blood. Similar results in the pleural fluid have been reported by Groman et al., however, in this report BAL cell analysis was not available. In our patients, the lymphocyte profile found in pleural effusion was closer to that seen in BAL. Lymphocyte subpopulation findings in the pleural fluid seem to be representative of the pleural histologic involvement, as BAL is of alveolitis. By contrast, in another granulomatosis, an amiodarone-induced pleuropulmonary hypersensitivity pneumonitis, cell profile in BAL was quite different from that found in blood and pleural fluid. That would indicate a pathogenetic mechanism in sarcoidosis distinct from that involved in hypersensitivity granulomatosis.

M.P. Flammang d'Ortho, M.D.;
J. Cadranel, M.D.;
B.J. Milleron, M.D., F.C.C.P., and
G.M. Akoun, M.D., F.C.C.P.
Respiratory Division,
Hopital Tenon,
Paris, France

REFERENCES

An Unusual Cause of Pneumothorax During Percutaneous Pleural Biopsy

To the Editor:

Percutaneous pleural biopsy has been used for over 30 years as a diagnostic technique in the evaluation of pleural effusions.1 Pneumothorax is a well-described complication of this procedure, occurring in 3 to 15 percent of cases.4 The usual mechanism is that air entry into the pleural space through the lumen of the biopsy needle or from laceration of the lung.2 Recently, we observed the passage of air around a closed Abrams pleural biopsy needle during manipulation of the instrument, resulting in pneumothorax.

A 72-year-old white man was admitted to our facility with increasing dyspnea, a 30-pound weight loss, and a right-sided pleural effusion. The effusion had been noted six months previously and serial thoracenteses revealed an exudative effusion; however, other studies (including cytology and tuberculous cultures and smears) were nondiagnostic. He had a prior history of pulmonary tuberculosis which was diagnosed 13 years previously and treated with isoniazid and ethambutol for 18 months. He was also eight years post-radiation therapy (4,500 rads) to the right chest for presumed curative treatment of a squamous cell carcinoma of the right upper lobe bronchus. On examination the patient was a cachetic man who weighed 114 pounds and was 68 inches tall. Diminished breath sounds and dullness to percussion was noted in the lower half of the right hemithorax. Posteroanterior, lateral, and right lateral decubitus chest radiographs demonstrated a large mobile right-sided pleural effusion. No pneumothorax was present.

We performed percutaneous pleural biopsies using an Abrams biopsy instrument. Using sterile technique, the skin and underlying parietal pleura were anesthetized with a 1 percent lidocaine solution and a skin laceration was made. The biopsy needle was inserted without difficulty and pleural fluid was withdrawn. One operator performed four biopsies, and the instrument was removed for retrieval of the specimen. The instrument was reinserted through the original puncture site without difficulty and fluid was withdrawn to confirm proper placement. With the apparatus in the closed position, the operator demonstrated a technique alleged to improve biopsy yield. This included applying lateral pressure on the instrument in the direction of the hook, as well as sharply angling it to a position approximately 30 to 45° from the plane of the back, thus placing the hook orifice of the needle in more direct contact with the pleura. During this maneuver, the patient inhaled and passage of air around the closed instrument into the pleural space produced a sucking sound which was clearly audible. The patient experienced no change in his symptoms and three additional biopsies were taken by a second operator using standard technique (lateral pressure but no angulation)4 without further passage of air. A chest radiograph obtained shortly after completion of the procedure revealed a 20 percent pneumothorax. The patient remained symptomatically unchanged and the pneumothorax resolved without intervention. Pleural biopsy specimens demonstrated "nonspecific chronic pleuritis." No lung tissue was found in the biopsy specimen.

This case demonstrates an unusual and previously unrecognized cause of pneumothorax: passage of air around a closed instrument during percutaneous pleural biopsy. We speculate that the combination of an enlarged hole in the pleura from previous pleural biopsies plus the virtual absence of subcutaneous fat in this cachectic patient contributed to the poor seal around the instrument at the level of the pleura and subcutaneous tissue. The combination of lateral pressure and sharp angulation of the instrument probably reduced the seal at the skin, allowing passage of air into the pleural space as the patient inhaled. We recommend, therefore that marked angulation of the instrument during pleural biopsy be undertaken carefully, particularly when taking multiple biopsies in cachectic patients.

Mitchell Schwartz, M.D.;
Daniel Callahan, M.D., and
Curta N. Sessler, M.D., F.C.C.P.
Medical College of Virginia,
McGuire Veterans Administration Medical Center,
Richmond

REFERENCES
1 Abrams LD. A pleural biopsy punch. Lancet 1958; 1:30-31

Complication with a Transbronchial Histology Needle

To the Editor:

I am writing to describe a complication which occurred during use of the Wang 18-gauge transbronchial histology needle (Dual Histology Needle 18121 GA #MW-418-1, Lot 10089-5535, Mill Rose Laboratories Inc, Mentor, Ohio). I learned of its use through publication of an article in Chest by Schenk et al in August, 1989.

I found the technique relatively easy to use, and shortly thereafter made a diagnosis of adenocarcinoma of the lung metastatic to the mediastinum. I then started to do routine mediastinal core aspirates on all suspected lung carcinomas.

Recently, I began finding it difficult to pass the needle through the bronchoscope. Then I saw small, thread-like plastic material coming out of the tip of the bronchoscope as I passed the needle through it. I always passed the needle with the tip retracted, as per