By Beth Piraino and Judith Bernardini

Enhancing Nursing and Allied Staff Peritoneal Dialysis Education in a Chronic Kidney Disease Program

The option of peritoneal dialysis for management of advanced chronic kidney disease (CKD) is best introduced while the patient is being followed up in the CKD clinic. Educational approaches to patients with CKD include classes, instruction one-on-one by a nurse educator or other allied health care professional, and information provided by the physician. A team approach is often used in peritoneal dialysis education as part of a well-run CKD program. Therefore, all members of the team should fully inform and update about peritoneal dialysis. The CKD team may include medical assistants, physician assistants, nurse practitioners, dieters, nurses, and renal fellows as well as nephrologists. Education about peritoneal dialysis should be provided to these important team members.

Educating allied health care professionals about peritoneal dialysis, a modality with which many are unfamiliar, ensures that all speak with informed voices and avoid giving incorrect information about peritoneal dialysis. It is rather common for those with little knowledge about peritoneal dialysis to tell patients that the procedure is associated with a high risk of infection, thus discouraging patients from home peritoneal dialysis. Patients may also have obtained information about renal replacement therapy from the Internet (1). Although some websites have factually, clearly presented information, others are inaccurate and may be self-serving. It is quite possible that all health care professionals have likewise been exposed to incorrect information about peritoneal dialysis, and this may unfortunately reinforce a patient's wrong perceptions. Therefore, a structured approach to educating staff members of the CKD clinic about peritoneal dialysis seems desirable.

CKD patients with GFR levels of 20 mL/min or lower who are aware that dialysis will be likely needed in their future often have major depression (25 percent) or subthreshold depression (20 percent) according to structured psychiatric interviews (2). The team approach for these patients provides support and correct information in a longitudinal fashion. Many CKD clinics do not have the services of a social worker, so other allied health care professionals who work in the CKD clinic. The best approach to training these allied health care professionals is not known, but it might include attendance at one of the meetings listed, regular reading of the journal Peritoneal Dialysis International, and a review of the free slide set put together by expert members of the International Society for Peritoneal Dialysis North American Chapter (ISPD NAC) available at the ISPD website (http://ispd.org/NAC/education/pd-curriculum/). A peritoneal dialysis expert in the program could present the slide sets to the health care professionals working in the CKD program.

To summarize, little is known about the level of knowledge regarding peritoneal dialysis among allied health care professionals who work in CKD clinics. It appears probable that knowledge of peritoneal dialysis is variable and often lacking. A well-informed approach to educating the allied health care professionals in the CKD clinic about peritoneal dialysis as an option for patients should enable the entire team to support the patient to make informed choices. This is a fertile area for further research.

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References

Table 1. Peritoneal dialysis training tools for allied health care professionals

| Meetings with peritoneal dialysis courses available for allied health care professionals: |
| International Society for Peritoneal Dialysis North American Chapter meeting every other year |
| National Kidney Foundation spring meeting every year |
| ASN pre-meeting course |
| Annual Dialysis Conference |

| Online peritoneal dialysis course: freely available at ispd.org (http://ispd.org/NAC/education/pd-curriculum/) |
| Journal: Peritoneal Dialysis International: free online after first year, free to members of the ISPD. |

Maximizing Success with Peritoneal Dialysis: Best Demonstrated Practices

By Seth B. Furgeson and Isaac Teitelbaum

Peritoneal dialysis offers unique advantages for patients with ESRD. Peritoneal dialysis offers the convenience of home dialysis, allows continuous solute and fluid removal, and, for the incident dialysis patient, appears to be less harmful to residual kidney function (RKF). Many peritoneal dialysis patients have successfully used the therapy for a decade or longer without significant problems. To maximize success with peritoneal dialysis, providers must carefully attend to its many components. Preserving RKF, maintaining peritoneal membrane function, preventing cardiovascular disease, and avoiding infectious complications are all crucial components of therapy.

Preserving residual kidney function

It has long been recognized that peritoneal dialysis is associated with a slower decline in RKF than hemodialysis. Studies have also demonstrated that preservation of RKF correlates with improved survival. RKF allows for increased volume removal as well as improved phosphorus and middle molecule clearance. To preserve RKF, providers need to minimize nephrotoxic medications (e.g., intravenous contrast medium, nonsteroidal anti-inflammatory drugs), avoid rapid fluid shifts and hypervolemia, and, whenever possible, treat with blockers of the renin-angiotensin system. Two small randomized trials have shown that angiotensin converting enzyme inhibitors and angiotensin receptor blockers can minimize the loss in RKF (1,2). It is therefore recommended that patients with RKF receive either of these agents, assuming there are no contraindications.

Maintaining peritoneal membrane function

For peritoneal dialysis to be successful, adequate ultrafiltration is essential. However, in many peritoneal dialysis patients, anatomical changes in the peritoneal membrane affect ultrafiltration. Currently, a leading hypothesis posits that prolonged exposure over time to bioincompatible peritoneal solutions (high glucose, high glucose degradation products, low pH) damages mesothelial cells lining the peritoneum and increases vascularity of the peritoneum.