We think it is of interest to use BAL supernatant which has been obtained for bacteriologic studies and is thus readily available.

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REFERENCES

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To the Editor:

Doctors Van Vooren, Farber and Vernalnt have performed a Dot Blot assay on bronchoalveolar lavage fluid supernatand and measure light reflectance. They have adjusted the obtained values by correcting for total IgG concentration in the fluid (Fig B). The p value by t-testing is <0.001, which is indeed significant. We agree that a method of standardizing bronchoalveolar lavage fluid concentration is required if the results of assay of this fluid is to be of predictive value in the diagnosis of tuberculosis. However, from subsequent studies we now believe that serum is a preferable body fluid, is readily available and serodiagnosis given reliable separation between tuberculosis and sarcoidosis without manipulating the obtained assay reading.1

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REFERENCE

Pleural Fluid in Wegener's Granulomatosis

To the Editor:

If pleural effusion occurred in approximately 20 percent of patients with Wegener's granulomatosis, the literature lacks available biologic data about the characteristics of pleural fluid.14 We wish to report our findings in a case of Wegener's granulomatosis with pulmonary involvement and bilateral pleural effusion.

A 65-year-old man was referred for arthralgia and severe renal failure. Crescentic glomerulonephritis was demonstrated by percutaneous renal biopsy and chronic hemodialysis was required. There was no history of upper respiratory tract involvement. Careful physical examination revealed ulceration of the uvula and purpuric lesions on both legs. Histology disclosed necrotizing granulomatous vasculitis lesions on uvula biopsy sample. Erythrocyte sedimentation rate was 125 mm/h and serum C-reactive protein level was 12 mg/100 ml (normal less than 1 mg/100 ml). Tests for serum antineutrophil cytoplasmatic antibodies (ANCA) was found strongly positive when detected by both indirect immunofluorescence at a titer of 1/256 and an ELISA toward alpha granules of granulocytes obtained by nitrogen bomb cavitation. x-ray examination of the chest disclosed multiple bilateral nodular opacities without cavitation and bilateral pleural effusion.

A left-sided thoracentesis yielded cloudy-yellow fluid that contained few red cells (15 mm/m), and 35 leukocytes/cc mm with 78 percent polymorphonuclear neutrophils, 19 percent lymphocytes and 3 percent monocytes. Pleural fluid pH was 7.35, protein 4.3 g/100 ml with a pleural fluid/serum ratio of 0.7; glucose was 121 mg/100 ml with pleural fluid/serum ratio of 1, amylase was 50 U, and lactate dehydrogenase (LDH) was 95 U with pleural fluid/serum ratio of 0.8. Immunologic markers tested in pleural fluid (including rheumatoid factor and antinuclear antibodies) were negative. Pleural fluid ANCA (tested only by indirect immunofluorescence method) provided a weakly positive reaction. Bacteriologic study was negative, as were specimens taken for Ziehl stain and Loewenstein cultures. Cytologic examination yielded rare mesothelial cells without malignant cells. Histologic examination of percutaneous pleural biopsy sample proved discreet lesions of inactive fibrosis with no sign of vasculitis. The patient was treated with cyclophosphamide (2mg/kg/day) and prednisolone (1mg/kg/day/1); bilateral pleural effusions disappeared within 15 days, while pulmonary nodular infiltrates completely faded within five months. After 14 months follow-up, there was no recurrence of pulmonary symptoms (neither nodular infiltrates nor pleural effusion); the patient remained hemodialysis-dependent, and serum ANCA tested monthly by indirect immunofluorescence method remained positive at titers of 1/128.

Referring to the Sahn review,2 the biologic findings observed in pleural effusion fluid of our patient fit the criteria of a serous paucicellular exudate with normal levels of pH, glucose and amylase. In addition, our finding of a weakly positive test for ANCA in pleural fluid based on indirect immunofluorescence requires further evaluation to establish its value for monitoring Wegener's disease.

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