# LETTERS TO THE EDITOR

## Mesothelioma, Adenosine Deaminase, and C-Reactive Protein

**To the editor:**

In a recent article in ARCHIVOS DE BRONCONEUMOLOGÍA, Villena Garrido et al[1] described findings in 62 patients with mesothelioma. The biochemical characteristics of the pleural fluid were described for 59 patients with pleural effusion, but no mention was made of results for adenosine deaminase (ADA) in these patients. ADA assessment is highly useful for diagnosing pleural tuberculosis. Nevertheless, elevated ADA concentrations have been described in approximately a third of mesothelioma patients.[2]

The signs and symptoms of mesothelioma are nonspecific and a history of asbestos exposure can be difficult to obtain for some patients. The pleural fluid of mesothelioma and tuberculosis patients is very similar, consisting of a lymphocytic exudate that usually has a low pH and low glucose levels.[1] Because the incidence of mesothelioma is low in Spain, these findings along with an elevated ADA concentration might lead to a suspicion of tuberculosis. In such cases, certain biochemical markers in pleural fluid, such as C reactive protein (CRP)[3,4] and interferon gamma[5] can be useful alongside a history of asbestos exposure and other clinical data.

We recently attended a 66-year-old man who reported asthenia, poor appetite, unquantified weight loss, and dyspnea lasting longer than a month along with poor temperature regulation unverified by measurement. A chest radiograph showed right-sided pleural effusion. A tuberculin skin test caused a 12 mm induration. The fluid obtained by diagnostic thoracocentesis was a lymphocytic exudate with a pH of 7.31 and glucose concentration of 41 mg/dL. The ADA level was 73 U/L and the CRP concentration was 8.9 mg/L. A transthoracic needle biopsy of the pleura established the diagnosis of mesothelioma.

In our experience, CRP assessment of pleural fluid can be a useful approach for diagnosing pleural exudates.[3] Values under 20 mg/L point to malignancy, whereas concentrations over 45 mg/L mean that possibility is highly unlikely.[3] When considering only lymphocytic effusions, we have observed that CRP concentrations below 30 mg/L mean that a diagnosis of tuberculous pleuritis is highly unlikely, whereas values over 50 mg/L are highly suggestive.[4]

Based on their series of mesothelioma patients, Villena Garrido et al[1] describe interferon gamma levels that might also be useful for differentiating mesothelioma from tuberculosis.[5] A CRP assay is much faster and cheaper, however, as it is performed using conventional automatic analyzers.

We believe it would have been useful for clinicians if Villena Garrido et al[1] had described the results of ADA assay in mesothelioma cases, supposing that information was available, in order to confirm or call into question earlier reports suggesting that mesothelioma is a frequent cause of elevated ADA levels. We also think it is worth remembering that CRP measurement in pleural fluid can often provide additional information, as we have described.

**E. García Pachón, I. Padilla Navas, and C. Shum**
Sección de Neumología, Hospital General Universitario, Elche, Alicante, Spain.

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