

CRYPTOCOCCUS PERITONITIS

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SYNOPSIS

Peritonitis is a well-known complication of continuous ambulatory peritoneal dialysis (CAPD). It is not surprising that a self-help procedure using a glucose-rich dialysate fluid should be complicated by bacterial and fungal growth. Various fungi(1) — candida, fusarium have been found in the peritoneal fluid but cryptococcus in the peritoneal fluid has not been reported.

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CASE REPORT

L.L.Y. a 32-year old Chinese woman started CAPD in January 1982. She mastered the procedure within 2 weeks and was having 4 exchanges a day using 1.5% Travenol dialysate. In mid January 1983 she had some abdominal discomfort. A week later she had a low grade temperature. The abdominal discomfort persisted, the peritoneal fluid became cloudy. The patient performed peritoneal lavage and reported herself. On examination, temperature was 37°C. The abdomen was soft but mildly tender all over. The peritoneal fluid was opalescent. Culture for bacteria was negative. She was treated in the usual way with intraperitoneal cephalosporin (Cefotaxime) and Gentamicin while further dialysate returns were sent for microbiology. Three successive specimens showed cryptococcus. By the time cryptococcus was confirmed by culture the peritoneal fluid had cleared and the patient was clinically well and discharged. Repeat peritoneal fluid examination in late January again grew cryptococcus but the patient was well, the peritoneal fluid cell count was normal. Blood culture was negative but cryptococcus antigen and antibody were mildly positive. Rheumatoid factor was negative. It was decided not to treat the patient unless the cryptococcus persisted and the peritoneal fluid showed evidence of inflammation or the patient became symptomatic. However, the cryptococcus ceased to appear after February 1983. The patient has remained well and free of any illness or peritonitis till the time of writing (August 1984).

DISCUSSION

Although CAPD has been accepted as a form of treatment for end stage renal disease for 6 years, the problem of peritonitis is still not eliminated. Many types

of bacteria and fungi have been found to have caused infection (2). On the whole, experience with fungal infection is limited and cryptococcal peritonitis has not been described.

Cryptococcus neoformans is an encapsulated yeast commonly found in soil, birds and animals. It affects persons of normal and altered immunity. Infection may be harmless (3) or asymptomatic causing skin test conversion only (4). However, meningitis and disseminated cryptococcosis are well-known manifestations of cryptococcal invasion. The incidence of severe infection is said to be higher in individuals with altered host response (5).

The treatment of cryptococcus infection is prolonged. The drugs used are frequently associated with side effects and resistance of the organisms to the drugs is not uncommon. Patients with systemic cryptococcosis are usually treated with amphotericin B, in combination with 5 fluorocytosine. Sometimes even after a full course of treatment the organisms continue to be detected or evidences of infections persist. Recurrence after an interval of up to 15 years have been reported. Some patients with cryptococcal meningitis have remained asymptomatic despite being left untreated (7). However most of these patients did not have any underlying disease.

Although this patient did have a definite cryptococcal infection as demonstrated by the antibody response, the infection could have been contained by the multiple peritoneal lavage as soon as the peritoneal fluid became cloudy, even before she called her doctors. If the cryptococcus was found while the patient was having symptoms of peritonitis, there would have been little reason for withholding treatment. However, since the cryptococcus was discovered only after the patient had become asymptomatic and she was otherwise well, it seemed justified to withhold treatment until clinical circumstance required it or if the organisms increased in number. Such patients must be closely watched.

This case report shows that patients on CAPD may in addition to other fungal peritonitis, develop cryptococcal infection or contamination of the peritoneal cavity. In such circumstance, immediate and frequent lavage may help to contain the infection. Symptomatic patients should be treated and all patients whether treated or otherwise should be closely checked for recurrence, persistence or spread of infection.

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