

Louisiana State University Nephrology: Initiation of a Multicenter Urgent-Start Peritoneal Dialysis Program

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Urgent-start peritoneal dialysis (PD) refers to the initiation of PD in new-start end-stage renal disease patients who present either emergently in the hospital or urgently in clinic. These patients are called “late-referred patients.” Our academic practice group, like many private practice and academic groups, currently functions within 4 hospitals and 4 clinics. The patient base consists of a large indigent population with limited access to health care and also of insured patients. An urgent-start PD program was initiated to provide all patients with a choice of dialysis modality.

Our faculty understood that, for their urgent-start PD program to be successful, they had to have the support of the house staff, hospitalists, surgeons, and the PD nurse. The education began with grand rounds on urgent-start PD in the medicine department. We also educated the hospitalists at the other private hospitals on our urgent-start program. Once the primary care services were comfortable with urgent-start PD, our nephrology group then educated the surgeons about best-practice guidelines for PD catheter placement. At that time, a direct feedback communication loop was created between the PD nurse, surgeon, and nephrologist about the placement and functionality of the catheter. Here, we present our success in the creation of an urgent-start PD program.

Key words

Urgent start, low-volume PD, late-referred patients, renal failure

Introduction

In 2011, the U.S. Renal Data System reported that 116,000 patients had initiated dialysis, but that more

than half had not been under the care of a nephrologist before initiating (1). The reasons for that staggering number are many, but the situation has led to many patients starting with hemodialysis (HD) on account of not having a choice of dialysis modality and being routinely started on HD. Historically, PD was a modality reserved for patients being followed by a nephrologist, because it required a planned start. To avoid pericatheter leaks and hernias, use of a PD catheter was typically held for 2 weeks after placement. The urgent-start PD protocol avoids that waiting period and allows patients to promptly begin PD (2).

Methods

Urgent-start PD protocol

The late-referred patient presents to the nephrologist usually requiring dialysis either immediately or soon after that first encounter. Once a decision is made to initiate dialysis, the patient is automatically screened for PD. If the patient is medically unstable or requires emergent dialysis, a temporary HD catheter is placed to initiate HD. While HD proceeds, the nephrologist and nurse educator provide education about dialysis modalities, dietary instructions, and renal transplant. At this important time, the patient and family have a chance to choose the modality that best fits them (Figure 1). Once education is complete, and if the patient chooses PD, a peritoneal catheter is placed by an interventionalist (interventional nephrologist, intervention radiologist, or surgeon) within 48 hours of presentation. Peritoneal dialysis is subsequently initiated within 48 hours of catheter placement. The urgent-start protocol uses low-volume dwells administered by a PD nurse in the outpatient dialysis unit with the patient in the recumbent position for 8 hours 3 times weekly for the first 2 weeks (2). During that time, the patient is not only dialyzing, but also undergoing training.

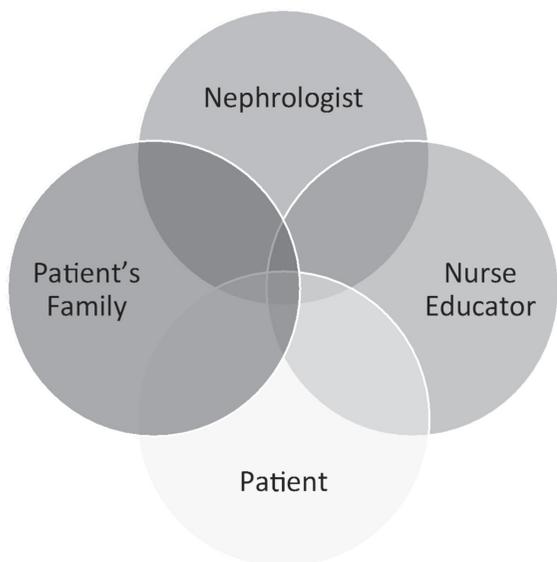


FIGURE 1 Interactions at the time of modality choice.

At the end of 2 weeks, the patient is ready to begin dialysis on their own at home.

Program development

Our practice, which encompasses 4 hospitals and 4 clinics, developed an urgent-start PD program primarily to provide patients with dialysis modality options. Our local population consists largely of indigent patients seen at our academic university medical center and in 3 community-based hospitals with local private-practice physicians. The first step toward building our program was to recognize the lack of awareness of PD and especially of urgent-start PD among patients, residents, fellows, and local physicians. The second task for a successful program was to find an interventionalist to place catheters at each facility. This scenario resembles many private-practice groups that are spread across different hospitals.

The first education objective began with grand rounds about urgent-start PD for the Department of Medicine (Figure 2). Our faculty and fellows also regularly discussed urgent-start PD with the hospitalists, who frequently consulted them at other hospitals. Furthermore, our fellows devoted time to educate both internal medicine and emergency medicine residents to promote PD as an option.

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The second education objective involved identifying surgeons willing to place PD catheters and educating them in best-practice guidelines for PD catheter placement. To ensure the quality of catheter placement, a direct communication feedback loop was created between the PD nurse, surgeon, and nephrologist about placement and functionality of the catheter. Once the foundation of the program was thus created, the department of nephrology began offering urgent start to all patients as a pathway for dialysis initiation.

