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Case Report

Squamous cell carcinoma of the renal pelvis

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Introduction

Squamous cell carcinoma of the renal pelvis is uncommon compared to other tumours of the kidney. It is believed that the transitional epithelium undergoes metaplasia caused by the presence of infection and chronic irritation by renal stones. The subsequent squamous metaplasia then becomes maligant after several years. Most of the available literature shows a strong correlation between stones and squamous carcinoma (1). On the other hand only a minority of patients with staghorn calculi develop squamous cell carcinoma (2). We report a patient who had squamous renal cell carcinoma of the kidney with no history of stones in that kidney.

Case report

A 65-year old woman (non-smoker) developed left upper abdominal pain, fever and vomiting. She had neutrophil leucocytosis and a normal x-ray KUB. Urine analysis showed increased red cells and pus cells. The urine culture did not grow any organisms. The abdominal ultrasonography revealed a mass in the left kidney. Her serum creatinine was 3.0. Her symptoms improved with antibiotics and conservative measures. The renal functions became normal in 5 days. An abdominal CT scan done showed a mass arising from the renal pelvis and enlarged renal hilar nodes (Figures 1 and 2). There were necrotic areas in the lymph nodes suggestive of malignant deposits. There were no renal stones. The CT scan of the chest was normal. A diagnosis of urothelial carcinoma of the renal pelvis was made and a nephroureterectomy was done. The histopathology revealed a squamous cell carcinoma of the left kidney. The ureter showed squamous metaplasia in several areas. She had a course of external beam radiotherapy. She is alive one year after surgery.

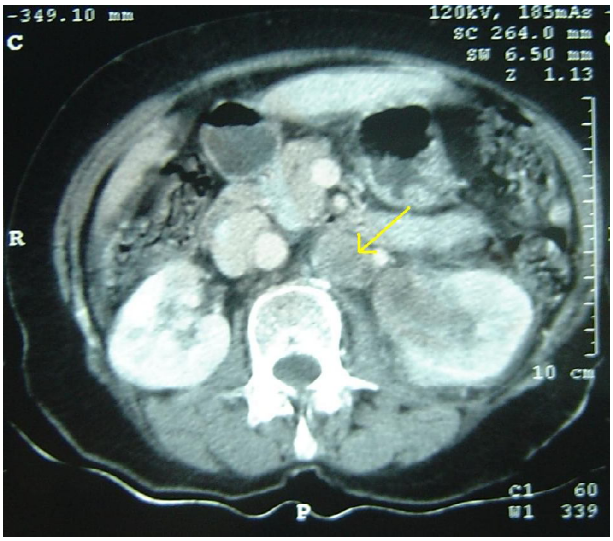

Figure 1. *CT scan showing a tumour in the left renal pelvis. The yellow arrow head shows the lymph node.*

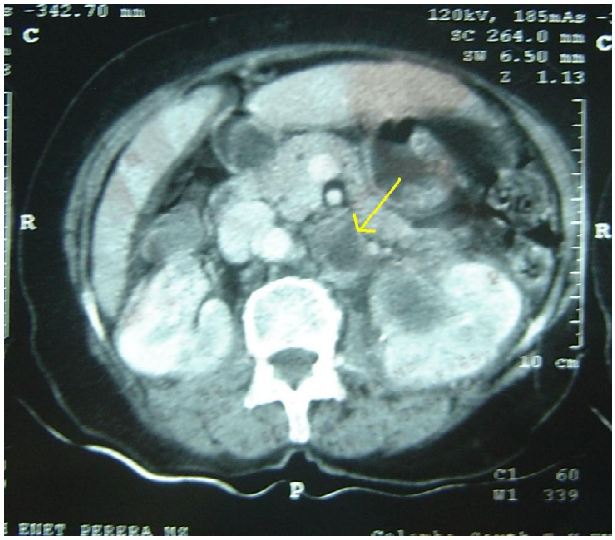

Figure 2.

Discussion

Renal pelvic squamous cell carcinoma is generally secondary to large renal stones. In such a situation nephrectomy alone may suffice. However, when it occurs de novo, the squamous metaplastic changes may occur throughout the urinary tract as shown in this patient who had squamous metaplasia in the ureter. In such situations it is useful to do a nephroureterectomy and keep the rest of the urinary tract under surveillance for occurrence of metaplasia and malignant change (3).

When renal pelvic squamous cell carcinoma occurs without an apparent predisposing factor it may be difficult to differentiate it from transitional cell carcinoma of the renal pelvis preoperatively by CT scan images. Occurrence of necrotic areas in the lymph nodes may give a clue to the diagnosis of squamous cell carcinoma in such a situation. Necrosis of lymph nodes is not a feature with metastatic deposits of transitional cell carcinoma. Preoperative diagnosis is important as squamous cell carcinoma of the renal pelvis has a grave prognosis than transitional cell carcinoma and a decision to perform a major operation in a patient with serious comorbidity can be tailored accordingly.

References

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