

**American Society of Nephrology – Renal Week 2010
Nephrology Quiz and Questionnaire: CKD and Dialysis**

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Case 1

A 47-year old woman of African-Caribbean descent has been on conventional in-center hemodialysis since 1997. The cause of her kidney disease was said to be hypertension. Ten years earlier she had a ruptured appendix with surgical peritonitis. Two weeks ago a breast lump was discovered, and the patient was awaiting biopsy.

Her vascular access for hemodialysis was a right internal jugular cuffed central venous catheter, which had been in place for four years. It was placed after the failure of a left brachiocephalic AV fistula in 2005. Many attempts had been made to salvage the fistula, which had stenoses of the venous limb including the left cephalic, subclavian, and innominate veins.

During a routine dialysis treatment, she started to complain of headache and dizziness. This was followed by an acute deterioration in her level of consciousness (Glasgow Coma Scale 11/15). There were no lateralizing or focal neurologic deficits.

Question 1a: Which ONE of the following is the MOST likely cause of the change in her level of consciousness?

- A. Line sepsis
- B. Acute intravascular hemolysis
- C. Acute intracranial hypertension
- D. Pulmonary leukostasis syndrome
- E. Dialysis disequilibrium syndrome

Question 1b: Which ONE of the following would be the MOST appropriate immediate action?

- A. Blood cultures
- B. Hemodialysis line change over a guidewire
- C. Lengthen the hemodialysis session by one hour to optimize solute clearance
- D. Neurology opinion
- E. Computed Tomography of the brain

Question 1c: Which ONE of the following statements is MOST correct?

- A. She should be started on broad-spectrum antibiotics for presumed bacterial infection of the central nervous system.
- B. ANCA should be sent urgently to rule out vasculitis and pulse corticosteroid given empirically.
- C. She should be put on the priority list for deceased donor renal transplant.
- D. She has superior vena cava syndrome and should have dilatation of the stenotic veins.
- E. She is intolerant of hemodialysis and should be transitioned to peritoneal dialysis.

Case 2

A 74-year old woman has kidney failure from nephropathy of Type 2I diabetes mellitus. She attends a pre-dialysis education program and chooses home peritoneal dialysis (PD). A PD catheter is placed uneventfully by laparoscopy. She is trained on home PD and is discharged on Continuous Ambulatory PD (CAPD), four exchanges a day. She does very well on this regimen. At year 3, she has an episode of peritonitis caused by coagulase-negative staph, which is quickly treated with intraperitoneal cefazolin.

In her fourth year of CAPD, her daughter calls to say that her catheter does not appear to be working properly. Specifically, there is marked difficulty with both inflow and outflow of the dialysate. This has worsened over the past three days, so that now there is essentially no flow at all.

An X-ray of the abdomen in the supine position shows the catheter in good placement, and there is a moderate amount of feces in the colon.

She is given polyethylene glycol solution and has several bowel movements. Repeat abdominal flat plate shows improvement in the amount of feces, but there is still no inflow or outflow of dialysate.

Question 2a: Which ONE of the following is the LEAST likely cause of the catheter dysfunction?

- A. Constipation
- B. Intraluminal clot
- C. Encapsulating peritoneal sclerosis
- D. Kink in the catheter
- E. Omental wrap

Question 2b: Which ONE of the following represents the BEST option the next step to be taken in her care?

- A. Catheter study with radiocontrast media
- B. Immediate permcath placement for hemodialysis
- C. Oral kayexalate for her hyperkalemia
- D. PD catheter removal and replacement
- E. Add an ACE inhibitor for the hypertension

Question 2c: While awaiting surgery, one of the experienced PD nurses suggested which ONE of the following for management?

- A. Instill tPA into the lumen of the catheter
- B. Change the catheter transfer set
- C. Use a stronger cathartic
- D. Change from a coiled to a straight intraperitoneal portion of the catheter when it is replaced
- E. Use icodextrin instead of conventional dialysis solution