Abstract

Objectives
To review fine needle aspiration biopsy (FNAB) diagnosis of malignant lymphoma retrospectively, and to determine the diagnostic accuracy and pitfalls.

Methods
Sixty-eight cases of malignant lymphoma and fifty-two cases of non-malignant lymphoma were identified between 1997 and 2004. All cases were recognized as cervical lymphadenopathy and evaluated by FNAB. Open biopsies were also performed to obtain final diagnoses. Malignant lymphomas were subclassified according to World Health Organization classifications. We compared the FNAB and final diagnostic results to determine the diagnostic accuracy and examine the false negative cases.

Results
41(60%) cases had a positive diagnosis of malignant lymphoma, 21(31%) had a suspected diagnosis, and 6(9%) had a false negative diagnosis. On histopathological examinations, diffuse large B cell lymphomas yielded a high positive diagnosis, whereas follicular lymphoma and Hodgkin’s disease had less positive diagnosis and there were also false negative cases. Fourteen(29%) lymphadenitis cases had a suspicious diagnosis and some cases were difficult to differentiate from malignant lymphoma.

Conclusions
FNAB is considered a useful and efficient method of estimating malignant lymphoma but diagnostic accuracy varied among lymphoma subtypes. We should remain aware of the existence of false negative cases when using this diagnostic method.

Introduction

Many patients with cervical lymphadenopathy go to otorhinolaryngological outpatient clinics for sample collection by a hematologist. This practice concerns otolaryngologists about accurate diagnosis of malignant lymphoma. It is common to perform FNAB to screen patients before sampling the node directly. The increased use of FNAB emphasizes the importance for understanding the pitfalls, limits, and requires careful interpretation of the results using this material. We investigated the 120 cases of cervical lymph node adenopathy including 68 cases of malignant lymphoma. Fine needle aspiration biopsies were performed initially and final diagnosis was obtained by open biopsy in all cases.

Methods and Materials

120 subjects with cervical lymphadenopathy underwent FNAB from January 1997 to December 2004 were included in this study at Numazu municipal hospital. We excluded the cases which had the lesion in other head and neck fields, such as forosils and nasopharynx. One cytotechnologist (accredited by Japanese Society of Clinical Cytology) evaluated the samples first and then pathologist confirmed the diagnosis. Papanicolaou and Giemsa stain were used to stain the cells and results were based on Papanicolaou classification. We regarded Class as negative, Class as suspicious, Class as positive in this study. We repeated FNAB when the samples were not enough for investigation of the results were quite different from the clinical aspects.

Results

Subclassification of 68 cases of malignant lymphoma

<table>
<thead>
<tr>
<th>Subtype</th>
<th>Diffuse large B cell lymphoma</th>
<th>Follicular lymphoma</th>
<th>Hodgkin lymphoma</th>
<th>Angioimmunoblastic T cell lymphoma</th>
<th>Anaplastic large cell lymphoma</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subtypes</td>
<td>41(60%)</td>
<td>21(31%)</td>
<td>6(9%)</td>
<td>4(6%)</td>
<td>6(9%)</td>
<td>52(77%)</td>
</tr>
</tbody>
</table>

Conclusions

1. Diffuse large B cell lymphoma was the highest percentage (45.6%), followed by follicular lymphoma (19.1%) and Hodgkin lymphoma (16.2%).
2. Overall a malignant lymphoma, accuracy rate was positive 60%, suspicious 31%, false negative 9%. High accuracy rate was observed in diffuse large B cell lymphoma.
3. Suspicious cases in lymphadenitis were 30%. There were some difficult cases to distinguish from malignant lymphoma only by FNAB.
4. FNAB is considered a useful and efficient method of estimating malignant lymphoma but diagnostic accuracy varied among lymphoma subtypes. We should remain aware of the existence of false negative cases when using this diagnostic method.

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