This 65-year-old white man was admitted with dyspnea and hemoptysis. He had had “asthma” for many years and developed a cough and an increase in dyspnea two months prior to admission. These symptoms became worse despite administration of antibiotics. Just prior to hospitalization he developed hemoptysis, ankle edema, and paroxysmal nocturnal dyspnea.

His temperature was 99.8°F., pulse 120, respirations 20 and blood pressure 110/75. His chest was increased in anteroposterior diameter, hyperresonant and unremarkable to auscultation. Skin tests, bronchoscopy, and sputum cytology were negative. The white blood cell count was 11,200 with 74 per cent polys. Sputum culture grew a variety of organisms.

Figure 1 is the admission film. Figure 2 was obtained three weeks later.
**Diagnosis:** Multiple Cavitating Pulmonary Infarcts

The admission film shows a sharply circumscribed rounded density in the right costophrenic angle and a small density in the right mid-lung field. The film taken three weeks after admission demonstrates an additional density in the right upper lung field. Cavitation of all three lesions is now seen. The right hilum appears enlarged and the vessels in the infra-hilar area are truncated.

The patient improved with digitalis, diuretics, coumadin (Dicumarol), and antibiotics and was discharged in one month. He was readmitted about three weeks later because of acute thrombophlebitis of the left leg. He now recalled having had a similar episode prior to the original admission.

Cavitation of a pulmonary infarct is not rare. A recent review of 90 cases of pulmonary infarction at the Indiana University Medical Center revealed four cases with cavitation. Soucheray and O'Loughlin found a similar incidence in their material. Chester and Krause report an incidence of abscess formation in pulmonary infarction of approximately 5 per cent, although cavitation is not demonstrable roentgenographically in all cases.

Cavitation may result from either bland necrosis or secondary infection of the infarcted area. The latter mechanism is apparently the cause in most cases, but in none of Soucheray and O'Loughlin's cases was the cavity infected. Empyema formation secondary to infected infarcts was common in the pre-antibiotic era, but is rare now. Schmidt et al. state that cavitation of pulmonary infarcts should always arouse suspicion of polyarteritis.

The most important conditions which should be considered in the differential diagnosis are lung abscess, tuberculosis and other granulomatous diseases, bronchogenic carcinoma and metastatic disease.

**References**

1 Sisk, P. B.: Unpublished data.

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**REPLACEMENT OF TOTAL AORTIC ARCH**

In the complete replacement of the aortic arch for aneurysm, it is important first to avoid temporary shunts prolonging the operative time. Second, heparinization should be avoided since there is increased risk of hemorrhage from the large areas of dissection left behind after resection of a huge aneurysm. Third, the utilization of hypothermia permits occlusion and an end-to-end suture of the left carotid artery and of the anastomosis between the graft to the descending aorta. A successful arch resection is reported in which these principles were utilized. Bjork, V. O.: "Successful Replacement of the Total Aortic Arch for Aneurysm," *J. Thor. and Cardiovas. Surg.*, 49:817, 1963.