Diagnostic Value of Mononuclear Cell Infiltration in Subpleural Adipose Tissue

To the Editor:

We read with interest the article by Nagata et al., which appeared in the November 1990 issue of Chest. The authors pointed out that the presence of bandlike mononuclear cells in subpleural adipose tissue with minimal pleural inflammatory infiltrate in pleural biopsy specimens from patients with lymphocyte-rich pleural effusion suggests that the pleuritis is of nontuberculous origin. Studies that involve detailed examination of pleural biopsies with unknown etiologies are very few. Therefore, the study and the results of Nagata and colleagues are very valuable.

After reading their article, we planned a similar retrospective study. Patients with minimal pleural inflation and tuberculous, carcinomatous, or nontuberculous benign pleuritis were included in the study. The pleural biopsy specimens of 80 patients were examined for characteristics of mononuclear cell dissociation in subpleural adipose tissue (Table 1). Bandlike mononuclear cell infiltration was seen in the subpleural adipose tissue of 36 patients. Diffuse mononuclear cells were found in the subpleural adipose tissues of ten patients, but no mononuclear cell infiltration was present in 34 cases.

Band-like mononuclear cell infiltration in the subpleural adipose tissue was found in 15 of 27 (55.5 percent) cases of tuberculous pleuritis and in 14 of 29 (48.2 percent) cases of carcinomatous pleuritis. However, mononuclear cell infiltration was found in only seven of 24 (29.1 percent) cases of nontuberculous benign pleuritis.

Absence of mononuclear cell infiltration in subpleural adipose tissue was noted in nine of 27 (33.3 percent) cases of tuberculous pleuritis, in 12 of 29 (41.3 percent) cases of carcinomatous pleuritis, and in 13 of 24 (54.1 percent) cases of nontuberculous benign pleuritis.

When the cases were examined according to their lymphocyte quantity, bandlike infiltrations in the subpleural adipose tissue were found significantly more often in tuberculous pleuritis (73.3 percent of cases) than in carcinomatous pleuritis (41.6 percent) or in nontuberculous benign pleuritis (16.6 percent). Also, no mononuclear cells were found in 75 percent of cases of nontuberculous benign pleuritis with lymphocyte-rich pleural effusions.

We also found that the adenine dopamine levels in pleural effusion were significantly higher in tuberculous pleuritis than in carcinomatous and nontuberculous benign pleuritis (p = 0.05).

In our study, bandlike infiltrations were found in 73.3 percent of cases with lymphocyte-rich tuberculous pleural effusions. Contrary to the findings of Nagata et al., the results of our study suggest that, particularly in lymphocyte-rich pleural effusions, the presence of bandlike mononuclear cell infiltration should prompt a search for a tuberculous etiology.

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REFERENCE


To the Editor:

We are grateful for the comments expressed by Dr Samurkaçoğlu and his colleagues. Unfortunately, their results are absolutely opposite to ours.

We cannot comment on their study and results precisely because they do not mention the diagnostic criteria for tuberculous and nontuberculous benign pleuritis. The category "nontuberculous benign pleuritis" contains many disorders of different etiologies. As we reported, the incidence of bandlike mononuclear cell infiltration in the subpleural adipose tissue in nontuberculous benign pleuritis varied according to the underlying etiology. Therefore, the difference in its incidence between our study and theirs may be explained by the variety of disorders that can be categorized as nontuberculous benign pleuritis.

We cannot, however, explain the high incidence of bandlike mononuclear cell infiltration in the subpleural adipose tissue in the tuberculous cases in their study. We wonder if they included those cases in which pleural effusion resolved with antituberculous therapy during a diagnostic therapeutic trial as being tuberculous pleuritis. In our retrospective study, several cases had been diagnosed as tuberculosis on the basis of a diagnostic therapeutic trial. After reevaluating in detail the clinical charts and course, some of

Table 1—Characteristics of Mononuclear Cell Dissociation in Subpleural Adipose Tissue*

