CASE REPORT

A patient under our care underwent percutaneous transthoracic needle aspiration biopsy of a right upper lobe cavitating lesion of the lung. His clinical state and data on studies of pulmonary function precluded thoracotomy. Flexible bronchoscopic examination had not yielded a diagnosis. The diagnosis before and after the procedure was that of a cavitating epidermoid carcinoma.

Immediately after the biopsy, the patient developed a tension pneumothorax. A chest tube was inserted, and the lung was reinflated. The patient did well for approximately six hours, when suddenly he developed massive subcutaneous emphysema, starting with the right side of the chest and progressing to symmetric subcutaneous emphysema of the abdomen, thorax, neck, and head. The patient at this time also developed mediastinal emphysema and a Hammond's crunch. He became hypotensive and hypoxic and required endotracheal intubation. He was placed on a volume ventilator and ventilated with 100 percent oxygen. Within four hours the mediastinal emphysema had completely resolved, as had 95 percent of the subcutaneous emphysema.

DISCUSSION

Although we are aware of reports recommending ventilation with increased oxygen tension for pneumatosis cystoides intestinalis,1,2 we were unable to find a case similar to ours in the literature. Using an increased inspired oxygen concentration is certainly known to be helpful for resorption of air in the chest in the typical case of pneumothorax. A response of this magnitude was, for this patient, lifesaving. Although this is our first occasion to observe such an occurrence, we will certainly employ the same technique again when the occasion arises. We would be interested to know if any other physicians have observed a similar chain of events. Interestingly, since this first case, we had another patient in whom life-threatening mediastinal emphysema developed and in whom this technique worked equally well and as rapidly.

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REFERENCES


Echocardiographic Determinations of Systolic Time Intervals in Mitral Valvular Prolapse

To the Editor:

We have determined systolic time intervals by echocardiographic studies in 25 patients with clinical evidence of mitral valvular prolapse without significant mitral regurgitation, and we found no alteration of ventricular function when measured by these determinations.

The clinical entity of mitral valvular prolapse comprises a wide range of clinical manifestations, such as premature ventricular contractions,1 ocular disturbances,2 sudden death,3 pain in the chest, and association with myocardial infarction.4 Because of reports of abnormal left ventricular function associated with this syndrome,5 we calculated systolic time intervals in 25 patients with mitral valvular prolapse by echocardiographic studies (Fig 1). Kleid et al6 published a study of 30 patients with this syndrome and obtained similar results when measuring systolic time intervals by pulse-phonoangiographic studies. When our data were compared with data from normal subjects, there was no statistical difference.

Systolic time intervals in patients with mitral valvular prolapse are difficult to evaluate, since the influence of severe mitral insufficiency cannot be distinguished from the abnormalities found in diminished intrinsic contractile performance of the left ventricle as seen in primary myocardial disease. Our study corroborates the investigation of Kleid et al,4 who demonstrated that left ventricular performance remains well preserved in patients with mitral valvular prolapse. The abnormalities observed by others on angiographic studies in which abnormal patterns of motion were seen may in many instances reflect the effect of the anatomic deformity itself in relation to the pattern of contraction of the papillary muscle and may not result from primary myocardial disease. None of our patients were significantly symptomatic, and our results correlate well with the concept that abnormalities in the ratio of the prejection period over the left ventricular ejection time parallel the ejection fraction as determined by angiograms.7 It has been demonstrated that the prejection period is found to be increased with shortening of the left ventricular ejection time in patients with mitral insufficiency, even in the presence of normal intraventricular pressures and a normal contractile pattern.8 Obtaining normal values in our patients supports the analysis that the mechanical consequences of abnormal motion of the mitral valvular apparatus might be responsible for the associated regional contractile abnormalities and might not be a sequel of primary disease of the myocardium.

We conclude from this study that left ventricular function remains normal in patients with mitral valvular prolapse in whom minimal or no mitral insufficiency coexists. These patients can be studied serially by echocardiograms in order to detect early manifestations of left ventricular dysfunction which may develop in mitral insufficiency due to mitral valvular prolapse.

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CHEST, 76: 4, OCTOBER, 1979

COMMUNICATIONS TO THE EDITOR 483
Bronchography with Bronchoscopy

To the Editor:

The two communications1,2 dealing with the use of the fiberoptic bronchoscope to help perform bronchographic studies deserve some comment. The "new method" described by Lutch and Ryan2 was described in 1973.3 The use of the word, "serendipitous" ("obtained or characterized by serendipity; "the gift of finding valuable or agreeable things not sought for"4), by Wagner and Paidipaty4 is incorrect. If these authors1 had encountered an unexpected situation during the fiberoptic bronchoscopic procedure and subsequently had utilized the instrument in a novel fashion (in this instance, to facilitate bronchographic studies), their usage would be proper.

The employment of the fiberoptic bronchoscope to help perform bronchographic studies is neither new nor serendipitous but should be considered an alternative to the traditional "blind" methods of passing a bronchographic catheter.

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REFERENCES


To the Editor:

My coauthor and I apologize for overlooking the previous report by Schoenbaum et al1 in our search of the literature. We are pleased to agree entirely with the suggestions in that publication, and we wish to encourage the use of the combined bronchoscopic-bronchographic procedure.

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REFERENCE