AMEBIC PERICARDITIS

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Amebic infection in man is worldwide in distribution. Persons in temperate climates as well as tropical areas are occasionally afflicted by this disease (*1*). The infection usually involves the lower gastrointestinal tract and may be asymptomatic. In a small percentage of cases, the amebae spread beyond the bowel wall, producing serious or even fatal complications (*2*).

The purpose of this communication is to report a case of amebiasis in which a serious complication was diagnosed by radiological means, which led to prompt surgical intervention.

CASE REPORT

The patient, a Vietnam veteran from Louisiana, enjoyed good health until August 5, 1970, when he sought medical attention because of left pleuritic chest pain. He was not hospitalized until several weeks later, at which time he appeared jaundiced. His general condition improved over the next 10 days, and he was sent home without a diagnosis having been made. His chest pain later recurred, and he was readmitted to a local hospital on October 5. Episodes of fever as high as 104°F and documented weight loss of 35 lb prompted his referral to this institution.

He appeared very ill upon arrival and was breathing with rapid, shallow respirations. He was tender in the epigastrium. His WBC was 22,900 and his Hb was 12 gm%. Admission chest roentgenogram showed moderate enlargement of the cardiovascular silhouette and signs indicating pleural effusion and infiltrate at the left base.

Initial liver scintiphotos using 2 mCi ^{99m}Tc-sulfur colloid were interpreted as showing moderate hepatomegaly with a large avascular filling defect in the area of the left lobe. A "blood pool" scan was then done, using 2 mCi ^{99m}Tc-pertechnetate because of the enlarged cardiovascular silhouette on chest x-ray. A rectilinear scan was obtained which included both the chest and abdomen (Fig. 1). Findings indicated a large pericardial effusion in addition to the liver defect already described.

At this point, a needle was advanced into a fluctuant area in the patient's epigastrium. Thick, dark material was aspirated. A polyethylene tube was left in position, and the patient was brought to fluoroscopy. Water soluble contrast agent injected through the tube outlined an enormous cavity. A short time later the pericardial effusion was seen to be partially opacified by the same contrast material (Fig. 2). A diagnosis of liver abscess with extension into the pericardial sac was made.

The patient was taken to surgery where approximately 1,500 cc of dark, blood-stained pus was re-

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FIG. 1. Rectilinear scan of chest and abdomen. Clear space around cardiac blood pool indicates pericardial effusion. Defect in liver is also evident. Activity below liver defect corresponds to stomach (compare with Fig. 2).

moved through an epigastric incision. The pus-containing space—which nearly replaced the left lobe of the liver—was found to communicate directly with the pericardial cavity through a necrotic area in the diaphragm several centimeters in diameter. Amebae were identified in the aspirated pus.

Repeat liver scintiphoto done approximately 2 weeks after surgery showed a much smaller defect in the left lobe area. The patient gradually regained his strength and was discharged after several additional uneventful weeks of bed rest.

DISCUSSION

The incidence of amebic infection in the general population in this country has been estimated to reach as high as 10% (*3*). In a study of stool specimens from asymptomatic individuals, amebae were found in 4–6% in the South and 2–4% in Northern States (*1*). Variations in incidence are thought to correlate better with adequacy of sanitation facilities than with climate (*3,4*).

Amebic infection in man, acquired by ingesting the cyst form of the organism in contaminated food or water, may be asymptomatic and is limited to the lower gastrointestinal tract in a majority of instances. The commonest route of spread beyond the bowel is through the portal system to the liver (*3*). Further spread may be hematogenous or may occur by direct extension from a liver abscess.

Amebic liver abscesses may rupture downward, spilling into the peritoneal cavity, outward to the skin, or upward through the diaphragm. Pleural and pulmonary complications of amebic liver abscesses are well summarized elsewhere (*5,6,7*).

Pericardial complications almost invariably accompany an abscess in the left lobe of the liver because of the contiguity of this part of the liver to the pericardial sac. Pericardial involvement may be limited to a "reactive" or "sympathetic" non-purulent effusion (*8*). Direct rupture of the liver abscess into the pericardial cavity may occur. This complication carries a high mortality rate, usually as a consequence of cardiac tamponade (*9*). In one series of 44 cases of direct extension there was only one survivor (*10*). Constrictive pericarditis has been reported in survivors of the acute phase and poses a late threat to life (*8,9*).

SUMMARY

Amebic infection of the pericardial cavity is an unusual complication of amebic liver abscess. Because this complication carries a very high mortality rate, every effort should be made to make the correct diagnosis early. As illustrated in this case report, information gained from roentgenograms and isotope studies may be quite dramatic and should suggest the correct diagnosis. The extremely high mortality rates due to amebic pericarditis cited in earlier reports should be reduceable by the proper application and interpretation of these diagnostic tools.

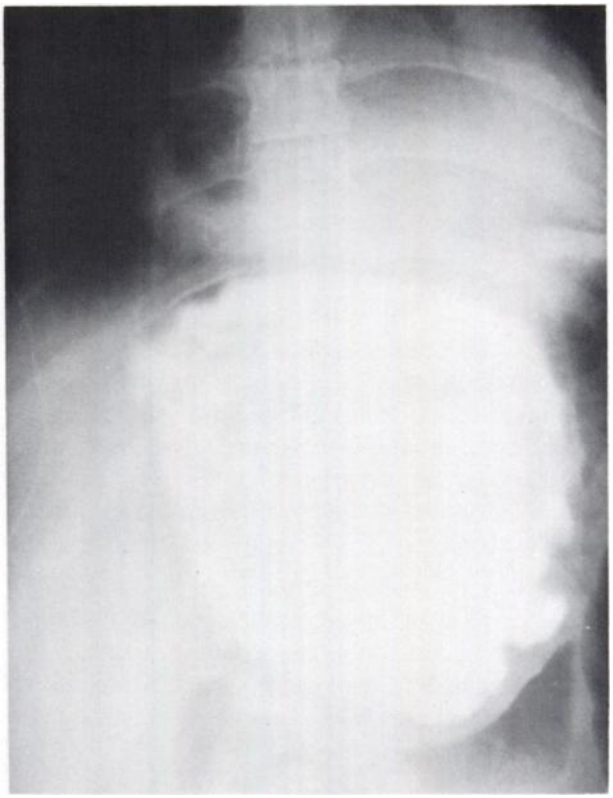

FIG. 2. Roentgenogram of area shown in Fig. 1. Water-soluble contrast material outlines huge cavity in left lobe of liver. Pericardial effusion is partially opacified.

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