injection port resulted in an immediate reduction of the pressure to 16-20 mm Hg. (By inserting the manometer adapter into the injection port, the one-way function of the valve was cancelled and flow occurred from cuff to external balloon.)

In view of this serious potential for undetected clinical abuse, we feel that the controlled pressure cuff system does not replace the need for frequent monitoring of cuff pressures by standard methods.

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Transbronchial Biopsy in Sarcoidosis

To the Editor:

The recent article by Ackert et al (Chest 1982; 82:7-9) deserves a few further comments. The authors suggest that if a diagnosis of sarcoidosis is not obtained after the first transbronchial TBLB biopsy attempt, then an alternative procedure such as mediastinoscopy would be preferable to repeating TBLB. The basis for this conclusion is due to a diagnostic yield of 25 percent which they found from a second transbronchial biopsy attempt. This yield is derived from results on four patients with negative findings on first transbronchial lung biopsy in which one patient had a positive diagnosis after a second transbronchial lung biopsy. Of the four patients, three had stage 2 sarcoidosis and one had stage 1 disease. The positive TBLB findings came from one of the patients with stage 2 disease.

The authors support their approach to mediastinoscopy by referring inappropriately to data from our report, "Transbronchial Lung Biopsy in Sarcoidosis" (Am Rev Resp Dis 1980; 122:721-24). In our study of stage 2 sarcoidosis patients, the diagnostic yield increased from 41.6 percent (5/12) to 58.3 percent (7/12) after the second biopsy attempt and continued to improve to 91.6 percent (11/12) after four attempts. Although the data of Ackert et al are consistent with our findings, the conclusions that authors Ackert et al draw are diametrically opposed to the conclusions which were made in our original report. We demonstrated that repetitive biopsy attempts can significantly enhance the diagnostic yield until an optimal number of biopsies have been obtained. This optimal number in a disease such as sarcoidosis is theoretically based upon the quantity and distribution of granulomatous lesions in the lung parenchyma. In stage 1 sarcoid, it would be expected that more frequent biopsy attempts are needed to optimize diagnostic yield than stage 2 disease since the degree of granuloma is greater in the latter roentgenographic state. The data from our study do not suggest that if the first biopsy attempt is negative, an alternate procedure should be explored. Rather, our data and the observations of Ackert et al suggest that repeated transbronchial biopsy attempts in sarcoidosis can further enhance the diagnostic yield even if the first biopsy is nondiagnostic.

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To the Editor:

I have reread Dr. Gilman’s article and I do not really believe that we have a disagreement. Perhaps I should have made my point under the discussion section a little clearer.

You will note under the section, Methods and Material, our transbronchial lung biopsy procedure consisted of at least four or five separate biopsies. In Dr. Gilman’s article, the concluding statement said, “Although the potential risk of each biopsy is probably minimal it is our opinion that the cost, time and marginal increase in diagnostic accuracy does not justify a recommendation of more than four biopsies.”

I probably should have been more explicit in my discussion when I made the statement, “Our low yield of 25 percent from a second transbronchial lung biopsy agrees with the findings of Gilman et al.” What I probably should have said was, “If four or five biopsies yielding alveolar tissue during the first transbronchial lung biopsy procedure did not yield a positive diagnosis for sarcoidosis, then an alternative procedure may be more productive.” In other words, if we obtained adequate alveolar tissue from four or five biopsies during the initial FOB procedure, then repeating the procedure for a second time probably would not increase our yield significantly according to data in Gilman’s article.

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Echocardiographic Detection of Associated Pulmonary and Mitral Valve Prolapse

To the Editor:

Combined valvular prolapse is being discovered with increasing frequency since echocardiography allows noninvasive analysis of valvular motion.

Recently, Ogawa and coworkers reported a series of 50 patients with mitral valve prolapse; in one case of combined mitral and tricuspid valve prolapse, pulmonary regurgitation could be assessed.

FIGURE 1a (upper). Parasternal long axis view showing the right ventricular outflow tract, the pulmonary valve in diastolic position, and the main pulmonary artery. Two cusps of the valve are clearly prolapsing into the right ventricle. (RV = right ventricle; PA = pulmonary artery). 1b (lower). M-mode echocardiogram of the pulmonary valve, showing a steep diastolic EF slope and undulating movements of the inferior cusp. The multiple echoes, produced by the valve, are consistent with myxomatous thickening.
by intracardiac phonocardiography. Even though pulmonary valve involvement by myxomatous degeneration has been described, only one case of pulmonary valvular prolapse has been studied echocardiographically in a patient with pulmonary valve endocarditis.

CASE REPORT

A 49-year-old man underwent echocardiographic study for evaluation of a grade 2/6 systolic murmur, followed by a soft grade 2/6 diastolic murmur, best heard in the second left intercostal space. ECG and chest x-ray examination did not show any abnormality. Two-dimensional echocardiography demonstrated an unusually large diastolic motion of the pulmonic cusps. Using a parasternal long axis view, with superolateral angulation of the probe, the right ventricular outflow tract and the main pulmonary artery could be seen, separated by two cusps of the pulmonic valve. Figure 1a allows clear observation of protrusion of two pulmonic cusps into the right ventricular outflow tract during diastole. The M-mode tracing demonstrated a particularly steep E-F slope with coarse and undulating movements during diastole (Fig 1b). In addition, the inferior cusp produced multiple echoes, consistent with local redundant material. On apical four-chamber view, the anterior and posterior mitral leaflets showed a systolic bulging into the left atrium, consistent with mild mitral valve prolapse. Further analysis of M-mode and two-dimensional echocardiogram did not detect any other abnormality.

DISCUSSION

In this patient, the usual possible causes of pulmonary regurgitation could be reasonably ruled out. Because of the presence of associated mitral valve prolapse, we suggest that the most probable origin was myxomatous degeneration of the pulmonary valve.

As pathologic examination has demonstrated that myxomatous degeneration may involve the four cardiac valves, the rare occurrence of pulmonary valve prolapse can be questioned. Clinically, isolated pulmonary regurgitation is often asymptomatic and its diastolic murmur is usually faint and difficult to detect. Moreover, the pulmonary valve often remains uneasy to record echocardiographically. Finally, the pulmonary valve is submitted to the lowest pressure stress among the four cardiac valves.

As the transvalvular pressure gradient, as well as the size of the cusps and the stage of tissue alteration play probably a synergistic role to determine the prolapse, it is conceivable that, even if the morphologic changes were uniform on the four valves, the pulmonary valve would be the last one to present a prolapse.

This case illustrates, in addition, a particular M-mode echo pattern of pulmonary valve motion in pulmonary regurgitation, different from those described earlier by Weyman and coworkers who found irregular and undulating movements of cusps during diastole.

We suggest that a similar M-mode echo pattern should be carefully screened by two-dimensional echocardiography, using appropriate parasternal views, for the presence of pulmonary valve prolapse.

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REFERENCES