CASE REPORTS

Tympany Over the Liver in Hepatic Abscess Caused by Clostridium Welchii

Report of a Case

MARSHALL J. FIESE, M.D., *Fresno*

TYMPANY in the center of the area of normal liver dullness has not, so far as I know, been previously described in cases of liver abscess. In a patient recently observed, this unusual physical sign was the first evidence of a huge gas-containing abscess of the liver, secondary to empyema of the gallbladder.

About 10 per cent of pyogenic liver abscesses arise by direct extension from the gallbladder.[3] Occasionally Clostridium welchii is found in diseased biliary passages, although less commonly than Escherichia coli, streptococci, and staphylococci.[2] Now and then members of the Clostridium group are recovered from liver abscesses.[1] On rare occasions gas has been demonstrated in hepatic abscesses by roentgenographic examination.[1]

A 67-year-old Swedish packer entered Stanford University Hospitals on August 5, 1948, because of severe right upper quadrant pain for ten days. Two years previously an appendectomy had been done for transient, vague right upper quadrant pain. For several months the patient had been known to have pernicious anemia, which had responded rapidly to injections of liver extract. Two weeks before entry he noticed steady, mild right upper quadrant pain, which in the next several days became much worse. Two days before entry the pain had subsided somewhat, but the patient began having severe chills and fever, and became delirious.

At the time of admission the patient was weak, tired, sweating, and disoriented, with a swinging fever as high as 40° C. There were crackling rales at both lung bases posteriorly. The liver was enlarged and tender. In the midst of the area of liver dullness, which extended from about the level of the fifth costochondral junction to 5 cm. below the costal margin, was an area of loud, resounding tympany 10 cm. in diameter (see Figure 1).

There were 4,100,000 erythrocytes per cu. mm. and 14.7 gm. of hemoglobin per 100 cc. of blood. Of the 15,600 leukocytes per cu. mm., 88 per cent were polymorphonuclear cells, 17 per cent banded. Roentgenograms showed a large area of decreased density in the liver, with a shifting fluid level (see Figure 2). Clostridium welchii was cultured from the blood.

There was no apparent response to penicillin and streptomycin. On the sixth hospital day laparotomy and cholecystectomy were carried out. The liver was enlarged, firm, and as tympanitic as a drum. The tense, distended gallbladder contained 800 cc. of foul pus. A perforation in the gallbladder wall entered a cavity in the liver 20 cm. deep, full of pus and gas, from which E. coli and Cl. welchii were cultured. Two days following operation the patient, in delirium, pulled out the drains which had been left in the

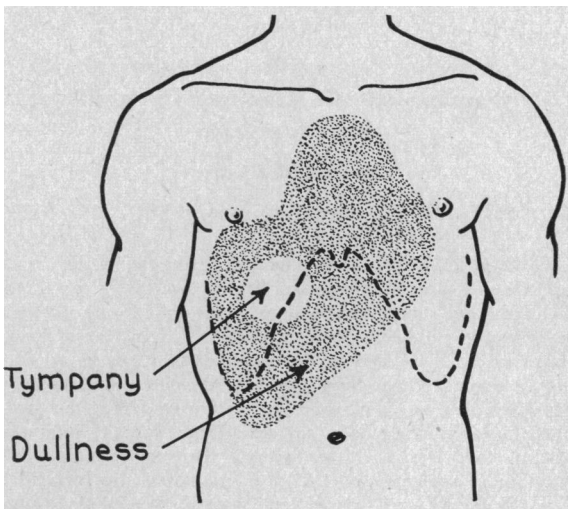

Figure 1.—Pattern of cardiac and hepatic percussion dullness and tympany in a case of abscess of the liver due to Clostridium welchii.

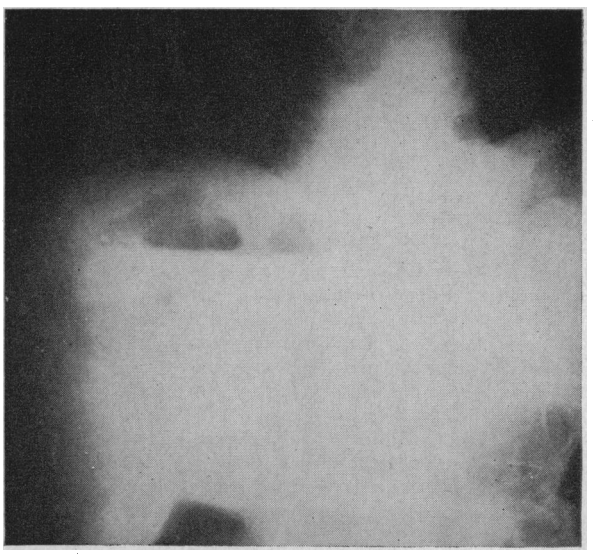

Figure 2. — Roentgenogram of the abdomen, showing area of decreased density with fluid level, in a case of abscess of the liver due to Clostridium welchii.

From the Department of Medicine, Stanford University School of Medicine, and the Stanford University Hospitals.

abscess cavity, so that a second laparotomy was necessary ten days later. Penicillin and streptomycin were continued for two weeks. The wound drained for six weeks, but convalescence was otherwise uneventful. The tympany over the liver disappeared.

