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LETTERS TO THE EDITOR
EDİTÖRE MEKTUP

Spontaneous bacterial empyema in cirrhosis

Sirozda spontan bakteriyel ampiyem

Dear Editor,

A 25-year-old man with end-stage liver disease (Child stage C) presented to our hospital with fever, shortness of breath and right-sided pleuritic pain of one day duration. He had a history of hepatitis B-related liver cirrhosis for five years. At admission, his body temperature was 38.5°C.

Chest X-ray revealed massive right pleural effusion. Pleural fluid study yielded white blood cell count of 27, 100/mm^3 with 80% neutrophils. Cultures of pleural fluid revealed *Escherechia coli*. Ultrasonography of the abdomen showed splenomegaly with increased portal vein diameter and minimal ascites, compatible with liver cirrhosis.

On admission empirical intravenous antiobiotic therapy, cefotaxime 2 gr per 8 hours, was instituted. A total of 2000 cc fluid was evacuated with serial therapeutic thoracentesis. On the 5th and 10th days of therapy the pleural fluid revealed more than 500/mm^3 PMNL counts. Therefore, cefotaxime was continued further. Follow-up X-ray, on the 14th day of the admission, revealed minimal right pleural effusion, and evaluation yielded white blood cell count of 100/mm^3 with 45% neutrophils and negative bacterial culture. Cefotaxime was stopped and the patient was discharged on the 15th day with no signs or symptoms of infection.

The accumulation of fluid in the pleural space as a consequence of hepatic disorders, and in the absence of cardiac or lung disease, is described as hepatic hydrothorax (1, 2). Hepatic hydrothorax has been reported to occur in a range from 0.4-12.2% of cirrhotic patients, with most studies reporting an incidence of 5-10% (1, 2). Spontaneous bacterial empyema (SBEM) is a complication of hepatic hydrothorax in cirrhotic patients. About 13% of patients with hepatic hydrothorax develop spontaneous bacterial empyema, often in the absence of concomitant spontaneous bacterial peritonitis (SBP) or ascites (3). Patients with SBEM have a case fatality rate as high as 20% (3). Diagnostic criteria for SBEM are clinical evidence of fever or shock; positive pleural fluid culture or, if negative, a pleural fluid neutrophil count greater than 500 cells/mm^3; no evidence of pneumonia on chest radiology; and preexistent hepatic hydrothorax (3).

Early diagnosis and the initiation of prompt therapy have played key roles in decreasing the mortality associated with SBEM. Either second- or third-generation cephalosporins or the combination of amoxicillin/clavulanic acid administered intravenously are considered first line therapy of SBEM (4).

Chest tube insertion is not necessary for SBEM (3, 5). Successful treatment has been reported using antibiotic therapy and pigtail drainage, or even antibiotic therapy alone (3, 5).

In conclusion, SBEM is not infrequent in cirrhotic patients and it might be seen in the absence of SBP. It can be treated successfully with broad spectrum antibiotics without chest tube insertion.

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