Implantation of a Swan-neck Missouri peritoneal catheter on July 8, 1998 was without complications. The pre-operative laboratory data showed: blood urea nitrogen 62 mg/dl; serum creatinine 7.3 mg/dl; creatinine clearance 8 ml/min; white blood cells 6700/mm³ with eosinophils 13%, neutrophils 63% and lymphocytes 18%; haemoglobin 8.2 g/dl; and platelets 173 000/mm³. Thoracic radiographs revealed normal lung parenchyma. Stool analysis for parasitic ova was negative. The serum IgE level was within normal range. The physical examination was unremarkable.

Turbid dialysate effluent without any abdominal discomfort or fever developed in August 1998, soon after initiation of CAPD therapy. The dialysate effluent revealed white blood cells (1160/mm³) with eosinophilia (84%), and negative staining for micro-organisms including mycobacteria. Culture for micro-organisms yielded no growth. Since no definite infectious focus was found and the peritoneal fluid eosinophilia appeared upon starting CAPD therapy, we considered it to be a result of mechanical irritation and only further observation was undertaken.

Peritoneal fluid eosinophilia (54–85%) and peripheral eosinophilia (7–12%) persisted during the following 3 months, and a bone marrow study revealed only reactive eosinophilia. Progressive enlargement of bilateral neck masses (1–3 cm), and generalized malaise developed in October 1998. Computed tomography revealed multiple lymphadenopathies with significant central necrosis on both sides of the neck. Biopsy from the above lesions showed pus-like material with positive culture of unidentified non-fermentative Gram-negative bacilli, but no evidence of malignancy or granulomatous disease. After 3 weeks of treatment with piperacillin and gentamicin which were chosen according to the above sensitivity test, some resolution of neck lymphadenopathy was noted. However, the peripheral and peritoneal fluid eosinophilia persisted. CAPD therapy was stopped in November 1998 and replaced by thrice weekly haemodialysis. Two weeks later, the eosinophilia did not improve. A repeat biopsy of neck lymph nodes showed caseating necrosis with Langerhans’ giant cell formation, and was negative for acid-fast stain and TB culture. In addition, detection of TB, using the polymerase chain reaction (PCR) technique, was negative for the dialysate effluent, urine, and sputum. Extrapulmonary tuberculous infection manifested as peritoneal fluid eosinophilia.


discussion.

Extrapulmonary tuberculous infection manifested as peritoneal fluid eosinophilia in a continuous ambulatory peritoneal dialysis patient

sir,

Peritoneal fluid eosinophilia is a common event in peritoneal dialysis (PD) patients, especially during the first 3 months after initiation of PD therapy [1]. The mechanism for eosinophil infiltration into the peritoneal cavity is still unclear [1–3]. Herewith we present a uraemic patient on continuous ambulatory peritoneal dialysis (CAPD) with peritoneal fluid eosinophilia resulting from tuberculous lymphadenitis-related peripheral blood eosinophilia.

Case. A 66-year-old female with a 6-year history of chronic renal failure due to tubulointerstitial nephritis reached end-stage renal disease in July 1998. She had hypertension which had been treated for 20 years and denied any systemic diseases or atopic disorders. CAPD therapy was chosen and
of extrapulmonary involvement of TB, especially in lymph nodes [5–7] has been reported for uraemic patients. The clinical course and presentation are non-specific and often mimic that of underlying chronic renal failure. In addition, a positive skin test, acid-fast stain, or culture for TB are rarely found [5], making the diagnosis difficult. In some cases, the diagnosis can only be confirmed by a successful anti-TB therapeutic trial [5].

Our patient had mild peripheral eosinophilia before CAPD therapy, which may be the result of early, occult tuberculous lymphadenitis [8]. After initiation of CAPD, concomitant mild peripheral eosinophilia and severe peritoneal fluid eosinophilia persisted over 5 months, even after withdrawal of CAPD. The eosinophilia subsided after 2 weeks of anti-TB treatment. The only explanation for the above event was that the peritoneal fluid eosinophilia resulted from tuberculous lymphadenitis-related peripheral eosinophilia, but not vice versa. To our knowledge, this is the first reported case of TB-related peritoneal fluid eosinophilia.

In conclusion, in the early stage of initiation of dialysis therapy (usually within the first year), a high index of suspicion for an aggressive evaluation of TB are necessary if uraemic patients present with an unusual and unexplained clinical course. With early diagnosis and adequate treatment, the outcome of uraemia-related TB is positive [5–7]. However, the emergence of multiple drug-resistant TB due to insufficient treatment stemming from patient non-compliance and the high relapse rate of TB associated with short-term therapy, supports the use of prolonged treatment with a combination of multiple drugs for at least 6 months and patient education.

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