Communications for this section will be published as space and priorities permit. The comments should not exceed 350 words in length, with a maximum of five references; one figure or table can be printed. Exceptions may occur under particular circumstances. Contributions may include comments on articles published in this periodical, or they may be reports of unique educational character. Please include a cover letter with a complete list of authors (including full first and last names and highest degree), corresponding author’s address, phone number, fax number, and e-mail address (if applicable). Specific permission to publish should be cited in the cover letter or appended as a postscript.

Keep Testing the Waters

To the Editor:

We have read with interest the article by Costa et al., “Measurement of Pleural Fluid Cholesterol and Lactate Dehydrogenase: A Simple and Accurate Set of Indicators for Separating Exudates From Transudates” (CHEST 1995; 108:1280-65). These authors and the writers of the corresponding editorial (CHEST 1995; 108:1191-2) concluded that pleural fluid (PF) cholesterol plus PF lactate dehydrogenase (LDH), with cutoff points of 45 mg/dL and 200 IU/L, respectively, are able to separate, with a sensitivity of 96% and a specificity of 98%, pleural exudates from transudates. These figures are better than those of current criteria (mainly the criteria by Light et al.) with the added advantages of avoiding the necessity of a concomitant venipuncture and a cheaper cost. These results have prompted us to validate the criteria proposed by Costa et al. in the 351 patients of our series, reported in CHEST in 1993. As it can be seen in Table 1, neither applying the cutoffs used by the authors nor correcting them for differences in technique, the accuracy exceeds 92%, which is lower than that obtained using the criteria by Light et al.

Again, remarkable differences between groups applying identical diagnostic criteria are evident. The convenience of validating the results of any study in a new series seems essential in the light of these controversies. New cutoff points “carefully chosen” to optimize the sensitivity and specificity of a given criteria may set the limits very close to some values and be so easily surpassed in a new series.

We agree with the editorial that in the study by Costa et al patients were carefully categorized. However, the convenience of such a profound selection, with exclusion of 48% of the patients who underwent a thoracentesis during the study because they did not comply with the conditions of the protocol, seems not to be justified given the prospective character of the study. Even among the remaining 228 patients, 108 (38%) were later excluded because they had more than one disease or an absence of a definitive diagnosis. These percentages of exclusion are much higher than in previous studies (11 to 18%), but they may convey a bias from oversampling. Regardless of this, these high percentages of exclusion do limit the usefulness of the test. In fact, what will be the utility of the initial categorization of a pleural effusion as a transudate or an exudate in the absence of a definitive diagnosis at the end of the study?

Table 1—Sensitivity, Specificity and Accuracy of PF Cholesterol and LDH for the Identification of Pleural Exudates: Comparision Between Two Series*

<table>
<thead>
<tr>
<th>Author/Criteria</th>
<th>Se(%)</th>
<th>Sp(%)</th>
<th>Ac(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costa et al. (CHEST 1995; 108:1280-65)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chol &gt;45 mg/dL + LDH &gt;200 IU/L</td>
<td>130/131 (99)</td>
<td>48/49 (98)</td>
<td>178/180 (99)</td>
</tr>
<tr>
<td>Romero et al. 1993</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chol &gt;45 mg/dL + LDH &gt;200 IU/L</td>
<td>246/252 (98)</td>
<td>27/44 (61)</td>
<td>273/296 (92)</td>
</tr>
<tr>
<td>Chol &gt;80 mg/dL + LDH &gt;307 IU/L</td>
<td>230/252 (91)</td>
<td>40/44 (91)</td>
<td>270/296 (91)</td>
</tr>
</tbody>
</table>

*Se=sensitivity; Sp=specificity; Ac=accuracy; Chol=cholesterol.

To the Editor:

We fully agree that because of the remarkable differences between groups, validation through a new series is needed, but it would be necessary to follow uniform criteria for diagnosis and procedures, which are not easy to agree upon when the authors are working apart. There is, however, a possibility that a meta-analysis, which is being conducted by Dr. John E. Effnner (personal communication, November 20, 1995) from the University of Arizona, may provide some guidelines on the matter.

In spite of the risk of oversampling as a consequence of strict protocol requirements, we believe that there is no alternative when evaluating the accuracy of a test. For the application of the evaluated test to a clinical setting, less rigid diagnostic criteria are justified and the simultaneous consideration of other factors such as age, presence of other symptoms and signs, evolutive pattern, etc., generally permit a sufficient degree of certainty for backing up clinical decisions.

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