All of our urgent-start patients initiated PD in the outpatient setting. The patients who required emergent dialysis were started temporarily on HD; they then had a PD catheter placed, with removal of the HD catheter; they were subsequently discharged; and then they were started on PD in the outpatient dialysis unit.

To standardize PD education for our patients, 2 nurses are dedicated to PD. All patients attend a presentation and discussion about PD provided by the PD nurses. The nurses also teach hygiene with respect to hand washing and catheter care. Patients are quizzed at the end of teaching to assess their comprehension. They are then given a booklet about PD for further reading.

Results

Over the 15 months preceding the writing of this paper, our Nephrology section started 14 patients on PD using the urgent-start protocol. All 14 patients initiated PD and were maintained on continuous ambulatory PD for the first few months. During the first 6 weeks of PD after the urgent start, none of the 14 patients experienced any catheter problems, such as pericatheter leaks, hernias, exit-site infections, or peritonitis. We have not experienced any burnout among the patients. One patient had to transition to HD because of funding related to his housing.

Discussion

Our Nephrology section currently has 21 patients in the PD program, 14 of whom initiated through the urgent-start program. All 14 were initially prescribed continuous ambulatory PD, which did not result in any dropouts or transitions to HD. Reviewing our program, we could find no differences in the ease of learning or the incidence of peritonitis between the traditional-start and urgent-start patients. Back pain was the only

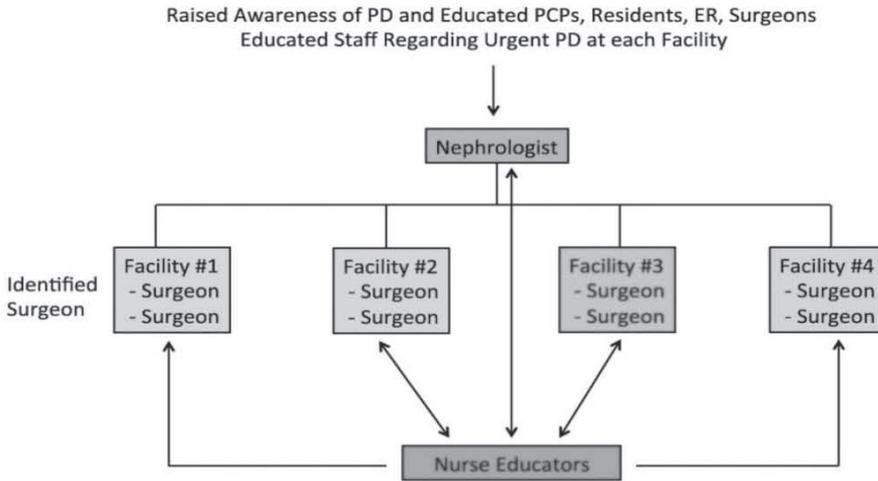


FIGURE 2 Approach to implementing urgent-start peritoneal dialysis (PD) at Louisiana State University–Nephrology. PCPs = primary care physicians; ER = emergency room.

urgent-start complaint voiced by many patients. Nurses felt that, from their perspective, urgent-start PD allowed them to spend more time with patients and to teach hand washing and catheter care better than they could with the traditional-start patients. Currently, no difference in peritonitis between the two groups has been evident, but tracking that complication over the next few years will be important.

Urgent-start PD has transformed renal replacement therapy in America. It has created an environment of creativity among nephrologists, who will begin to change the standard treatment regimens and offer new regimens of dialysis. Currently, incremental and designer PD prescription programs are examples of new, creative programs that have been spawned from urgent-start PD.

The success of our program was based on three steps:

- Raising awareness of PD in the medical community and educating its members about the process and technique of urgent-start PD.
- Providing interventionalists with best-practice guidelines and establishing a feedback loop involving the interventionalist, the PD nurse, and the nephrologist to ensure quality outcomes.
- Advocating on behalf of patients, to offer them a choice of modality when they feel they have no choice.

Summary

Urgent-start PD solidifies the relationship between the nephrologist and the patient by allowing the physician to advocate and coordinate care for the patient with a sense of fulfillment because the patient had the freedom to choose the modality of dialysis (Figure 3).

Disclosures

None of the authors has any financial disclosures to make. AJ is nephrology fellow at LSUHSC–New Orleans. AL was a LSU medical student. JGO and

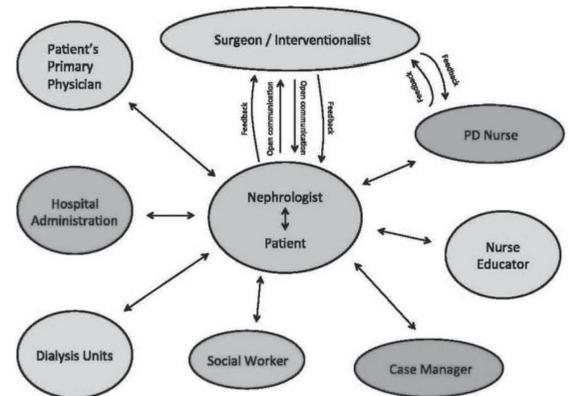


FIGURE 3 Relationships and advocacy for all participants in the process of urgent-start peritoneal dialysis.

MVN are nephrology faculty employed by LSUHSC—New Orleans.

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