

Peritoneal Dialysis

Trends in Outcomes of Peritoneal Dialysis Patients in the United States

By Rajnish Mehrotra

In the 1960s, peritoneal dialysis for the treatment of uremia was performed intermittently. Patients would come in to receive treatment for 10 to 24 hours or more at a time, two to four times weekly. It was soon recognized that intermittent peritoneal dialysis did not provide adequate control of uremia and this approach was abandoned in favor of thrice-weekly hemodialysis. This changed in 1975 with the successful treatment of one patient with peritoneal dialysis performed continuously, rather than intermittently, while living at home, rather than in a healthcare setting.

The delivery of continuous peritoneal dialysis has substantially improved over the last three decades. It is estimated that about 15 percent of the dialysis population worldwide uses the therapy now. The proportion of dialysis patients in the United States treated with peritoneal dialysis is about 7 percent.

As more patients with ESRD began treatment with peritoneal dialysis, the question of whether patients do as well when treated with this form of dialysis compared to in-center hemodialysis gained importance. Most studies have examined patient survival, and the discussion herein will be limited to this issue.

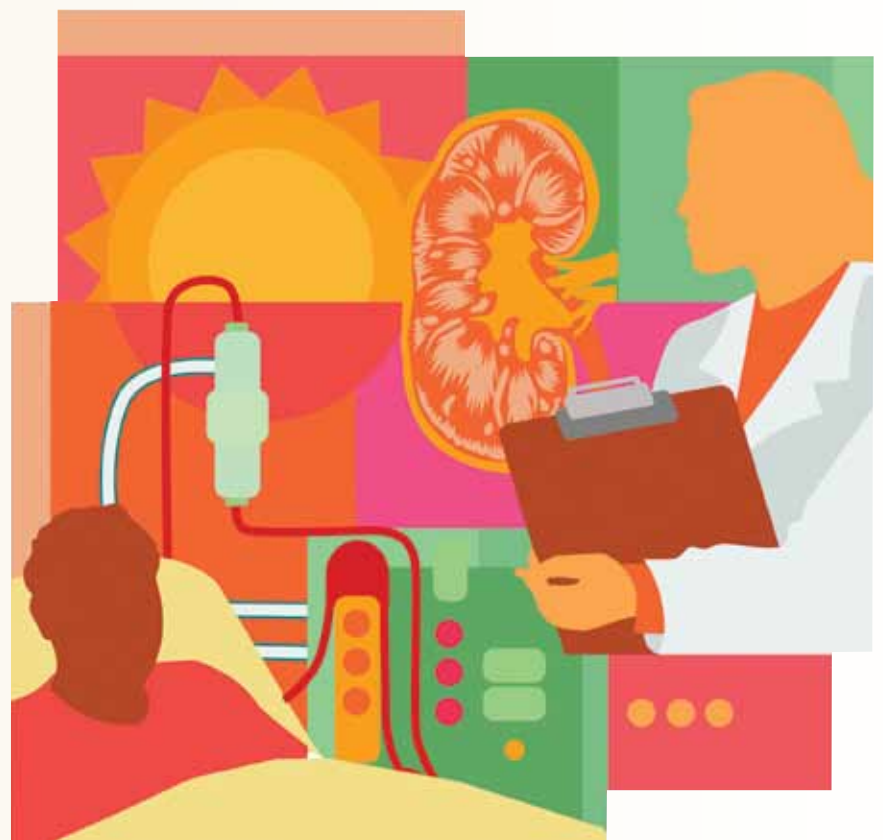
Initial studies were small, often from a single center. Since the 1990s, a large number of studies have used information from all ESRD patients in any given country from different parts of the world. The studies from the 1990s showed that patients who started treatment with peritoneal dialysis had a lower chance of dying in the first 2 to 3 years of starting dialysis compared to those who started treatment with hemodialysis. The apparent “benefit” of treatment with peritoneal dialysis was greatest for the youngest and healthiest patients and least for the oldest and sickest patients. However, the long-term death risk was seemingly greater for peritoneal dialysis patients compared to those treated with hemodialysis. These studies showing an apparent change in death risk over time were interpreted as reflecting the advantages and disadvantages of each individual dialysis therapy. This interpretation has led to the widespread perception that peritoneal dialysis is a good therapy for some, but not all patients. Moreover, it is believed that peritoneal dialysis can be used for only a short period of time, generally for only as long as patients with ESRD make at least some urine.

Over the past decade, the survival of patients who start treatment with peritoneal dialysis has improved significantly more than that of in-center hemodialysis patients. Greater improvements in survival of peritoneal dialysis than of hemodialysis patients have been reported from North America (United States and Canada), Europe (France and Denmark), Asia (Taiwan), and Oceania (Australia and New Zealand).

Studies of patients who have started treatment with dialysis therapies in the 21st century show that the 4-, 5-, and 10-year survival of peritoneal dialysis and hemodialysis patients in the contemporary era are virtually identical (1–3). This equivalency in outcomes with peritoneal dialysis and hemodialysis has been reported from North and South America, Europe, Asia, and Oceania (4–7). These studies challenge the traditional paradigm of which patient with ESRD should be treated with peritoneal dialysis and for how long (8). It would seem that there are no meaningful differences in patient survival with peritoneal dialysis and hemodialysis. Thus patient survival should not be a consideration when patients are counseled about the different renal replacement therapies.

Few treatments impact so many aspects of an individual’s life as dialysis therapy does. Given the overall equivalency of patient survival with the two therapies, the overwhelming majority of patients can and should choose which dialysis therapy they will use, on the basis of lifestyle considerations with active support and guidance from the healthcare staff. ●

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