

## Tips for GP trainees working in renal medicine

A placement in renal medicine offers a wealth of opportunities and experience for GP trainees, as well as providing a solid grounding in general medicine.

You will soon find out that renal medicine is not as complicated and scary as you once perceived it to be.

### GENERAL TIPS

1. Organise your placement to enable you to obtain a broad range of clinical experience: working on the dialysis unit, looking after patients on the ward, seeing new admissions, and observing or carrying out practical procedures. Go on a home visit if the opportunity arises.
2. Spend as much time as possible in outpatients: it is here that you will learn most about the primary care aspects of renal medicine.
3. You will find that much of the decision-making is done at a senior level. Come up with your own 'impression' and management plan before discussing this with a more senior member of the team. It is too easy to have your hands held and be 'spoon-fed'.
4. Doses of many common medications need to be adjusted for those with renal failure. Locate the *Renal Drug Handbook* or a renal pharmacist and refer to them for every drug you prescribe.

### ON THE WARD

5. You will soon become very skilled in cannulating dehydrated patients with tiny, tortuous veins. Backs of the hands only. The big veins of the antecubital fossa and the 'houseman's' vein may need to be used to form an AV fistula in the future.
6. Most renal patients have a number of other medical conditions. Learn about these conditions, reflect on the challenges posed by managing patients with several complex, chronic diseases and don't be afraid to teach your nephrology colleagues

as you may know more than they do.

7. Examine patients. You will pick up some interesting signs: pericardial rubs, AV fistulae, transplants, polycystic kidneys, skin changes associated with immunosuppression. Learn to assess fluid balance (it is a difficult art).
8. Medical (and surgical) emergencies are common in renal and transplant patients. Patients with chronic kidney disease (CKD) have an increased risk of cardiovascular disease. Transplant patients with fever need a thorough work-up.
9. Try to avoid blood transfusions in patients who may be candidates for transplantation in the future.
10. When a patient presents with acute kidney injury, think about possible causes, potential nephrotoxins and optimising circulation. Don't forget to collect a urine sample, review the patient's drugs, examine for an enlarged bladder, and check the blood sugar.
11. Will this patient need dialysis? Indications include severe volume overload (or pulmonary oedema) with oliguria; severe acidosis; refractory hyperkalaemia; and symptoms of renal failure. Hence a blood gas (venous is fine) to measure the pH and bicarbonate, patient's weight, and input-output chart are essential.
12. Deciding when to stop dialysis (at the end of life) can be as much of a challenge as starting it in the first place. Engage in these interesting, ethical discussions.
13. Show enthusiasm. Engage in teaching. Observe a renal biopsy. Do some suturing. Perform an audit. These experiences will not be lost and you never know when they may come in handy in the future.

### DIALYSIS

14. 'PD' in the renal context, stands for 'peritoneal dialysis', not Parkinson's disease.

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15. Familiarise yourself with different forms of dialysis. Take time to speak to patients (and their carers) using each type of dialysis. Spend time with members of the multidisciplinary team as they prepare and counsel a patient for renal replacement therapy, or conservative care.
16. On the dialysis unit work with your GP hat on and get to know the patients week by week, following up as appropriate, and sorting out problems as they arise.
17. Consider the diagnosis of PD peritonitis in a PD patient presenting with abdominal pain. PD fluid needs to be sent for cell count and culture. (The patient will often have noticed cloudy bags).
18. Many dialysis-related problems are linked to fluid balance. Blood pressure, hydration status, and dry weight are all important features to take into account. Acute shortness of breath on the dialysis unit is commonly secondary to pulmonary oedema.
19. Many dialysis patients are extremely sensitive to small changes in warfarin dose. Patients with diabetes may need reduced doses of hypoglycaemic agents on dialysis days, as glucose is dialysed out. Clearance of standard morphine preparations is reduced in patients with CKD. Oxycontin and oxynorm are generally safer. Consider opiate toxicity in a renal patient with pinpoint pupils and a reduced level of consciousness, or confusion.

#### **SURGICAL ASPECTS**

20. Renal physicians work closely with the transplant team, vascular surgeons, and urologists. This is a good opportunity to find out about the different forms of transplantation, including the 'work-up' required for a living donor transplant and a cadaveric transplantation.
21. Learn about immunosuppressant drugs, their side-effects, monitoring, and interactions with commonly prescribed medications (for example, erythromycin and tacrolimus).
22. Learn about the complications of transplantation (rejection, infection, malignancy, cardiovascular disease, diabetes) and the differential diagnosis for a transplant patient with fever.

#### **PRIMARY CARE ASPECTS OF NEPHROLOGY**

23. It can be a challenge to relate inpatient

nephrology to general practice, hence the importance of trying to spend some time in outpatients. For every patient you see, think, 'What would I do if this patient presented in primary care?' Management of CKD in primary care includes:

- a. making a diagnosis and excluding acute renal failure;
  - b. considering referral to secondary care;
  - c. slowing progression;
  - d. modifying patients' drugs; and
  - e. checking for complications of renal disease.
24. Read the NICE guidelines for CKD. Learn the different stages and the indications for referral to secondary care. Get to grips with proteinuria and microalbuminuria.
  25. Certain patient groups need regular monitoring for CKD. How will you identify these patients and how will you monitor for CKD? What are the QOF targets for CKD patients in primary care?
  26. Slowing the progression of CKD involves controlling blood pressure (often with an ACE inhibitor or angiotensin receptor blocker) and managing cardiovascular risk (strict blood pressure control and starting a statin).
  27. Learn about nephrotoxic drugs and think about what changes you could make, as a GP, to slow the progression of CKD. Avoid NSAIDs. Review hypoglycaemic agents (gliclazide is the most kidney-friendly drug). Avoid nitrofurantoin and trimethoprim when prescribing antibiotics. Refer to the *BNF* if in doubt.
  28. Be aware of some of the complications of renal disease, including renal bone disease and anaemia. These will usually be managed in secondary care but a basic understanding of phosphate binders, iron replacement, and erythropoietin is helpful.

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