**RENAL ARTERY STENOSIS PRESENTED WITH SUDDEN FLASH PULMONARY EDEMA IN A PATIENT WITH SINGLE KIDNEY**

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**Case Study**: Flash pulmonary edema is characterized by sudden episode of dyspnea resulting from acute pulmonary venous congestion and rapidly resolves with well-preserved left ventricular systolic function. It is associated with bilateral renal artery stenosis or with unilateral renal artery stenosis in a single kidney. We report a case of renal artery stenosis presenting as flash pulmonary edema in a single kidney treated by angioplasty with stent implantation.

A 75-year-old man visited the emergency department with acute shortness of breath. He was diagnosed with right upper ureter cancer at 6 years ago and was in complete remission after radical nephroureterectomy. The patient had a left single kidney and he was taking medication for 6 years because of diabetes and hypertension. The patient maintained blood pressure at about 130/70 mmHg while taking the medicine, but at the time of admission to the emergency room, blood pressure was rising to 206/90 mmHg and chest radiograph showed pulmonary congestion, bilateral pleural effusion and cardiomegaly. Intravenous furosemide and nitrate were administered and the pulmonary edema had subsided rapidly. Electrocardiogram showed normal sinus rhythm with inverted T waves in V5, V6 and echocardiography revealed increased LV wall thickness, no significant valvular abnormality with an ejection fraction of 55%. Although coronary angiography was performed, there was no thrombus or stenosis in the coronary artery.

Since he had good left ventricular function we suspected primary aldosteronism or renovascular etiology. Aldosterone/renin ratio was within normal range, but adrenal computed tomography showed focal severe stenosis in the left proximal renal artery. In the captopril renal scan, time to peak(Tmax) and half time of radioactivity was delayed in the left kidney after one hour of captopril administration.

The patient performed percutaneous transluminal angioplasty immediately. The balloon expandable stent (6.0x24mm) was inserted into the stenosis of the left renal artery and blood flow was improved after stent expansion. In addition, the Tmax of radioactivity and excretion were returned to normal in the captopril renal scan.