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Grace Chong DO
Lehigh Valley Health Network, Grace.Chong@lvhn.org

Joseph Moran DO
Lehigh Valley Health Network, Joseph.Moran@lvhn.org

Fnu Vikram MD
Lehigh Valley Health Network, Fnu.Vikram@lvhn.org

Benjamin Sanchez MD
Lehigh Valley Health Network, Benjamin.Sanchez@lvhn.org

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A Case of Flash Pulmonary Edema Caused by Iliac Artery Stenosis

Grace Chong, DO,* Joseph Moran, DO,* Fnu Vikram, MD,** Benjamin Sanchez, MD,**
*Department of Medicine and **Division of Cardiology, Lehigh Valley Health Network, Allentown, Pa.

INTRODUCTION
• Flash Pulmonary Edema (FPE) secondary to renal artery stenosis is a well-known phenomenon first described by Pickering et al in 1988.
• It is precipitated by renal hypo-perfusion which activates the renin-angiotensin-aldosterone system resulting in increased water and sodium retention.
• Despite advances in medical therapies since its recognition, in-hospital mortality from FPE remains significant.
• We present a case of FPE caused by an iliac artery stenosis in a patient with a transplanted kidney.

METHODOLOGY/CASE PRESENTATION
• A 69-year-old female with a history of kidney transplant and peripheral arterial disease complicated by severe claudication s/p prior iliac artery stenting, presented with acute hypoxic respiratory failure and hypertensive emergency with mean arterial pressure (MAP) of 176.
• Labs revealed elevated NT-proBNP at 135,442 and creatinine of 2.43 (baseline 1.2).
• She was treated for FPE secondary to hypertensive emergency with noninvasive positive pressure ventilation, diuresis, and anti-hypertensives; however, there was no improvement in MAP and creatinine worsened to 3.15.
• Meanwhile, a transplant renal ultrasound revealed decreased blood flow to the transplanted kidney.

RESULTS
• Urgent renal angiography revealed a 95% stenosis of the patient’s left iliac artery proximal to the anastomosis site of the transplanted renal artery (Figure 2).
• Successful percutaneous trans-luminal angioplasty of the lesion was performed, resulting in revascularization of the kidney and immediate improvement of symptoms and creatinine (Figure 3).

CONCLUSION
• This case highlights the importance in maintaining a broad differential diagnosis for FPE especially when patients do not respond in an anticipatory manner.
• Our differential did include acute transplant rejection, prompting the ultrasound which revealed the iliac artery in-stent restenosis, prompting revascularization.
• Early recognition and consideration of uncommon causes of FPE is important given the high mortality rate and potential for reversibility of the condition.

REFERENCES