ly (two to six months), and some progressed to the usual chronic progressive type of lesions.

Our patient differs from those findings usually associated with chronic cavitary pulmonary histoplasmosis. In him was an acute illness, with rapid development of cavitation within one to four months. There was rather rapid closure of the cavity with therapy.

In contrast, the more frequent form of pulmonary cavitation in histoplasmosis has a more insidious progression, developing over months to years, is usually apical and often bilateral, and is usually associated with definite and marked fibrosis. This form is usually classified as chronic. Without therapy, there is a high mortality; even with therapy a rate of relapse of 5 percent or greater may be expected.

Acute cavitation in histoplasmosis may indeed be an early phase of chronic progressive pulmonary histoplasmosis, as suggested by Goodwin et al. If so, one must consider the role of reinfection, whether endogenous or exogenous, as reviewed and summarized by Schwarz and by Tosh.

Taking another viewpoint, can cavitation be a manifestation of primary histoplasmosis? We believe this case to be highly suggestive of this.

Clinically, it is important to differentiate these two forms of cavitary histoplasmosis. The chronic form has been well established, and its natural history is known. The acute form is less well known. It remains to be determined whether this form is "benign" or whether it has the same implications pathogenically and prognostically as chronic cavitary pulmonary histoplasmosis.

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In cases showing a protruded pulmonary arterial area on the chest x-ray films, echocardiographic studies may be useful to differentiate whether it is a dilated pulmonary artery or not prior to invasive studies.

REFERENCES

Positive Radionuclide Myocardial Infarction Pattern After Ventricular Fibrillation and Direct Current Countershock

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A patient is presented in whom direct current countershock was applied for primary ventricular fibrillation. He recovered uneventfully and no evidence was found of a myocardial infarction; however, a positive technetium stannous diphosphate scan obtained four days after the defibrillation showed positive findings. This positive scintigram was most probably due to myocardial or skeletal muscular damage consequent to countershock, but myocardial necrosis induced by ventricular fibrillation may be another cause. This case demonstrates again that a transmural or subendocardial infarction is not the only circumstance under which an abnormal scintigram can be obtained.

Scanning of the myocardium has become an established method for visualizing an infarcted area of the myocardium, and thus contributes to the clinical diagnosis of myocardial infarction.1,2 Both in patients with acute and subendocardial infarctions the isotope used in scanning has been shown to accumulate in the necrotic myocardium.3 Recently, it has been demonstrated that not only patients with infarction, but also

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Figure 1. Electrocardiographic tracing of patient in 1975. Those with severely ischemic myocardium, without electrocardiographic or enzymatic evidence of necrosis, may have positive scintiscans.4 We present a patient in whom positive results of myocardial scanning were found after external direct current countershock for primary ventricular fibrillation, although we found no other evidence of myocardial infarction.

CASE REPORT

A 52-year-old man had been treated at another hospital because of myocardial infarction a year and a half previously. He was free of chest pain or any other symptoms afterward. His present admission came after he lost consciousness and the electrocardiogram showed ventricular fibrillation. He immediately received two direct current electro-countershocks of 400 watts each and was resuscitated successfully. His mental status became fully clear soon thereafter, and he did not complain of chest pain. Serial ECGs taken during subsequent days and weeks, did not show any alterations from previous ECG tracings (Fig 1, 2). 99m-Technetium stannous diphosphate uptake scan on the fourth day of hos-

Figure 2. Electrocardiogram in March, 1976, one week after direct current countershock for ventricular fibrillation.