

Chief Complaint: I had a kidney transplant a few years ago...

Primary Care of Renal Transplant Patients

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More people are receiving and surviving kidney transplants, so much so that transplant centers are not equipped to provide all of those patients with primary care. Thus, it is very likely that we will take care of kidney transplant recipients (KTR) during our careers. (1) Here are some of the things we should think about when caring for this population:

Immunosuppression: Pts are usually on a calcineurin inhibitor (CNI) like cyclosporine and tacrolimus (Prograf), mycophenolate (CellCept), and prednisone. Some only take tacrolimus. Monitor for drug interactions! Check levels of CNI 2 days after changing meds (draw blood when they'd be taking the dose to get a trough).

CV risk: KTRs develop cardiovascular disease 20 years earlier than the general population, so modifying those risk factors is extremely important. (2) Relatedly, patients tend to gain 5-15 kg 1 year post-transplant, so one must address obesity. (3) Unfortunately, the Framingham Heart Score has been shown to underestimate CV disease risk, so stricter thresholds for intervention might be necessary. (4)

HTN: Goal BPs are <130/80. Home BP monitoring is recommended. Some KTRs need more anti-hypertensive medications in the evenings. (5) If using ACEI/ARBs, follow Cr and lytes weekly for 2 weeks, then monthly. (6) If BP is refractory, look for graft renal artery or iliac artery stenosis. (7)

HLD: Goals: LDL <100, Total chol - HDL <130, TG < 150. Fluvastatin is safe to 80mg, the statin with the least CNI interactions. Low-dose atorvastatin and pravastatin are probably also safe (ALERT trial). (8)

Diabetes: Goal Hgb A1c is 7-7.5%. Screen every 3 mo for the first year then annually. (9)

Anemia: Screen every 3-6 months. (10)

Depression: It's very common and can lead to graft loss due to non-adherence.

Osteoporosis: Screen Ca, PTH, Phosphorous yearly and get regular DEXAs. Calcium & Vit D supplementation, orally supplement phos <2.5, and bisphosphonates for t-score < -2. (11)

Malignancies: KTRs are at increased risk for many cancers, but skin cancer is a big one. All should use SPF >30 and have yearly skin checks. (12)

Infections: Aside from opportunistic infections associated with immunosuppression, UTIs are the most common. (13) Live vaccines are contraindicated and contacts should stay away for 1-2 weeks if they receive them. KTRs may need additional doses of vaccines to boost immunity.

Refer to this great article for more details and tables with recommendations for each topic above:

1. Gupta G, et. al. Primary Care of the Renal Transplant Patient. J Gen Intern Med. 2010;25(7): 731-40.

Other resources:

Uptodate.com

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4. Kasiske BL, et al. Explained and unexplained ischemic heart disease risk after renal transplantation. *J Am Soc Nephrol*. 2000;11(9):1735-43.
5. Covic A, et al. Ambulatory blood pressure monitoring in renal transplantation... *Transplantation*. 2003;76(11):1640-42.
6. Djamali A, et al. Medical care of kidney transplant recipients after the first posttransplant year. *Clin J Am Soc Nephrol*. 2006;1(4):623-40.
7. Voiculescu A, et. al. Management of arterial stenosis affecting kidney graft perfusion: a single-centre study in 53 patients. *Am J Transplant*. 2005;5(7):1731-38.
8. Holdaas H, et al. Effect of fluvastatin on cardiac outcomes in renal transplant recipients: a multicentre, randomised, placebo-controlled trial. *Lancet*. 2003;361(9374): 2024-31.
9. Special Issue: KDIGO Clinical Practice Guideline for the Care of Kidney Transplant Recipients. *American Journal of Transplantation*. 2009;9(s3):S1-55.
10. Kasiske BL, et al. Recommendations for the outpatient surveillance of renal transplant recipients. *J Am Soc Nephrol*. 2000;11(10):S1-86.
11. KDOQI, Clinical practice guidelines for bone metabolism and disease in chronic kidney disease. *Am J Kidney Dis*. 2003;42(4 Suppl 2):S22-36.
12. European best practice guidelines for renal transplantation Section IV: Long-term management of the transplant recipient, etc. *Nephrol Dial Transplant*. 2002;17((Suppl)4):31-6.
13. Abbott KC, et al. Late urinary tract infection after renal transplantation in the United States. *Am J Kidney Dis*. 2004;44(2):353-62.