<table>
<thead>
<tr>
<th>Type of Pleural Effusion</th>
<th>Mononuclear Cell Infiltration</th>
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<tbody>
<tr>
<td></td>
<td>Bandlike</td>
</tr>
<tr>
<td>Tuberculous</td>
<td></td>
</tr>
<tr>
<td>All cases &lt;i&gt;(n = 27)&lt;/i&gt;</td>
<td>15 (55.5)</td>
</tr>
<tr>
<td>Lymphocyte-rich cases &lt;i&gt;(n = 15)&lt;/i&gt;</td>
<td>11 (73.3)</td>
</tr>
<tr>
<td>Carcinomatous</td>
<td></td>
</tr>
<tr>
<td>All cases &lt;i&gt;(n = 29)&lt;/i&gt;</td>
<td>14 (48.2)</td>
</tr>
<tr>
<td>Lymphocyte-rich cases &lt;i&gt;(n = 12)&lt;/i&gt;</td>
<td>5 (41.6)</td>
</tr>
<tr>
<td>Nontuberculous benign</td>
<td></td>
</tr>
<tr>
<td>All cases &lt;i&gt;(n = 24)&lt;/i&gt;</td>
<td>7 (29.1)</td>
</tr>
<tr>
<td>Lymphocyte-rich cases &lt;i&gt;(n = 12)&lt;/i&gt;</td>
<td>2 (16.6)</td>
</tr>
</tbody>
</table>

*Values are numbers of cases, with percentage of all cases in the category in parentheses.

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The cases turned out to be nontuberculous benign pleuritis. Therefore, we did not include those cases that had been diagnosed as tuberculous pleuritis on the basis of the diagnostic therapeutic trial.

We are now conducting a prospective study to evaluate more objectively the significance of subpleural inflammatory infiltrate. We have so far found eight cases with this finding in the pleural biopsy specimen; none of the patients has tuberculous pleuritis.

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Traumatic Coronary Artery-Atrioventricular Fistula
A 26-Year Follow-up with Application of Transesophageal Echocardiography

To the Editor:

Our institution described the first surgical repair of a traumatic coronary artery fistula in 1965.1 We recently evaluated this lesion with transesophageal echocardiography.

In 1964, an 18-year-old soldier was accidentally wounded in the chest with a .38 caliber pistol, resulting in a cardiac laceration. Several weeks after the initial repair, he was referred to our institution for the evaluation of dyspnea and a continuous murmur. A fistula from the right coronary artery to the right atrium and ventricle was diagnosed and then repaired by means of proximal and distal ligation of the right coronary artery.

He did well until 1986, when atypical chest pain developed. The cardiac catheterization findings were normal except for a calcified, aneurysmal right coronary artery, which ended blindly. Recently, we evaluated this lesion with biplane transesophageal echocardiography. The dilated right coronary artery was visualized in both the horizontal and longitudinal planes. Utilizing Doppler color-flow imaging, we found no evidence of communication to either the right atrium or the right ventricle (Fig 1).

The diagnosis of a coronary artery fistula, usually based on clinical and angiographic findings, has recently been increasingly reported with the use of noninvasive modalities, including two-dimensional and Doppler echocardiography, Doppler color-flow imaging, contrast echocardiography, and contrast material-enhanced cine computed tomography. One potential limitation of these techniques is in the evaluation of small shunts. Biplane transesophageal echocardiography offers the advantage of a high degree of resolution, the ability to image the lesion in cross-sectional and longitudinal planes, and the added advantage of color-flow Doppler imaging, which may be useful for detecting shunts. We believe that transesophageal echocardiography will be used in the evaluation of coronary artery fistulae with increasing frequency and success in the future.

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Endobronchial Deposition of Radioactive Monoclonal Antibody in Patients with Inoperable Non-Small-Cell Carcinoma of the Lung

To the Editor:

We read with great interest the article by Stein and Goldenberg,1 which appeared in the June 1991 issue of Chest. They reviewed...

Figure 1. Transesophageal echocardiogram demonstrates the course of the enlarged right coronary artery (arrowheads). Ao = aorta; RA = right atrium; RV = right ventricle. Left panel, Horizontal-plane image shows dilated proximal right coronary artery adjacent to the right sinus of Valsalva. Right panel, Longitudinal-plane image shows dilated right coronary artery traversing atrioventricular groove.