with acute myocardial infarction as demonstrated by short-term intravenous therapy. This is probably related to changes in protein binding or hepatic congestion due to clinical or subclinical heart failure. Our patient had a small non-Q wave myocardial infarction, suggested by a creatine kinase MB fraction of 7 percent, and was in compensated congestive heart failure. Although her liver function test results were normal, congestion still could very well have affected the metabolism resulting in increased elimination half-life. This effect was compounded by preexisting renal failure in our patient, resulting in clinical symptoms of mexiletine toxicity. The electrocardiographic changes are due to mexiletine toxicity, as indicated by an elevated plasma mexiletine concentration of 5.2 μg/mL that reverted to normal once the drug was discontinued. The plasma level was 1.1 μg/ml when the electrocardiographic changes normalized.

This case illustrates that, contrary to the general belief, mexiletine toxicity can occur in patients with renal failure, as suggested by El Allaf et al. Transient hepatic congestion without liver function abnormality is sufficient to prolong the elimination half-life, resulting in clinical toxicity, especially in patients in whom renal clearance of mexiletine is decreased because of renal failure. The usual oral dose of 200 to 300 mg of mexiletine every 8 h required to obtain optimum therapeutic levels (i.e., 0.75 to 2.00 μg/ml) may, in fact, be too much in patients with renal failure and associated heart failure. Checking the plasma concentration of mexiletine may be helpful in distinguishing gastrointestinal and CNS symptoms of mexiletine toxicity from those of uremia and also in patients with congestive heart failure. This case also illustrates that oral mexiletine can cause prolongation of ventricular depolarization, observed previously by Campbell et al. with rapid intravenous infusion of mexiletine in patients with acute myocardial infarction. To our knowledge, this has not been previously observed with the normally recommended oral mexiletine dosage.

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Breakage and Detachment of an Abrams Needle in the Pleural Cavity During Performance of a Pleural Biopsy*

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This is the report of a case of breakage and detachment in the pleural cavity of the tip of a nearly new Abrams needle during performance of a pleural biopsy. We have not found any reference in the literature to similar accidents and do not know what later complications may be produced by the metal body in the pleural cavity. In this case, there have been no complications 12 months after the incident.

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Pleural biopsy of transthoracic puncture is an effective means of obtaining parietal pleura samples. It is indi-

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cated when no etiologic diagnosis has been reached in the analyses of the pleural fluid. The most widely used needles are of the Abrams and Cope types. The specificity of pleural biopsy by puncture is 100 percent and its sensitivity is approximately 90 percent for tuberculosis and 68 percent for neoplasias. The incidence of complications is low; in a review of 923 biopsies it was 6 percent, with a morbidity of 0.3 percent. These complications have been reported: pneumothorax, hemothorax, spread of infection or tumor to the thoracic wall, extravasation of pleural fluid and intercostal neuralgias.

In the literature, we have not found any reference to complications from instrument failure so we believe it is of interest to report a case of breakage of a biopsy needle and its detachment in the pleural cavity.

**CASE REPORT**

A 45-year-old woman was hospitalized for examination of a right pleural effusion. She had a history of varicose veins in the legs, sclerosis in the legs 12 years previously, and peripheral vein thrombosis two years previously.

The physical exploration revealed right pleural effusion, The rest of the physical exploration was normal. An x-ray film of the thorax showed right pleural effusion. The ESR value was 51 mm/h. The rest of the general analysis was normal. The PPD RT23 TU showed 15 mm induration.

The properties of the pleural fluid were those of an exudate with predominantly lymphocytic cytology and without evidence of malignant cells (four samples). The investigation for Mycobacterium tuberculosis in pleural fluid was negative (four samples). The adenosine deaminase activity was 0.26 and 0.30 μkat/L (normal: 0.00 to 0.75 μkat/L).

A pleural biopsy was done. Several samples of pleura were taken by means of an Abrams needle. In the exploration, it was found that the needle did not correctly aspirate the pleural fluid. When the needle was withdrawn, the tip was missing (Fig 1). An x-ray film of the thorax immediately was taken, showing the tip of the Abrams needle lodged in the right posterior pleural sac.

The histology results of the pleural biopsy were of non specific pleuritis, the Ziehl-Neelsen stain was negative and the Löwenstein medium culture was negative. The pleural effusion limited itself without treatment. All the explorations made to rule out an occult neoplasia and collagenosis were negative.

After 12 months, the patient is asymptomatic and has a normal x-ray film of the thorax except for the iatrogenic foreign body (Fig 2).

**DISCUSSION**

The Abrams needle is a trocar measuring 4 mm in diameter composed of two tubes, one inside the other. The trocar is inserted through the thoracic wall between two ribs. The side window of the instrument is applied to the parietal pleura. The inner trocar is rotated and advanced, acting as a guillotine, to obtain the pleura fragments. In our practice, with the attachment of a Yale syringe and by aspirating the biopsy sample together with pleural fluid, we take all the required samples without removing the needle.

We use Abrams needles of Unimed model 2R2 (Switzerland). The outer trocar consists of three engaged parts: the tip, which eases the insertion of the instrument into the pleural space (Fig 1); the window through which the biopsy is made (Fig 1 [the space between the two arrows]); and the trocar proper. We do not know whether other firms manufacture Abrams needles with one-piece outer trocar.

We believe that the accident reported here, resulting from detachment of the trocar tip in the pleural cavity, may be attributed to a failure in the quality controls of the instrument. The needle was nearly new, having been used for only 12 patients. We know of the same failure in another needle of the same make, but detachment occurred outside upon being withdrawn at the end of the exploration. We think that such accidents could be prevented by manufacturing a one-piece trocar.

After six months of observation, the intrapleural foreign body has not shown any complication and the pleural effusion has not recurred.

We have no knowledge of the behavior of this metal object in the pleural cavity over a long-term period so we consider that a follow-up study of the patient should be performed.

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