Impact of continuous ambulatory peritoneal dialysis on treatment of renal failure in patients aged over 60

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Abstract

Thirty eight patients aged over 60 with end stage renal disease were treated by continuous ambulatory peritoneal dialysis for up to three years. Most of these patients, because of their age or coexisting diseases, had been considered to be unsuitable for haemodialysis by the criteria used before the advent of continuous ambulatory peritoneal dialysis in 1980. Actuarial patient survival at one and two years was 72% and 61% respectively, and only two patients were permanently transferred to haemodialysis. Twenty one of the 23 survivors were fully rehabilitated, the remaining two being partially disabled but living at home.

Continuous ambulatory peritoneal dialysis permits more liberal selection of patients with end stage renal disease for renal replacement treatment with excellent survival and rehabilitation and without overburdening scarce hospital haemodialysis facilities.

Introduction

Few patients over 60 years old started dialysis in Britain until 1980, when the use of continuous ambulatory peritoneal dialysis became widespread. Indeed, the major reason for Britain's poor record in treating renal failure compared with other western European countries has been the fact that until recently only a small proportion of patients with renal failure aged 45-55 and virtually none aged over 55 had been treated. Underlying this is the strategy of provision of renal replacement services in Britain, home haemodialysis and transplantation being the favoured modes of treatment. In contrast, hospital haemodialysis is the commonest form of treatment for renal failure in the rest of western Europe.

With the scarcity of permanent beds for hospital haemodialysis in Britain there has been a reluctance to accept older patients with renal failure for treatment as these patients are often, for various reasons, unsuitable for home haemodialysis and would in the past rapidly have filled the limited number of beds for dialysis. With the advent of continuous ambulatory peritoneal dialysis, however, there has been a rapid and radical change in the upper age limit of patients accepted for renal replacement treatment in Britain—that is to say, most nephrologists are now prescribing continuous ambulatory peritoneal dialysis to older patients who, some years ago, would not have received any treatment at all (and would thus have been left to die), as they would not have been suitable for home haemodialysis and could not, for lack of resources, be accommodated on hospital haemodialysis programmes.

Results

Inpatient training—Two patients totally failed to grasp the fundamentals of continuous ambulatory peritoneal dialysis due to unrecognised dementia at the time of presentation in terminal renal failure. No further treatment was offered to these patients. In the remaining 36 patients the mean time from implantation of the Tenckhoff catheter to final discharge from hospital was 24 days; a few patients, however, took an inordinately long time to learn the dialysis technique successfully, the range of inpatient training being 12-90 days.

Survival—The figure shows the actuarial survival of the 36 patients who successfully completed training. The survival rate was 72% at one year and 61% at two years. Eleven patients died. The causes of death (and the duration of continuous ambulatory peritoneal dialysis before death) were: myocardial infarction or heart failure, five patients (three weeks, four weeks, six weeks, four months, six months); stroke, two patients (two months, nine months); withdrawal of dialysis, two patients (six months, 20 months); sudden cardiac arrest during temporary haemodialysis, one patient (13 months); and recurrent lymphoma, one patient (seven months). Most deaths due to cardiovascular causes occurred within the first few weeks or months of treatment, two occurring during the initial inpatient stay. One patient, in whom dialysis was stopped at 20 months, was 74 years old when she died. Her Tenckhoff catheter had been removed during a unresolved attack of peritonitis, possibly of bowel origin.

Peritonitis—The overall incidence of peritonitis after discharge from hospital after initial inpatient training was one episode per 12.5 patient months. Fifteen per cent of these episodes were due to cracked or leaking peritoneal dialysis catheters, which were subse-
Actuarial survival of patients aged over 60 at start of continuous ambulatory peritoneal dialysis. Figures above graph indicate number of patients at risk at that time.

Discussion

Our initial three year experience with a relatively large number of elderly patients receiving continuous ambulatory peritoneal dialysis is highly encouraging. The overall survival of this largely unselected group of patients, who often had coexisting heart and lung disease, is similar to European figures for survival of patients over 55 years old receiving haemodialysis. In general, patients either survive and do well with continuous ambulatory peritoneal dialysis or die soon after starting treatment. We have not created a pool of dissatisfied patients who are kept alive by continuous ambulatory peritoneal dialysis merely to suffer from other diseases, nor have we overburdened our limited hospital haemodialysis facilities.

The impact of continuous ambulatory peritoneal dialysis on our provision of renal replacement treatment has been enormous. The number of new patients entering our programme has risen by roughly half, and this is almost entirely due to the influx of patients over 60 years old (though we have also been more liberal in treating younger diabetics). The current rate of acceptance of new patients of around 30 patients per million population per year, however, is still far below that found in most other countries, so our experience is the same as that of other units who honestly claim to treat almost every patient that is referred to them in the knowledge that many more die without ever being referred.

On the basis of our experience we believe that there are no medical grounds for denying continuous ambulatory peritoneal dialysis to most elderly patients with renal failure. Apart from the initial period of inpatient training for this treatment, no capital outlay is entailed, in contrast to that with home haemodialysis. Thus if a patient receiving the treatment dies within a few weeks or months there has been little financial outlay, whereas if he survives for a long period the expenditure is justified by his satisfactory survival and rehabilitation.

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References


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