Bronchoscopy for Hemoptysis

To the Editor:

Recently, Lederle and colleagues found that six of 106 older men with hemoptysis and nonsusicious chest radiographs had cancer that was diagnosed by fiberoptic bronchoscopy. The findings were similar to those of Heaton and colleagues, although Weaver and colleagues found no neoplasms in 15 patients who presented with hemoptysis and had normal chest films.

All bronchoscopy performed at the University of Illinois at Chicago and the Veterans Administration West Side Medical Center for 1.5 years were monitored. Thirty-two patients complained of hemoptysis and had normal chest radiographs. Twenty-nine were men with an average age of 55 (SD 12) years. Most patients were smokers; many had mild obstructive lung disease. The average FEV1/FVC was 0.71. With bronchoscopy, we found three patients with endobronchial lung carcinoma and two with lesions that caused bleeding at or above the larynx. The patients were not identifiable before bronchoscopy. We believe the 16 percent yield makes bronchoscopy worthwhile in patients presenting with hemoptysis and a normal chest x-ray film.

Dean Schraufnagel, M.D., F.C.C.P., and Benjamin Margolis, M.D., University of Illinois, Chicago

REFERENCES

4 Weaver LJ, Sollday N, Cugell DW. Selection of patients with hemoptysis for flexe bronchoscopy. Chest 1979; 76:7-10

To the Editor:

The letter by Drs. Schraufnagel and Margolis comments on our article in Chest. They state that the results of Weaver et al are "opposite" to our finding of a 6 percent cancer rate. This could be confusing and perhaps should be clarified. While Weaver et al found no cancers in 15 patients with normal chest x-ray films (which, given the small sample size, is not incompatible with our 6 percent rate), they did find two cancers in ten patients with "questionable" chest x-ray films and recommended bronchoscopy in all patients over 40 years of age with hemoptysis.

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A Circulating Myocardial Depressant Substance in Septic Shock

To the Editor:

In the editorial, "Myocardial Dysfunction in Seeps" (Chest 1989; 95:941-45), and special report (Chest 1989; 95:1072-80), Parrillo's team considers most earlier investigations of circulating myocardial depressant substances (MDS) "of dubious human relevance", claiming to bring "the first strong evidence that a MDS played a pathophysiologic role in the myocardial dysfunction of human septic shock". I sincerely hope so, especially as the results reported could be a confirmation of our own previous studies. Indeed, we evidenced ten years ago the MDS activity of human serum from an early hypodynamic phase of septic shock using a similar bioassay of beating rat heart cells.

However, as outlined, most investigations of MDS activity may be "flawed" due to a variety of reasons cited in the above papers.

For our part, our findings in a sublethal endotoxic rat model have been verified in early human septic shock, particularly the lipid soluble nature of the cardiodepressant factor (CDF) identified (ie, quite different from the other MDS previously found to be water soluble). Interestingly, in the animal model, CDF release was unrelated to prolonged tissue hypoperfusion and paralleled in vitro intrinsic myocardial dysfunction with regard to time course and intensity. In addition, any possible role of pharmacologic agents was clearly excluded since our patients received no treatment other than correction of water-electrolytic disturbances.

The previous investigation of Parrillo et al and the above recent one derive their interest from an attempt to correlate in vitro MDS activity with in vivo measurements of cardiac function. However, treatments given to the septic shock population raise serious objections.

First, contrary to the assertion of the authors, there was a possibility that pharmacologic agents could be responsible for myocardial depression in the septic shock group since antibiotics were not assayed on in vitro myocardial cell performance. Indeed, direct cardiac toxicity of antibiotics, especially that of aminoglycosides in endotoxin shock, has been shown. In addition, it is unclear and most unlikely that MDS negative control groups (particularly non-septic patients) received identical antibiotic treatment, including aminoglycosides.

Furthermore, there is serious concern about corticosteroid therapy administered to septic shock patients, since inhibition of prostanoic synthesis is able to suppress the early released lipid soluble CDF.

Thus, the water soluble MDS found by the Parrillo's team could be related to either previously described proteic myocardial depressant factor(s) that is only consistent with prolonged splanchic hypoperfusion associated with hyperlactacidemia (as observed in MDS group), or exogenous agents such as antibiotics. In any case, the possibly combined effects of exogenous agent(s) and inhibited release of CDF make hazardous to interpret any correlation between in vitro MDS activity and in vivo data, and ascribe the results to the "early" cardiodepression of septic shock. Undoubtedly, any investigation of circulating MDS(s) has to take the previous ones into account more carefully.

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