

INITIAL EXPERIENCE WITH CAPD IN PATIENTS WITH HIV INFECTION IN A DEVELOPING COUNTRY

Sir:

Renal replacement therapy in the form of hemodialysis for the treatment of end-stage renal disease was started in Nairobi, Kenya, in 1984 (1). Since its inception it has been routine to screen all patients for markers for the hepatitis B virus. It was not until mid 1987 that we started screening patients for HIV antibodies as part of the preparation for hemodialysis.

At the beginning of 1989 we started a CAPD program, aimed at treating a few patients who were determined to be dependent of hospital-based treatment. Because of the prohibitive cost of renal replacement therapy and the bleak prognosis in patients with HIV infection, we exclude such patients from our program, despite the WHO recommendation (2).

In a 33-month period (January 1989 to September 1991) 9 patients (5 females and 4 males) with end stage renal disease and HIV infection, without AIDS, have opted for treatment with CAPD at their own cost. Their mean age was 33.6 yr (range 24 yr -48 yr). The double-cuff Tenckhoff catheter was inserted surgically in all patients, and all used a spike connection system. The training period lasted from 10 to 14 days. In the first week of CAPD all the patients had adequate dialysis, as evidenced by blood urea nitrogens, range 15-23 mol/L and serum creatinine of 668-957 μ mol/L.

The major complication in these patients was peritonitis, with the first episode developing 5 to 18 days (mean 7.8 days) after insertion of the catheter . This compared unfavorably with 5 CAPD patients who had no HIV infection. These patients developed the first episode of peritonitis 3 to 14 months (mean 6 to 8 months) after insertion of the catheter. In all, the HIV -infected patients were dialyzed for a duration of 52 patient months (mean 5.8 months) before death (7) or loss to follow up (2). In this period the HIV -infected CAPD patients developed 35 episodes of peritonitis or 8 episodes of peritonitis per 12 patient months. On the other hand, our 5 patients on CAPD, without HIV infection, have been followed up for 15 to 24 months (mean 26.2 months) and have developed 14 episodes of peritonitis, working out to 2.1 episodes of peritonitis per 12 patient months. The infecting organisms during the 35 episodes of peritonitis have been coagulase negative *Staphylococcus* in 11, *S. aureus* in 8, *Klebsiella* strains in 6, culture negative in 6, *Pseudomonas aeruginosa* 2, *Mycobacterium tuberculosis* and *Candida albicans* in one each. The pattern of infecting organisms in patients without HIV infection was more or less the same.

In the HIV-infected patients the peritonitis episodes took a protracted course (10 to 67 days, mean 23.4 days) despite appropriate antibiotic therapy as determined *in vitro*.

The effluent peritoneal dialysis fluid was analyzed for HIV antibodies by the ELISA method in 7 patients. This was found to be strongly positive in 1 patient and weakly positive in another 3.

Whereas peritonitis continues to be the dominating complication and cause of morbidity and discontinuation of therapy in CAPD (3,4), the relatively abysmal performance of our patients with HIV infection convinces us that this kind of expensive treatment of end-stage renal disease should not be offered to such patients in countries with limited health budgets, despite the WHO recommendation (2). In

addition, health workers who undertake to perform CAPD in such patients should take the necessary precautions when handling the effluent peritoneal dialysis fluid because of the risk of infection.

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