Continuous Ambulatory Peritoneal Dialysis in Scleroderma

Dear Sir,

The best treatment for end stage renal disease due to scleroderma is uncertain. Haemodialysis [1] and transplantation [1, 2] have been used but experience is limited and success has been variable. There is also little experience with continuous ambulatory peritoneal dialysis (CAPD) and thus far only 3 cases have been reported [3, 4]. We have successfully treated a 55-year-old female with biopsy-proved renal failure due to scleroderma with CAPD for 12 months. Other complications of scleroderma which had developed prior to CAPD included malignant hypertension, pericarditis, upper limb peripheral vascular insufficiency, reflux oesophagitis, scler-odactyly, carpal tunnel syndrome and Raynaud’s phenomenon. A Tenckhoff catheter was used, the insertion of which was complicated by peritonitis. However, there have been no further episodes of peritonitis. Fluid balance has been easily controlled and serum creatinine, blood urea nitrogen and haemoglobin levels have been approximately 5.3 mg/dl (0.47 mmol/l), 34 mg/dl (12 mmol/l) and 8.9 g/dl (89 g/l), respectively. A 24-hour kidney creatinine clearance was 4.8 ml/min. Dialysate/plasma concentration ratios for urea and creatinine were 0.93 and 0.81, respectively. A measurement of dialysate protein loss was 11.3 g/day. Small amounts of phosphate binders and antihypertensive drugs have been required. During the first 9 months body weight fell progressively by 6 kg, and serum albumin averaged 3.2 g/dl (32 g/l). A dietary assessment showed inadequate protein and caloric intake. She attributed this to a feeling of fullness caused by peritoneal dialysis fluid. Encouragement to increase caloric intake and to have smaller more frequent meals resulted in stabilisation of body weight and a rise in serum albumin to 3.9 g/l (39 g/l) during the next 3 months. She did not perceive any improvement in her skin changes. Two small abdominal incisional hernias have developed. She becomes fatigued on moderate or sustained exertion, but manages her usual household tasks. This report accords with others [3, 4] which show that CAPD is a satisfactory treatment for renal failure due to scleroderma. Although the good biochemistry would have been partly due to the residual renal function, equilibration of urea and creatinine between blood and dialysate was similar to that measured when CAPD has been used to treat renal failure due to other causes [5], which does not support the suggestion that peritoneal clearances in scleroderma may be suboptimal [6]. Dialysate protein loss was also comparable to patients receiving CAPD for renal failure due to other causes [7]. Special attention was necessary to diet in order to maintain adequate nutrition, which may have been improved by the use of smaller volume exchanges. Difficulties with nutrition [4] and gastrointestinal symptoms though due to dialysis fluid in the
peritoneal cavity [3, 4] have been noted in other cases. It has been suggested that renal replacement therapy for scleroderma is associated with improvement in extrarenal manifestations of the disease, particularly skin [1–3]. However, in this case there was no apparent improvement in the degree of skin binding.

References
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