Clinical picture

Ureteral cancer in a duplicated ureter

An 87-year-old previously healthy woman presented with a 5-day history of hematuria, dysuria and lower abdominal fullness. She denied nausea, bowel habit change, body weight loss and fever. Her medical and family history, as well as physical and laboratory examinations were unremarkable. After left side hydronephrosis seen in ultrasonography, the subsequent computed tomography (Figures 1 and 2) further disclosed duplicated left kidney with the normal excretory upper moiety (black arrowhead), along with the hydronephrosis (white arrowhead) caused by tumor infiltration involving upper ureter of the lower moiety (white arrow). The diagnosis of urothelial cell carcinoma was established by urine cytological examination. Concerning her old age and advanced cancer stage, the patient only received radiotherapy, and died 6 months later.

Duplicated kidney is the most common congenital anomaly of urinary tract occurring in about 0.8% of general population. It has certain associated anomalies and complications, but ureteral cancer in duplicated kidney is rarely reported. Although no etiologic association between these two entities is proven, the postulation is that urine reflux chronically irritates the ureteral mucosa and makes them susceptible to malignant change. The standard therapy includes a total nephroureterectomy with excision of bladder cuff, followed by chemotherapy and radiotherapy. However, most reported cases had poor prognosis due to metastasis or recurrence of the tumor. This case reminds physicians to take ureter cancer as one of the complications of duplicated kidney. Early diagnosis and diligent monitoring of duplicated kidney patients with image or cytological study are the keys to prevent unwanted outcomes.

Photographs and text from: J.-L. Kao, Division of Nephrology, Department of Internal Medicine;

![Figure 1. Computed tomography of an 87-year-old woman disclosing duplicated left kidney with the normal excretory upper moiety (black arrowhead), and hydronephrosis (white arrowhead).](image1)

![Figure 2. The computed tomography showing the hydronephrosis (white arrowhead) of the duplicated left kidney caused by tumor infiltration involving upper ureter of lower moiety (white arrow).](image2)
C.-H. Huang, Department of Nursing; Y.-M. Chang and S.-C. Tsai, Division of Nephrology, Department of Internal Medicine; C.-L. Yang, Department of Nursing; C.-C. Shiao, Division of Nephrology, Department of Internal Medicine, Saint Mary’s Hospital Luodong, Saint Mary’s Medicine, Nursing and Management College, Yilan, Taiwan.

email: chungyy2001@yahoo.com.tw

Conflict of interest: None declared.

References

