

Case Report

## A case of non-Hodgkin's lymphoma presenting as a perirenal urinoma

A. M. Abeygunasekera\*, S. Sudheshan\*, A. F. Fathiehu<sup>+</sup>, M. Madurawe\*\* and M. T. Duminda\*

Departments of Urology\*, Radiology<sup>+</sup> and Pathology\*\*, Karapitiya Teaching Hospital, Galle.

### Introduction

A perirenal urinoma is an encapsulated collection of extravasated urine in the perirenal space and can occur after injury to the kidney or spontaneously. The former can be traumatic or iatrogenic following endoscopic or open renal surgery (1). Spontaneous extravasation occurs if there is distal obstruction leading to calyceal rupture of the fornix. The possible causes of obstruction include ureteric calculi, periureteric masses, tumour of the ureter or bladder, benign prostatic enlargement and neurogenic bladder with vesicoureteral reflux.(1,2,3,4). Metastases from gastrointestinal malignancies to the kidney can cause calyceal rupture and urinoma (1). We describe a case where urinoma formation was secondary to enlarged retroperitoneal lymph nodes causing obstruction of the ureter.

### Case report

A 55-year-old woman having well controlled type 2 diabetes mellitus presented with right upper quadrant pain of two weeks duration. This was accompanied by fever, mostly in the evenings and loss of appetite. There were no urinary symptoms or similar episodes in the past. Her physical examination revealed a ballotable mass in the right loin. There was no lymphadenopathy. Her ESR was 126 mm. Serum creatinine, full blood count and X-Ray KUB were normal. Abdominal ultrasonography showed a right perinephric fluid collection with no echogenic particles within the fluid. Computed tomography (CT) of the abdomen revealed a subcapsular collection of urine, postero-lateral to the right kidney and a well defined solid mass probably a group of enlarged lymph nodes in relation to the proximal ureter (Fig. 1). The Chest X-ray was normal and the Mantoux reaction was negative. Right sided "percutaneous nephrostomy (PCN)" was performed and the drained fluid was sent for analysis. It did not grow any bacteria and showed few red cells and pus cells only. There were no acid-fast bacilli. An ultrasound guided core biopsy of the mass was performed but the histopathology was equivocal. A double J stent was inserted into the right ureter and open biopsy was

performed. The histopathology revealed a Non-Hodgkin's lymphoma.

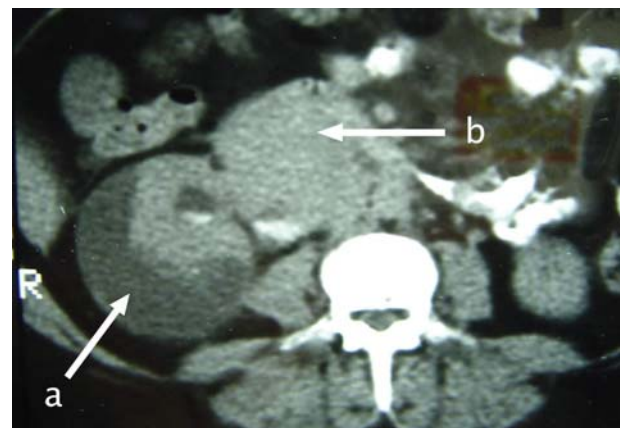


Figure 1.

### Discussion

A retroperitoneal urine collection by virtue of its size may cause considerable discomfort. Common complaints include loin pain, abdominal distension or reduced urine output. These are mainly due to pressure effect on the adjacent organs (5). When the amount of urine exceeds the capacity of lymphatic clearance, perirenal fluid collects. Because of the lipolytic effect of urine, over 2-5 days, perinephric fat disappears and an inflammatory reaction follows. The urine collection becomes encapsulated in a fibrous sac within 3-6 weeks (1,5).

Abdominal ultrasonography can easily identify the urinoma. Contrast enhanced CT is more informative. It can reveal the exact location and extent of the urinoma and its relationship to the kidney and ureter, surrounding structures and retroperitoneal fascia. A left sided urinoma has to be differentiated from a pancreatic pseudocyst (6). Unlike with other retroperitoneal fluid collections, in urinoma the initial CT attenuation values may increase after administration of intravenous contrast material (7). In addition the CT attenuation values are homogenous

throughout a urinoma unlike in a haematoma or an abscess (8). Sometimes CT and ultrasonography may be limited in ascertaining the origin and nature of fluid collections in the abdomen and pelvis. In such situations  $^{99m}\text{Tc}$ -DTPA scintigraphy can be used to confirm the fluid collection to be a urinoma (9). Moreover, scintigraphy can also delineate the site and estimate the rate of leakage. A nephrostogram may be useful in studying the fistulous tract (9).

Generally a urinoma is treated by PCN. Percutaneous aspiration may be considered in some cases to minimise damage to the kidneys. Non obstructive urinoma, usually due to trauma or instrumentation, settles with PCN within 48-72 hours. If not subsequent insertion of an indwelling ureteral stent will divert the urine from the fistulous tract and allow it to heal. But some urinomas may not have a direct communication with the pelvicalyceal system where ureteral stents may not solve the problem. These patients require surgical correction in the form of fulguration or repair of the fistulous tract or even nephrectomy (1). Obstructive types of urinoma are also managed in the same way as non obstructive cases initially. But the cause should be identified and corrected to prevent recurrence.

## References

1. McDougall EM, Liatsikos EN, Dinlenc CZ, Smith AD. Percutaneous approaches to the upper urinary tract. In: Walsh PC, Retik AB, Vaughan ED Jr, Wein AJ, eds. *Campbell's Urology*, 8th ed. Philadelphia, W.B. Saunders. 2002: pp3344-5.
2. Fujita K, Sugao H, Tsujikawa K. Perinephric urinoma secondary to neurogenic bladder with vesicoureteral reflux: Report of an adult case. *International Journal of Urology* 2004; 11: 53-5.
3. Urbain D, Vanderauwera J, Dewit S, Vandendris M. Perirenal urinoma secondary to prostatic obstruction. *Journal of Urology* 1985; 134: 967-8.
4. Sajeed R, Nyamekye I, Kinder. Unsuspected rectal adenocarcinoma causing a urinoma. *Int. Journal of Urology* 1997; 4: 99-100.
5. Kettlewell M, Walker M, Dudley N, De Souza B. Spontaneous extravasation of urine secondary to ureteric obstruction. *British Journal of Urology* 1973; 45: 8-14.
6. Mc Inerney D, Jones A, Roylance J. Urinoma. *Clin. Radiol.* 1977; 28: 345-51.
7. Healy M, Teng SS, Moss AA. Uriniferous pseudocyst: Computed tomographic findings. *Radiology* 1984; 153: 757-62.
8. Lang IK, Glonoso LW. Management of urinomas by percutaneous drainage procedures. *Radiological Clinics North America* 1986; 24: 551-9.
9. Kumar R, Gupta R, Khullar S, Sharma S. The management of urinoma: the role of renal scintigraphy. *British Journal of Urology International*. 2000; 85: 1154.

## Authors

Anuruddha M. Abeygunasekera, MS (Col) FRCS (Eng) FRCS (Edin)  
Consultant Urological Surgeon

S. Sudheshan, MS (Col)  
Senior Urological Registrar

A. F. Fathiehu, MD (Col)  
Consultant Radiologist

M. Madurawa, MD (Col)  
Consultant Pathologist

M. T. Duminda, MBBS  
Senior House Officer in Urology

Karapitiya Teaching Hospital, Galle, Sri Lanka.