



Case Report:

Spontaneous Bacterial Peritonitis Presenting as Acute Abdomen in a Patient with Chronic Kidney Disease.

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Abstract: Spontaneous bacterial peritonitis (SBP) is a relatively common problem in adult patients with liver cirrhosis. The complication of SBP in adults with chronic kidney disease on maintenance hemodialysis is, however, extremely rare. To best of our knowledge this is probably the first case report.

Key Words: Spontaneous bacterial peritonitis; Chronic kidney disease; Acute abdomen

Introduction:

Spontaneous bacterial peritonitis is usually a complication of liver cirrhosis. Few case reports are available regarding the same in nephrotic syndrome.¹ We observed spontaneous bacterial peritonitis in a 52 years old female who was on maintenance hemodialysis for chronic kidney disease stage 5.

Case Report

A 58 years old female with chronic kidney disease stage 5 had been on maintenance hemodialysis for two years in dialysis unit of our hospital. This time she came to us with acute pain in abdomen, fever and vomiting since one day. Physical examination showed tender abdomen with mild guarding, and mild ascitis. Her vitals were normal with blood pressure of 160/90 mm Hg in right arm supine. She was nondiabetic. Laboratory investigations showed: hemoglobin 7.5 g/dl, WBC 15.5 x 10⁹/L with neutrophil 85%, Platelets 240 x 10⁹/L, blood urea 96 mg/ dl, serum creatinine 3.8 mg/dl, serum potassium 4.8 mmol/l, and sodium 132 mmol/l. ESR was 40 mm in first hour. Her liver function test, Urine examination was normal. Serum lipase was normal. She was negative for HIV, Hepatitis B and C. Chest X Ray was within normal limits and ultrasonography of abdomen showed mild ascitis. Ascitic fluid analysis showed an exudative fluid. The cell count was 1600/cu mm, with 90% polymorphonuclear leucocytes. Serum-ascites albumin gradient was 1.04 g/dl.

ADA of the fluid was negative. Provisional diagnosis of spontaneous bacterial peritonitis was made and she was put on injection ceftriaxone and metronidazole. Routine culture of the fluid showed no growth. On the basis of this finding culture negative neutrocytic ascitis was made. Her symptoms subsided in two days.

Discussion

SBP is the infection of the ascitic fluid that occurs in the absence of a visceral perforation, intraabdominal inflammatory focus such as abscess, acute pancreatitis or cholecystitis. For its diagnosis number of polymorphonuclear leucocytes (PMN) in the ascitic fluid obtained by paracentesis must exceed 250 cells/mm³ and at least one bacterium must be isolated from cultures.² In our case as blood culture was negative so we defined it as culture negative neutrocytic ascites. SBP or culture negative neutrocytic ascitis is sometimes seen as a complication in adult patients with liver cirrhosis (10%).³ Few cases are reported in adults with nephritic syndromes. We searched the literature, textbook, PubMed, Medlar and there was no case report or article regarding this. Probable pathogenesis in patients with chronic kidney disease on hemodialysis is considered to be the main consequence of bacterial translocation. The bacterial translocation is the process through which viable or non-viable bacteria and bacterial products (bacterial DNA or endotoxins) cross the intestinal lumen and come into the mesenteric lymph nodes or extraintestinal. The bacterial translocation is a perturbation of the equilibrium between the normal intestinal flora and the organism, leading to an inflammatory reaction that perpetuates, finally producing infection.⁴ In chronic kidney disease, because of the local and systemic immune deficiencies, the bacterial translocation process is followed by bacteremia and ascitic fluid inoculation.

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