Cytologically Proved Malignant Pleural Effusions

To the Editor:

We read with interest the report by Assi and colleagues1 on the distribution of transudates and exudates between cytologically proved malignant pleural effusions. The authors found that one of the 98 patients with malignant pleural effusions enrolled in the study, had a borderline transudate and had congestive heart failure at the time of thoracentesis. The authors concluded that cytologically positive pleural effusions for malignancy are always exudates and that cytologic evaluation for malignant cells of a transudative pleural effusion is not recommended.

We wish to report the results of our prospective study. We studied 620 consecutive patients, and we identified 122 cytologically proved malignant pleural effusions. Pleural fluid lactate dehydrogenase (LDH), protein, and cholesterol values were obtained from medical records of the 122 patients (100%).

The criteria proposed by Light and colleagues2 were used to distinguish a transudate from an exudate. We also used our own criteria that were superior to the criteria of Light and colleagues in our series of patients.3 An exudative effusion was defined as meeting at least one of the following criteria: pleural fluid cholesterol level greater than 57 mg/dL, or pleural fluid lactate dehydrogenase level greater than 200 U/L.

There were 64 men and 58 women with a mean age of 66 years. The distribution of malignant tumors included lung carcinoma (n = 67), breast carcinoma (n = 17), an unknown primary tumor (n = 16), lymphoma (n = 13), plasmacytoma (n = 5), hepatocarcinoma (n = 2), colon carcinoma (n = 1), and malignant melanoma (n = 1).

One hundred and nine patients (89%) met the criteria for an exudate. None of the fluids defined as transudates by Light’s criteria were classified as exudates using our own criteria.

We cannot share the authors’ observations that cytologic evaluation for malignant cells of a transudative pleural effusion is not recommended. Maybe our results are influenced by the lower yield of Light’s criteria in our series than previously reported.4

In conclusion, our results suggest that cytologic evaluation of pleural fluids should be considered as a useful test in the initial evaluation of pleural effusions.

David Jiménez Castro
Gena D. Nuevo
Esteban Pérez-Rodríguez, MD
Servicio de Neumología
Hospital Ramón y Cajal
Madrid, Spain

Correspondence to: David Jiménez Castro, Servicio de Neumología,Hospital Ramón y Cajal, Apartado 31057, E-28080 Madrid, Spain

REFERENCES

3 Castro DJ, Pérez-Rodríguez E, Nuevo GD, et al. Evaluation of different criteria for the separation of pleural transudates from exudates. Presented at the 1998 European Respiratory Society Annual Congress; Geneve, Switzerland, September 20–24, 1998

Table 1—Light’s Criteria of Four Patients With Transudate and Malignancy

<table>
<thead>
<tr>
<th>Patient</th>
<th>Protein Ratio</th>
<th>LDH Ratio</th>
<th>Pleural Fluid LDH (U/L)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.36</td>
<td>0.44</td>
<td>138</td>
</tr>
<tr>
<td>2</td>
<td>0.42</td>
<td>0.24</td>
<td>296</td>
</tr>
<tr>
<td>3</td>
<td>0.40</td>
<td>0.49</td>
<td>142</td>
</tr>
<tr>
<td>4</td>
<td>0.21</td>
<td>0.49</td>
<td>204</td>
</tr>
</tbody>
</table>

*LDH normal range 200 to 430 U/L.