

**Harvard Medical School Department of
Continuing Education and the Renal Division
of Brigham and Women's Hospital**



Nephrology Rounds
March 2008

Home Hemodialysis

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Objectives

This issue of *Nephrology Rounds* will help the reader to develop an understanding of:

- the important differences between home hemodialysis and standard hemodialysis (SHD)
- the important differences between short daily hemodialysis and nocturnal hemodialysis
- which patients are appropriate candidates for home hemodialysis
- how to prescribe nocturnal or short daily hemodialysis

Questions: Only one answer is correct

1. What percentage of dialysis patients in the United States are receiving home hemodialysis?
 - a. <1%
 - b. 1%-5%
 - c. 5%-10%
 - d. >10%
2. Compared with standard hemodialysis, control of hypertension is:
 - a. better with nocturnal hemodialysis
 - b. better with both short daily dialysis
 - c. not improved by nocturnal or short daily dialysis
 - d. better with both nocturnal and short daily dialysis.
3. Which of the following statements is the most accurate?
 - a. Erythropoetin requirements are decreased in patients on quotidian dialysis.
 - b. The dose of erythropoietin should be decreased by 50% in patients starting nocturnal hemodialysis.
 - c. Patients on daily dialysis require more erythropoietin than patients on SHD due to increased blood loss during dialysis.
 - d. Some data suggest that erythropoietin requirements are decreased on quotidian therapy, but further studies are needed to confirm this benefit.
4. Choose the most correct statement:
 - a. Phosphorous concentration typically increases in patients on short daily dialysis due to an increase in appetite.
 - b. Clearance of phosphorous is greater with short daily dialysis than with SHD.
 - c. Phosphorous binders should be decreased in patients starting short daily dialysis.
 - d. Dialysate should be supplemented with phosphorous in patients starting daily dialysis.
5. Patients on nocturnal dialysis:
 - a. may need to add phosphorous to the dialysate in order to maintain serum phosphorous concentrations within normal limits
 - b. typically need to continue phosphate binders in order to achieve goal levels of serum phosphorous
 - c. do not need vitamin D in order to normalize parathyroid hormone levels
 - d. should continue to restrict dietary phosphorous intake in order to maintain control of serum phosphorous.

6. Remote monitoring:
 - a. is an essential safety measure for nocturnal hemodialysis
 - b. is required by law for nocturnal hemodialysis programs
 - c. provides an important safety measure in the case of venous and/or arterial access disconnection
 - d. is unlikely to detect a venous access disconnection.

7. Patients on nocturnal dialysis should:
 - a. use a tunneled catheter rather than a fistula or graft in order to decrease the likelihood of inadvertent disconnection while asleep
 - b. use a catheter because fistula life is decreased with daily dialysis
 - c. use tape, Velcro[®] and/or elastic sleeves in order to decrease the risk of access disconnection
 - d. use the "buttonhole" technique to access their arteriovenous grafts.

8. Which of the following patients is the least suitable candidate for home dialysis?
 - a. a 70-year-old male who lives alone and has end-stage renal disease (ESRD) as a result of diabetes and coronary disease
 - b. a non-compliant 34-year-old with ESRD as a result of polycystic kidney disease
 - c. a 75-year-old with diabetes, peripheral vascular disease, coronary disease and congestive heart failure
 - d. a 55-year-old with diabetes, coronary disease, and a history of marked intradialytic hypotension.

9. When starting nocturnal dialysis:
 - a. phosphate binders should be continued without any change in dose
 - b. antihypertensive medications should be increased
 - c. the dose of phosphate binders and antihypertensive medications should be reduced, and blood pressure and phosphorous should be followed carefully
 - d. dialysate potassium should be increased to 4.0 mEq/L.

10. The recommended target dose for short daily dialysis:
 - a. can be easily obtained in all patients with all available machines
 - b. is a single pool Kt/V of 0.51 on a regimen of 6× 2-hour treatments/week
 - c. is a single pool Kt/V of >1.2 per treatment
 - d. is the same as in nocturnal hemodialysis.

To receive AMA category 1 credit, you must correctly answer 60% of the test questions.

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