Contribution of DRC-1 and Leu-M5 to Differential Diagnosis in B Cell Lymphomas

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An article recently published in this journal [1] discussed the immunohistochemical characteristics of various low-grade non-Hodgkin’s lymphomas. From the investigation of 22 cases, the authors concluded that monocytoid B cell lymphoma, mantle zone lymphoma, small lymphocytic lymphoma and hairy cell leukemia (HCL) can be differentiated by a combination of anti-sIgD, DRC-1, Leu-1 and Leu-M5.

We investigated bone marrow biopsies from 260 patients with lymphoproliferative disorders using an immunoperoxidase method on cryostat sections [2, 3]. Our data are in agreement with theirs, especially concerning the fact that the monoclonal antibody (MoAb) Leu-M5 (CD21c) is expressed in HCL in up to 100% of the cases. However, our data (table 1) differ from theirs as we detected Leu-M5 in 16/27 patients with chronic lymphocytic leukemia of the B-cell type (B-CLL) and in 7/12 immunocytoma (LP-IC) patients, which confirms previously published data [4]. In addition to the immuno-histological analysis, 42 cases of B-NHL (15 B-CLL, 12 LP-IC, 1 CC, 14 HCL) were also investigated by flow cytometry in order to detect coexpression of Leu-M5 with the malignant clone. In 69% (29/42) of these cases, a Leu-M5 coexpression of weak intensity was seen.

A network of follicular dendritic cells (DRC-1+) was not only demonstrated in centrocytic NHL [CC (7/8)] and centroblastic/centrocytic NHL [CB/CC (4/4)], but also in 32/147 B-CLL and 17/87 LP-IC patients. In B-CLL, DRC-1 positivity was mainly found in association with a nodular pattern of bone marrow infiltration as described by others [5], whereas no such correlation was seen in LP-IC. Furthermore, the authors did not mention MoAb B-Ly7, which has proved exceptionally useful in discriminating HCL from other NHLs [6], also allowing detection of minimal residual disease.

We agree with the authors that immuno-histology represents an important diagnostic tool for the classification of low-grade non-Hodgkin’s lymphomas, although MoAbs DRC-1 and Leu-M5 seem to be of minor diagnostic value.

Table 1. Immunological phenotype of B-CLL, LP-IC, CC, CB/CC and HCL

<table>
<thead>
<tr>
<th>MoAb</th>
<th>B-CLL</th>
<th>LP-IC</th>
<th>CC</th>
<th>CB/CC</th>
<th>HCL</th>
</tr>
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<tbody>
<tr>
<td>DRC-1</td>
<td>32/147</td>
<td>7/8</td>
<td>4/4</td>
<td>0/14</td>
<td>n.d.</td>
</tr>
<tr>
<td>Leu-M5</td>
<td>16/27</td>
<td>7/12</td>
<td>0/1</td>
<td>n.d.</td>
<td>14/14</td>
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<tr>
<td>Leu-20 142/147</td>
<td>47/87</td>
<td>8/8</td>
<td>0/4</td>
<td>1/14</td>
<td></td>
</tr>
<tr>
<td>Leu-1 145/14743/87</td>
<td>7/8</td>
<td>0/4</td>
<td>0/14</td>
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<tr>
<td>IL-2R 36/44</td>
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<td>4/8</td>
<td>2/4</td>
<td>14/14</td>
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References