Chemotherapy and/or Removal of the Peritoneal Catheter in the Management of Fungal Peritonitis Complicating CAPD?

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Dear Sir,

Fungal peritonitis in patients undergoing peritoneal dialysis is gaining in importance because of its increasing frequency. Medical therapy remains a critical problem and so far has not been uniformly successful. Peritoneal catheter removal is, at present, the recommended method for its treatment [1, 2]. We read with interest the recent paper by Pocheville et al. [3] which reports a case of *Candida* peritonitis during chronic ambulatory peritoneal dialysis (CAPD) recovered with intraperitoneal administration of 5-fluorocytosine (5-FC) without removing the catheter. We report here our experience with this drug in the treatment of fungal peritonitis in patients on CAPD. Between 1980 and 1983 34 patients with end-stage renal disease were submitted to CAPD. There were 51 episodes of peritonitis 6% of which were caused by fungi predominantly of *Candida* and *Torulopsis* species. The strategy of therapy we used in patients with fungal peritonitis consisted in a protracted course of oral 5-FC with the Tenckhoff catheter left in situ [4]. The minimum inhibitory concentration of 5-FC against the etiologic agent was determined before starting therapy. It usually ranged between 0.1 and 1 µg/ml. 5-FC was administered orally daily in a dose of 40 mg/kg body weight the first 2 days followed by 30 mg/kg daily for the next 2 days and then by a maintenance dose of 15 mg/kg daily for the remainder of the course of therapy. The drug was continued for 1 week after the dialysate leukocyte counts were normalized resulting approximately in a 5 week course of therapy. In 2 cases of peritonitis caused by *Torulopsis glabrata* we measured 5-FC levels in serum and peritoneal fluid [5]. In both cases the concentration of 5-FC in the peritoneal effluent ranged between 50 and 80 µg/ml well above the minimum inhibitory concentration of susceptible fungal strains. The drug was well tolerated in all patients and its serum peak levels never exceeded 100 µg/ml. Thus, our experience agreed with the current opinion that excess toxicity comes out only when serum levels exceed 100–125 µg/ml [6]. Medical management was successful in all cases with disappearance of symptoms and return of dialysate leukocyte counts to normal (< 50/mm³) in 4 weeks. Dialysate cultures became sterile after 1–2 weeks of therapy but 5-FC treatment was continued for approximately 1 week after the return of dialysate leukocyte counts to normal in order to have a better probability of sterilization. In fact, there is recent evidence [7] that, though the findings from the cultures of peritoneal fluid became negative during therapy, catheters when removed were found to be heavily colonized by fungi. In

our patients the peritoneal catheter did not have to be removed to control the infection. They continued CAPD and 1 year after cessation of therapy had no evidence of recurrence. Although appropriate therapy of fungal peritonitis in patients undergoing CAPD still remains controversial, our experience, like that of Pocheville [et al.](#) [3], seems to suggest that a protracted course of 5-FC therapy may be useful for the management of fungal peritonitis caused by susceptible strains of *Candida Albicans* and *Torulopsis glabrata* without having to remove the peritoneal catheter.

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