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Letter

Late upper urinary tract urothelial carcinoma following radical cystectomy, presenting as page kidney

Dear Editor,

We are describing a rare case presenting with page phenomenon, 9 years post radical cystectomy for muscle invasive bladder cancer. Page kidney was developed secondary to a late recurrent urothelial tumour in the left renal pelvis.

Our case is a fifty-seven-year-old gentleman presented with poorly controlled hypertension and left dull aching loin pain. His blood pressure (BP) was 180/80 mmHg at diagnosis and was down to 150/80 mmHg using angiotensin converting enzyme (ACE) inhibitor and beta blocker medications. He underwent a radical cystectomy (RC) and ileal conduit urinary diversion 9 years ago. Pathology of his cystectomy specimen was localized urothelial carcinoma with negative resection margin and negative lymph nodes (T2N0M0). Examination showed a palpable mobile mass in the left hypochondrium.

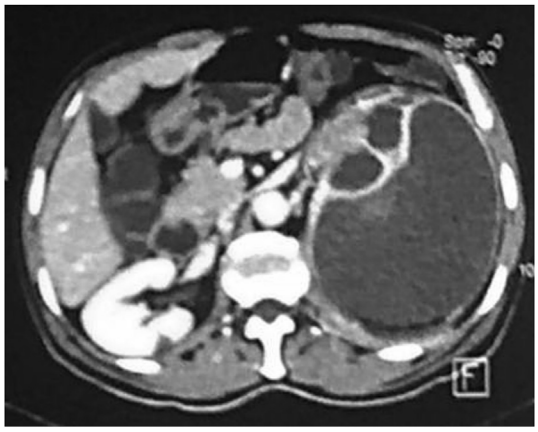

Figure 1 Computed tomography abdomen and pelvis with IV contrast (axial view) showing left kidney with renal pelvis tumour and large sub-capsular collection.

Computed tomography (CT) clearly showed an enhanced mass occupying the left renal pelvis, small left kidney with large subcapsular collection surrounding the kidney measuring 21 cm×11 cm×10 cm (Fig. 1). His kidney function was normal. The diagnosis of page kidney was done based on radiological findings. Renal vein renin was not tested.

The patient was counselled on left nephroureterectomy. Surgery was done through left chevron incision. We kocherized the colon, reflected spleen and pancreas that were found stretched at upper part of the mass. We decided to avoid decortication of the renal capsule, remove the whole mass with the subcapsular collection, and avoid any possible malignant spillage. We proceeded by dissection of the kidney and clipping renal vessels using large Hem-O-Lok clips, then tracing the ureter down through the sigmoid mesocolon and ending dissection at the site of end-to-side anastomosis to the ileal conduit. Small circular incision of the conduit at site of left ureteric anastomosis was done and nephroureterectomy was then completed. The conduit was repaired by Vicryl suturing in two layers. Para-aortic lymphadenectomy was then done. Pathology revealed high grade urothelial carcinoma of the renal pelvis and proximal ureter, invading the renal parenchyma and para pelvic fat. Remaining part of the ureter was normal. Para-aortic lymph nodes were normal (T3N0M0).

The patient recovered well after surgery. His surgery was complicated by ileus that resulted in a long hospital stay of 7 days before being safely discharged. His BP was down to 130/80 mmHg after surgery, although he remained only on his ACE inhibitor. His kidney function acutely deteriorated in the first postoperative 48 h, and then was back to normal at discharge.

At 6 months follow-up, his BP was stable without antihypertensive medications and stable kidney function.

A recent review article identified the risk for secondary upper tract urothelial carcinoma post RC of 4%–10%, and risk factors included bladder carcinoma *in situ* (CIS), positive urethral or ureteral margin and younger age of the patient [1]. Page kidney is a rare entity happening following subcapsular collection, resulting in compression of the kidney parenchyma and activation of the renin angiotensin system, resulting in hypertension. Goyal et al. [2] reported a case with subcapsular urinoma secondary to a large bladder tumour occupying the trigon. A similar case reported bilateral subcapsular urinoma secondary to high pressure chronic urinary retention [3]. Our case is unique in being secondary to an obstructing renal pelvic urothelial

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tumour, as a late recurrence post RC. The patient had prompt nephroureterectomy with normalization of BP at 6 months follow-up. BP was reported to normalize in 92% of patients following surgical intervention [4].

Author contributions

Study design: Ahmed Kotb.
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Drafting of manuscript: Asmaa Ismail, Ahmed Kotb.
Critical revision of the manuscript: Ahmed Kotb, Hazem Elmansy, Walid Shahrour, Owen Prowse.

Conflicts of interest

The authors declare no conflict of interest.

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