Group B Streptococcus and Treatment of CAPD Peritonitis

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Dear Sir,

Group B streptococci cause infections in neonates, but also in adults, with a significant morbidity and mortality rate. Reports of infection in CAPD patients are scarce. We report on such a case.

A 25-year-old patient with membranous nephropathy had been on CAPD for 7 months. He was generally healthy until he was admitted for abdominal pain of recent onset. On entry, he was stuporous, but not hypotensive; body temperature was 39.5 °C. Clinical examination disclosed diffuse abdominal pain with rebound tenderness. The first bag was clear, with 2 elements/mm³; the second was cloudy, with 1,400 elements/mm³. Culture yielded group B streptococcus serotype III in both, which was sensitive to penicillin. Blood cultures showed no growth. Peritonitis was treated with piperacillin (2 g/ bag), and cephalothin (0.5 g/bag), according to our standard protocol for severe cases. In addition, the patient received an initial intravenous injection of piperacillin (3 g) and cephalothin (1 g). Cephalothin was stopped when culture results were known. Conscience improved; abdominal pain and fever subsided in 3 days. Fibrinogen level was still 10.2 g/l at the time. No evidence of immuno-logical deficiency was found. The patient was discharged 7 days later on oral rifampin.

Four cases of group B streptococcus peritonitis have been reported in detail. Blood cultures were positive in at least 2 of them. Two children [1] were treated with a combination of cephalothin and tobramycin. Both had septic shock, 1 with cardiorespiratory arrest. Two adults [2, 3] were treated with a combination of vancomycin and tobramycin. One died, despite serum levels of antibiotics in the therapeutic range. Our case is similar to the 4 reported by its abrupt onset and severe clinical features. It differs by its early treatment with piperacillin, which is quickly active against most strains of streptococci, and its relatively uneventful outcome. Cephalosporins are less active than penicillins against streptococci. Bactericidal activity of vancomycin takes up to 48 h, as it interacts slowly with peptidoglycan synthesis [4].

Currently recommended protocols are clearly ineffective against what is probably the greatest infectious emergency in CAPD, group B streptococcus peritonitis. This is of importance, as an increased incidence of invasive group B streptococcal infection in adults has been reported both in the United States [5] and the UK [6]. We suggest that initial combination treatment of severe peritonitis with a suitable antistaphylococcal drug and a broad-spectrum penicillin adequately covers streptococcal and gram-negative peritonitis, with the added advantage of preserving residual renal function by avoiding nephrotoxic drugs.

References

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