Refractory Hypertension due to Iliac Artery Stenosis in a Renal Transplant Patient
Anne S. Yu MD, Zouyan Lu MD, Barbara Bresnahan MD
Medical College of Wisconsin, Milwaukee, WI

INTRODUCTION
• Transplant renal artery stenosis (TRAS) is a common and potentially reversible cause of refractory hypertension and graft dysfunction.
• Iliac artery stenosis may limit blood flow to the transplanted kidney and present similarly to TRAS.
• It is important to identify and treat such hemodynamically significant stenoses to prevent graft loss and death from hypertensive cardiovascular complications.

CASE
• A 64 year old female with history of renal transplant and uncontrolled hypertension presented from clinic with acute kidney injury (AKI) with a rise in creatinine from baseline of 1.6 to 3.3 mg/dL.
• The patient had recently been hospitalized for volume overload requiring aggressive diuresis with IV bumetanide and metolazone and had been discharged on furosemide and metolazone.
• On admission, the patient appeared volume deplete, with weight down 20 lb from discharge and no lower extremity edema.
• A FENa of 0.75% was consistent with a prerenal cause for AKI.

HOSPITAL COURSE
• However, despite fluid hydration and discontinuation of the patient’s diuretics and angiotensin receptor blocker, renal function did not improve.
• She was also noted to be hypertensive with systolics up to 200s despite appearing volume deplete.
• Along with findings of a right femoral bruit, there was concern for renal artery or iliac artery stenosis affecting the transplanted kidney.

DISCUSSION
• Transplant renal artery stenosis typically presents 3 months to 2 years after renal transplant.
• TRAS accounts for 1-5% of post-transplant hypertension and 75% of all post-transplant vascular complications.
• TRAS should be considered in any renal transplant patient with worsening hypertension and renal function which is not explained by graft rejection, post-renal obstruction, or immunosuppressive drug toxicity.
• Given the increasing number of renal transplant patients with comorbid peripheral artery disease, it is also important to suspect lesions proximal to the transplant anastomosis, namely iliac artery stenosis.
• Significant stenosis can cause kidney hypoperfusion, with resulting rapid kidney failure and severe hypertension.
• If left untreated, premature graft loss and even patient death from systemic complications such as congestive heart failure or pulmonary edema may occur.
• Thus, early diagnosis and treatment of these stenoses are vital to restore kidney perfusion for improved graft and patient survival.

REFERENCES

TAKE HOME POINTS
• Transplant renal artery stenosis is a major cause of graft loss and decreased patient survival. Iliac artery stenosis can mimic the signs and symptoms of TRAS.
• Suspect these potentially reversible stenoses in any renal transplant patient with worsening hypertension and renal function.