Carcinoma of the Kidney Presenting as Sterile Peritonitis in a Patient on Continuous Ambulatory Peritoneal Dialysis

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Dear Sir,

Cystic degeneration frequently occurs in the kidneys of patients on long-term dialysis and malignant change within the cysts is common [1]. We have recently seen a patient on chronic ambulatory peritoneal dialysis (CAPD) in whom acquired cystic disease complicated by a hypernephroma presented as recurrent episodes of culture-negative peritonitis.

A 47-year-old Cypriot woman with proliferative glomerulonephritis, who had been on haemodialysis for 9 years, was started on CAPD. Over the next 12 months she complained of cloudy effluent dialysate and abdominal pain on 15 documented occasions. On each occasion when peritonitis was suspected, the presence of neutrophils in the dialysate was confirmed. However, during none of these episodes were organisms seen on Gram stain or cultured. Full details of the bacteriological techniques employed are given elsewhere [2]. At each presentation, three immediate rapid exchanges of 2 litres of dialysate were performed and she then resumed her normal CAPD regimen (2 litres, exchanged 4 times/day) with the addition of 50 mg of vancomycin and 50 mg of ceftazidime to each litre of dialysis fluid. The antibiotics were continued for 10 days and, each time, there appeared to be a clinical recovery. After 9 months the pain became localized to the left loin. An ultrasound examination revealed a 5-cm solid mass in the lower pole of the left kidney and a CT scan demonstrated this to have the typical appearances of a hypernephroma. The kidney was removed via a flank incision without opening the peritoneum and peritoneal dialysis was continued throughout the perioperative period. The removed kidney contained numerous cysts and a well-differentiated hypernephroma which was not locally invasive. None of the cysts was obviously infected. There was no evidence of distant metastases on her chest X-ray or isotope bone scan, and she remains apparently free of malignant disease 2 years later. She has had two episodes of clinical peritonitis since her nephrectomy, both of which were culture-positive and responded to antibiotics.

Peritonitis remains the most common complication of CAPD. Generally, bacterial or fungal infection is the cause. Nevertheless, approximately 20% of cases of peritonitis in our unit are culture-negative [3]. Suggested causes for such cases include undiagnosed infectious peritonitis, chemical peritonitis, and irritation of the peritoneum by contaminants in the dialysate [4]. The close temporal relationship between the nephrectomy and the resolution of the recurrent episodes of peritonitis in this case suggests that pathology within juxtaperitoneal tissues should also be considered in the differential diagnosis of cryptogenic peritonitis.

References

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