The Clinical Manifestations In Children With Tonsillar Lymphoma

Dr. Alexandre Caixeta Guimarães

ENT doctor from Department of Otolaryngology, Head and Neck Surgery, University of Campinas (UNICAMP), Brazil.
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Clinical manifestations in children with tonsillar lymphoma: A systematic review

Alexandre Caixeta Guimarães\textsuperscript{a,*}, Guilherme Machado de Carvalho\textsuperscript{a}, Lucas Ricci Bento\textsuperscript{a}, Carlos Correa\textsuperscript{b}, Reinaldo Jordão Gusmão\textsuperscript{a}

\textsuperscript{a} Department of Otolaryngology, Head and Neck Surgery, University of Campinas (UNICAMP), Brazil
\textsuperscript{b} Department of Public Health, University of Campinas (UNICAMP), Brazil

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Introduction

- Lymphoma is the third most common childhood malignancy and the most common in the head and neck.

- Approximately 15% of head and neck lymphomas in children affect the Waldeyer's ring

- Non-Hodgkin lymphoma (NHL) is the most common type

- The palatine tonsils (PT) are the most frequent site of involvement for extra-nodal NHL

- Early diagnosis and treatment are of great importance in the prognosis of tonsillar lymphoma patients.
Objective

To realize a systematic review of the literature on the clinical manifestations present at diagnosis of tonsillar lymphoma in pediatric patients
MATERIALS AND METHODS:

- Articles in English, Spanish or Portuguese in the last 15 years about lymphoma in palatine tonsil in children from PubMed/Medline, LILACS, IBECs, Cochrane, SCIELO, BIREME and Scopus.

- The MeSH terms and free text words used were "tonsillar lymphoma and children."

- Two authors were responsible for selecting all the articles that had been completely read.
Articles and case reports were included covering the pediatric age group, considered up to 18 years old that contained information of the clinical manifestations of tonsillar lymphoma at diagnosis.
RESULTS:

- 87 articles were found, in which 18 (20.6%) met the inclusion criteria.
RESULTS:

- There were 66 cases of PT lymphoma.
- The age ranged from one to 17 years with a mean of 7.4 years.
- There was a predominance of male patients, with a male/female ratio of 1.95.
- Most of the cases (68.3%) were from North America, followed by Europe with 13.7% cases, Australia with 10.5%, South America with 4.5%, and Africa with 3% of the cases.
# Prevalence of clinical manifestations

<table>
<thead>
<tr>
<th>SIGN/ SYMPTOM</th>
<th>Cases</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unilateral tonsillar enlargement/ Tonsillar asymmetry</td>
<td>48</td>
<td>72.7%</td>
</tr>
<tr>
<td>Color alteration/ Visible lesion in PT</td>
<td>30</td>
<td>45.4%</td>
</tr>
<tr>
<td>Cervical lymphadenopathy</td>
<td>20</td>
<td>30.3%</td>
</tr>
<tr>
<td>Dysphagia</td>
<td>19</td>
<td>28.7%</td>
</tr>
<tr>
<td>Snore/apnea</td>
<td>16</td>
<td>24.2%</td>
</tr>
<tr>
<td>Recurrent tonsillitis</td>
<td>8</td>
<td>12.1%</td>
</tr>
<tr>
<td>Fever</td>
<td>7</td>
<td>10.6%</td>
</tr>
<tr>
<td>Weight loss</td>
<td>6</td>
<td>9%</td>
</tr>
<tr>
<td>Vocal alteration/difficulty to speak</td>
<td>6</td>
<td>9%</td>
</tr>
<tr>
<td>Local pain (tonsillar)</td>
<td>5</td>
<td>7.5%</td>
</tr>
<tr>
<td>Tonsillitis treatment without improvement</td>
<td>4</td>
<td>6.6%</td>
</tr>
<tr>
<td>Immunosuppression</td>
<td>4</td>
<td>6.6%</td>
</tr>
<tr>
<td>Auricular fullness</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>Prior radiotherapy</td>
<td>1</td>
<td>1.6%</td>
</tr>
<tr>
<td><strong>TOTAL (n=66)</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
RESULTS:

The presence of B symptoms occurred in only 16% of the patients

Burkitt's lymphoma was the most common type (50%), followed by B-cell NHL (30%), and T lymphoblastic (6%)
RESULTS:

- Burkitt: 50%
- B-cell NHL: 30%
- T lymphoblastic: 6%
- Lymphocytic: 1%
- Histiocytic: 1%
- NK/T Cells: 2%
- Pecursor B-cell lymphoblastic: 2%
- Hodgkin: 2%
- Without identification *: 6%
Discussion:

- This data contrast with the data collected for the adult population with PT Lymphoma, in which the most common manifestations are dysphagia or odynophagia and cervical lymphadenopathy.

- This was the largest review of PT lymphoma in children and the first systematic review that included case reports and appointed the most common symptoms in this disease.
Discussion:

Children with a high level of suspicion should undergo surgery of tonsillectomy for diagnosis.

Children who present only some of the manifestations should have a close follow up and be submitted to complementary examinations such as ultrasound when cervical lymphonodes are present. PET/CT may be discussed with the family.

For cases with atypical manifestations we advise only a close clinical follow up and perform complementary examinations or surgery if the level of suspicion increases.
Conclusion:

- The most common clinical manifestations found in children with PT lymphoma were **unilateral tonsillar enlargement, alteration of appearance of the PT, cervical lymphadenopathy, dysphagia, and snoring**

- **Burkitt's** was the most common type of lymphoma, followed by B-cell NHL

- A detailed description of the PT lymphoma cases and the use of criteria for the classification of tonsil asymmetry are important for future review.
Key Points:

Considering that early diagnosis and treatment are of great importance in the prognosis of tonsillar lymphoma patients;

The knowledge of the most frequent clinical manifestations are relevant for early suspicion and diagnosis.
Key Points:

Most frequent clinical manifestations:

Unilateral tonsillar enlargement / Tonsillar asymmetry (72%)
Key Points:

Most frequent clinical manifestations:
Alteration of appearance of the PT (45%)
Key Points:

Most frequent clinical manifestations:
- Cervical lymphadenopathy (30%)
Key Points:

Most frequent clinical manifestations:
Dysphagia (28%) and Snoring (24%)
Key Points:

Other frequent clinical manifestations:

Recurrent tonsillitis / Weight Loss / Fever
Key Points:

Tonsillar Lymphoma:
Future Directions:

• Association between unilateral tonsillar enlargement and lymphoma in children: A systematic review and Meta-Analysis

The main cause of asymmetry of palatine tonsils was lymphoid hyperplasia, followed by lymphoma and nonspecific benign changes.

The asymmetry of tonsils was present in 73.2% of cases of lymphoma.

There was association between asymmetric palatine tonsils and lymphoma, with a likelihood ratio of 43.5 for children with asymmetry of palatine tonsils and 8938.4 for children with asymmetry of tonsils and other signs of suspicion for malignancy.
Future Directions:

- Tonsillar lymphoma in children: An age distribution study

The children's ages ranged from 1 to 17 years with a mean of 7.7 years.
Future Directions:

- Tonsillar lymphoma in children: An age distribution study

Most patients (55%) are concentrated in the age group 2-7 years, with a peak between 4 and 5 years.

There was no difference between the pattern of age distribution between males and females.
Thank you for the attention

Clinical Manifestations of children with tonsillar lymphoma

E-mail: alecgxl2@hotmail.com