Fatal Complication in Percutaneous Needle Biopsy of the Lung

To the Editor:

The danger of percutaneous needle biopsy of the lung has been emphasized by the recent report of two additional fatal cases. The authors review the published fatalities in the English literature, pointing out that they have occurred, except in one case, after the use of cutting needles. We have published our own results in 18 patients submitted to biopsy with the high speed trephine presented by Steel and Winstanley. One of these patients died in a few minutes after a sudden endobronchial hemorrhage. The patient had been treated with tracheotomy and a positive pressure respirator for two months for acute polyradiculoneuritis. The biopsy was proposed in order to diagnose the cause of several ill-defined lung shadows which had been associated with development of pneumothorax.

The patient was breathing spontaneously, but still tracheotomized, when the procedure was carried out. About 500 ml of blood was aspirated from the trachea and positive pressure ventilation was immediately instituted. The patient became comatose and developed circulatory collapse followed quickly by cardiac arrest, from which she could not be revived. At autopsy, many areas of chronic pneumonitis were observed. Adjacent to one of them, a bronchiectatic area was found with a tear on the bronchial wall and hypertrophied bronchial arteries in the immediate vicinity. The tear was attributed to the biopsy since a bronchial fragment had been found in the specimen and a hemorrhagic linear tracing reached it.

All these facts point to the possibility of perforation of a bronchial artery as the cause of hemorrhage. Since both lungs were found to be full of blood, we believe that acute respiratory failure was the cause of death. Since then a Carlens differential bronchial catheter is always available during the biopsy procedure.

Since our study was published, 19 more patients have been submitted to biopsy without serious complications.

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References


Technology and the Therapist

A Therapist Speaks to Physicians

To the Editor:

The debate over the use of intermittent positive-pressure breathing (IPPB) therapy is spreading throughout medical literature and rightly so. At our institution alone, over 90,000 IPPB treatments will be given this year, while the physiologic rationale for this therapy is not entirely clear.

However, I am afraid that the pertinent questions, those relating to the therapeutic value of IPPB for various pathologic processes, are being obscured by many of the people who could be resolving the issues.

For example, an opinion frequently expressed is that IPPB is used because it is "big business" and "profitable." I must ask the question, profitable to whom? Do hospital administrators or respiratory therapists order the treatments? No, they don't; physicians order them, and the physicians who request IPPB do not order it for financial reasons. Of course, there is a lot of money involved, just as there is in the use of whole blood, for example, but there is no nationwide conspiracy forcing people to submit to procedures for the sake of producing revenue.

The second criticism of IPPB therapy that is often advanced centers around the idea that respiratory therapists and technicians are incompetent and rather dull-minded people who are concerned only with performing a mechanical function and not with quality patient care.

One recent study produced pages of statistical data about controlling the quality of IPPB. It was a splendid example of begging the question that needs to be answered. The author told us that, without too much "threatening," technicians could be taught to routinely measure parameters that have never been shown to be related to the therapeutic value of IPPB.

With the specter of further government involvement in medicine, it is popular, albeit irresponsible,