this article. University of Texas Southwestern Medical Center, Institutional Review Board (STU 022016-085) waived the requirement of informed consent for anonymized patient information to be published in this article.

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