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Bacterial peritonitis secondary to *Capnocytophaga canimorsus*

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Dear Editor,

We present the case of a 72-year-old male with a history of alcoholic liver cirrhosis with episodes of ascitic decompensation, an episode of gastrointestinal bleeding secondary to esophageal varices, chronic portal thrombosis and hepatocarcinoma treated by radioembolization with Y90. At the time of admission, he was not under active treatment due to decompensated cirrhosis.

The patient was admitted due to fever and abdominal pain. Examination revealed the presence of a tense umbilical hernia, with liquid content, and a thin, fragile, violaceous, erythematous, warm wall with lacerations and pain on palpation. The patient's temperature was 37.7 °C, with a good general condition and hemodynamically stable.

Laboratory tests showed leukocytosis with 19,550 leukocytes/mm^3 (88 % neutrophils), C-reactive protein of 82.5 mg/dl, and total bilirubin of 1.4 mg/dl. Diagnostic paracentesis was performed showing 1,073 PMN/mm^3, glucose 37 mg/dl and proteins 29.2 g/l. A sample was taken for ascitic fluid culture and hemocultures. An urgent abdominal computed tomography (CT) scan was requested due to the suspicion of secondary bacterial peritonitis, which showed ascitic fluid predominantly in the umbilical hernia, septated, with no other infectious focus.

Empirical antibiotic treatment was started with ceftriaxone. At 48 hours after admission, blood cultures and ascitic fluid culture were positive for *Capnocytophaga canimorsus (C. canimorsus)*,

therefore antibiotic therapy was changed to piperacillin/tazobactam, which was maintained for 14 days. In view of the finding, the patient was questioned and reported recent contact with dogs. The patient had a good evolution, showing clinical and analytical improvement, and normalization of polymorphonuclears in ascitic fluid. Finally, he was discharged with a diagnosis of secondary bacterial peritonitis, as the initial lacerations and fragility of the hernia wall were found to be the probable entry point. In addition, the possibility that the origin of the case was a bacterial translocation, and therefore a spontaneous bacterial peritonitis, is much more remote since this particular species of the genus *Capnocytophaga* is not part of the human digestive flora.

Discussion

C. canimorsus is a gram-negative fusiform bacillus, commonly found in the oral flora of dogs and cats. Infections in humans are usually related to contact with these animals and occur mainly in patients with associated risk factors such as immunosuppression and splenectomy (1,2). Although cases of peritonitis caused by this bacterium have been reported in patients on peritoneal dialysis (3,4), this is the first reported case of isolation of *C. canimorsus* in the ascitic fluid of a patient with liver cirrhosis.

The possibility of *C. canimorsus* secondary bacterial peritonitis should be considered in patients with exposure to canids or felines, especially if they present possible entry points such as wounds, bites or other lesions in the abdominal wall. In these patients, preventive and hygienic measures should be maximized to avoid infection by this germ.

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