COMMENT

The signs usually mentioned as indicative of large hepatic abscesses are enlargement and tenderness of the liver, friction rubs over the hepatic area, bulging and inflammation of the abdominal wall in the right upper quadrant or flank, and fixation of the right diaphragm. To this list may be added tympany over the liver if the abscess contains gas. Although this sign must be rare indeed, it is so striking when present that it may prove to be of diagnostic value, and should be sought when a liver abscess is suspected.

SUMMARY

Tympany in the center of the area of normal liver dullness characterized a case of gas bacillus abscess of the liver, secondary to empyema of the gallbladder. As far as has been determined, this unusual physical sign has not been previously described.

3243 Kerckhoff Avenue.

REFERENCES

1. Bockus, H. L.: Gastroenterology, Philadelphia and London, W. B. Saunders Company, 1946, vol. 3.
2. Hanssen, E. C., and Yurevich, A.: Bacteriological observations in disease of the biliary tract, Am. J. Digest. Dis., 2:460, Oct. 1935.
3. Ochsner, A., DeBakey, M., and Murray, S.: Pyogenic abscess of the liver, Am. J. Surg., 40:292, April 1938.

Tuberculous Pericarditis—Treatment with Para-aminosalicylic Acid and Intermittent Streptomycin

Report of a Case

WILLIAM WEISS, M.D., and EMIL BOGEN, M.D., *Olive View*

STREPTOMYCIN is an effective antibiotic in the treatment of tuberculous pericarditis as well as in the treatment of other tuberculous lesions, as described in a number of recently published case reports.[2, 4, 6, 7] In these cases streptomycin was used in the usual daily regimen consisting of several small doses per day. Recently this regimen has given way to an intermittent method in which the antibiotic is administered in a single large dose at intervals of days to a week, with or without the concurrent administration of such drugs as PAS (para-aminosalicylic acid). The efficacy of the intermittent method has been demonstrated in the treatment of pulmonary[1, 2, 8] and laryngeal[5] tuberculosis. The following case is reported to demonstrate its efficacy in the treatment of tuberculous pericarditis.

In this case PAS was used concurrently. Clinical improvement began immediately after the intramuscular injection of 2 gm. of streptomycin and daily oral administration of PAS. The PAS was stopped after two weeks because of a febrile reaction and granulocytopenia. Therapy was then continued with streptomycin, 2 gm. in each dose, at weekly intervals and convalescence was uneventful.

CASE REPORT

The patient was a 35-year-old Japanese housewife born in Los Angeles. Family history was not significant. Past medical history included an attack of pleurisy at the age of 15. One child was born in 1941.

The present illness began in 1944 when the patient was 30 years of age. At that time she was interned at a California camp for Japanese. In May of that year there was an acute febrile episode and the patient was in bed at the camp hospital for four days. Eight months later she began to cough, lose weight and to have pain of pleural type in the right chest. An infiltration in the upper lobe of the right lung was noted in a roentgenogram. The sputum contained tubercle bacilli. The patient was put to bed in the camp hospital and during the next three months there was a gain in weight from 110 pounds to 126 pounds. In April 1945 the patient was transferred to a Los Angeles County sanatorium. Modified bed rest was continued and the sputum was negative for tubercle bacilli. In August 1945 it was noted that the upper lobe of the right lung was atelectatic. The patient's activity was gradually increased.

In April 1946 the sputum again became positive for tubercle bacilli on concentrated smear. Cough increased, the sputum was blood-streaked, and there was slight fever. Bed rest was resumed. In repeated bronchoscopic examinations fibrous stenosis of the right main bronchus with a small area of granulation tissue was noted. Beginning at the end of August 1947 the patient was given a course of streptomycin consisting of 1 gm. daily in five divided doses for 70 days. Planigrams on several occasions in 1947 showed multiple small radiolucent patches in the atelectatic right upper lobe. The sputum remained persistently positive for tubercle bacilli. Therefore, three stages of a right thoracoplasty (seven ribs) were done in October to December of 1947. Following this procedure, the sputum was negative for tubercle bacilli.

Six months later, the sputum again became positive for tubercle bacilli and planigrams on two occasions in 1948 showed multiple radiolucent areas in the atelectatic right upper lobe under the thoracoplasty. Upon bronchoscopic examination the same degree of stenosis of the right main bronchus that had been noted before was observed but there was no active mucosal disease. In December 1948 tubercle bacilli from the patient were determined to be not resistant to streptomycin, so this antibiotic was given again in doses of 0.5 gm. intramuscularly once a day. Seven days later, right upper lobectomy was performed. During the operation the pericardium was inadvertently entered but the wound was repaired without incident. The patient made satisfactory recovery but had a low-grade fever for two weeks after the operation. Thereafter tubercle bacilli were never again isolated from the sputum or gastric washings.

Convalescence was uneventful for five months until May 22, 1949, when the patient began to have fever, dyspnea, a vague pressing pain in the left upper chest on coughing, increased cough with expectoration, and headache. These symptoms became worse during the next four days. Upon examination at that time fever and tachycardia were noted, and there was dyspnea but no cyanosis. Blood pressure was 110 mm. of mercury systolic and 90 mm. diastolic. The pulse was paradoxical. When the patient sat erect there was no venous distention in the neck, but when she lay down, the right external jugular vein became considerably engorged. The chest had the usual deformity of thoracoplasty on the right. The left hemithorax was barrel-shaped. The apex beat of the heart was not palpable. The heart was not ap-