



Simulation Set 1 (Civilian Programs)

Scenario A

Acute Dialysis Counseling in the ICU

Physician:

The patient, Mr. Varmas, is an 85-year-old male with Type 2 diabetes and severe vascular disease, who underwent an emergency femoral-popliteal bypass graft 3 days ago to salvage the right leg from ischemia. Post-op, the graft clotted, followed by emergent above the knee amputation. The patient developed acute kidney injury peri-operatively, probably due to iv contrast (a pre-operative angiogram), hypotension, and rhabdomyolysis.

The patient has underlying CKD3, with an eGFR prior to surgery of 40 ml/min, and 1200 mg proteinuria. He has long-standing hypertension, hyperlipidemia, and type 2 diabetes. He has had a 3 vessel CABG 5 years ago, and has moderate congestive heart failure with an EF of 40%, and has a left below-the-knee amputation due to osteomyelitis secondary to non-healing vascular ulcer shortly afterward. He has mild vascular dementia, and has undergone bilateral carotid endarterectomy after a TIA 3 years ago. He has a non-critical abdominal aortic aneurysm.

He is now anuric, with a potassium of 5.6, meq/L a bicarb of 18 meq/L, BUN 46 mg%, creatinine 7.0mg%. He is volume overloaded, with CHF/volume overload on CXR, and on 60% FIO2 to maintain a pO2 of 90 mmHg. You and your attending have assessed him, and feel that he meets indications for dialysis. The SICU team, and the Vascular Surgery team want dialysis. The patient has never had any discussion of end of life issues, and there is no advance directive. You will be counseling the patient's 75-year-old wife regarding dialysis.

Patient's Decision Maker:

You are the 75-year-old wife of Mr. Varmas, who has multiple medical problems, with a left below the knee amputation, and now another amputation on the right. He went to emergency surgery 3 days ago to try to save the leg, but the operation failed, and he now has lost both legs. Before surgery, he was frail, chronically ill, and forgetful. You handle the finances and are the primary care giver, although your daughter, who lives about 5 hours away by car, helps as much as possible. Your husband has no advance directive, but told you about 10 years ago that he didn't want to be a "vegetable" and didn't want to live in a nursing home.

The surgeons have told you that your husband is very seriously ill and may die. He has kidney failure, and that dialysis may help him survive. The nephrologist comes to you to discuss dialysis.

Scenario B.

Counseling a patient with ESRD and need for chronic RRT

Physician:

The patient, Mrs. Custis, is a 56-year-old woman with ADPKD and ESRD. She first saw you about a year ago, at which time her eGFR was about 20. She had not seen a nephrologist previously, and was shocked to realize that she was at near ESRD, and would need renal replacement therapy. She is a candidate for transplant, and has no contraindication to hemodialysis or PD. She is a high-school English teacher, and also is assistant principal for the sophomore class at the public high-school where she works. She is married, and has two children, both in their 20's. She has one sibling, who has ADPKD as well. Both parents are dead—her father died of ESRD secondary to ADPKD.

Her family practitioner has managed her BP well, and it is well controlled on Lisinopril 40 mg daily and Amlodipine 10 mg daily. She has followed a strict low protein, low salt diet for the last year (she read about it on the PKD Foundation website), but missed her follow-up appointments with you—she comes back at the insistence of her PCM. At present her eGFR is about 15 ml/minute. Her PTH is 850 ng/ml with a phosphorus of 8 and a Calcium of 8. Hgb is 11 g%. Otherwise, her appetite is still good, and her albumin is 4.1.

You discuss RRT with Mrs. Custis, as you would like her to choose and begin planning for a modality. If she chooses hemodialysis, she will require an AV fistula—and soon.

Patient:

You are a 56-year-old woman with autosomal dominant polycystic kidney disease. Your father died of it in his late 50s, and your brother has it as well, but does not yet need dialysis. You are very busy with your job (a high-school teacher), and have many responsibilities. Your husband is took early retirement (at 60 years old) because of a back injury (he worked for the VA as an administrator), and is also retired Air Force. Your mother is in her 80s, and you and your brother take her to appointments and shopping. She is getting a little forgetful. Your sons have both completed school, but one was recently laid off from his job, and may be moving back in with you and your husband for a few months.

When you first heard last year that you had advanced kidney disease, and would need dialysis or transplant, you went to the PKD Foundation website, and read everything you could about ADPKD. You have followed a strict diet for the last year, and would like to discuss whether you should start a drug called Tolvaptan, which might slow down your loss of kidney function. You really don't want to go on dialysis. Surely there must be a way to avoid this.

Scenario C

Counseling a Patient for Kidney Biopsy

Physician:

Mr. Elwitt is a 36-year-old male who was referred for evaluation of proteinuria. About 3 months ago, he began to notice that his ankles were swollen at the end of the day. BP was 150/92 during a visit to his PCM for a severe cold, but remained elevated after recovery. He had had a normal BP 6 months ago. Serum creatinine is 1.3 mg% (baseline 2 years ago 1.0 mg%), and he has 4.2 gm of protein on 24-hour urine. UA is remarkable for lipiduria, waxy casts, an occasional rbc, but no cellular casts. He has no clear secondary illness, is otherwise healthy, and is on no medications or supplements. Renal ultrasound shows two 12 cm kidneys, which appear normal. You start him on 20 mg Lisinopril daily, and counsel him for a kidney biopsy.

Patient:

You are a 36-year-old licensed airline pilot, who has previously been in excellent health, on no medications. You are very physically active, and your record as a pilot has been excellent—you are now a first officer (co-pilot) for a major airline. You understand that you have new hypertension, possibly a loss of kidney function, and a lot of protein in the urine. You want to know what is needed to diagnose the problem, what the problem could be, what the possible treatment is, and how this is going to impact your career. Might you lose your job?