New Developed Hypertension after Unilateral Ureteronephrectomy : Transitional Cell Carcinoma at Left Renal Pelvis with Silent Contralateral Renal Artery Stenosis

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The prevalence of renal artery stenosis as the cause of hypertension in the general population is only 2 to 4%. The existence of transitional cell carcinoma (TCC) and renal artery stenosis in the same patient is a very rare clinical presentation. We report a case of diagnosis and therapy of new developed hypertensive patients after unilateral ureteronephrectomy due to TCC. And the cause of hypertension was renal artery stenosis at solitary kidney.

Case : A 47-year-old man had been diagnosed with TCC stage III (T3N0M0) at the left renal pelvis by abdominal computed tomography. As such, he received a left laparoscopic ureteronephrectomy. Preoperation, his blood pressure (BP) was 122/79 mmHg and renal function was normal (BUN/creatinine 15/1.1 mg/dL). The patient had no history of hypertension. On operation room, his BP was 180/100 mmHg and intravenous calcium channel blocker was injected. After that, he received antihypertensive medication (calcium channel blocker, angiotensin converting enzyme inhibitor) from the cardiologist. 33 days after the ureteronephrectomy, he was referred to nephrology from urology for azotemia. His BP was 176/90 mmHg and abdominal bruit at right upper abdomen was auscultated. His BUN/Cr were 32/2.6 mg/dL, serum K was 5.5 mEq/L. The right renal artery showed tardus and parvus rhythm with a low resistance index (0.3) during a renal Doppler ultrasonography. We suspect to diagnose with renal artery stenosis. 79% stenosis of the main renal artery was shown in a renal angiography. An internal stent was inserted after a ballooning angioplasty. The next morning, his BP was 134/81 mmHg without antihypertensive medication. After discharge, he maintained normal BP and received anti-platelet medication. BUN/Cr were 17/1.4 mg/dL at last visit. Patient was referred back to urology for commencement of chemotherapy for TCC.