

# Extensive Urinary System Lymphoma Delineated by Coronal Computed Tomography

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**KEY WORDS:** lymphoma, kidney, ureter, computed tomography, ureteral obstruction

**DOMAINS:** imaging, clinical medicine, surgery, medical care

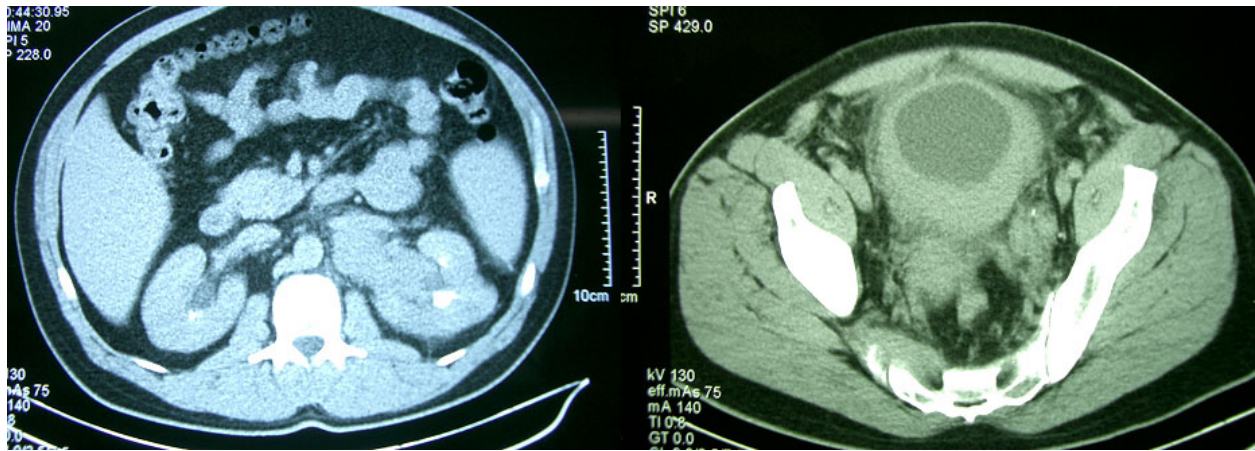
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## CASE REPORT

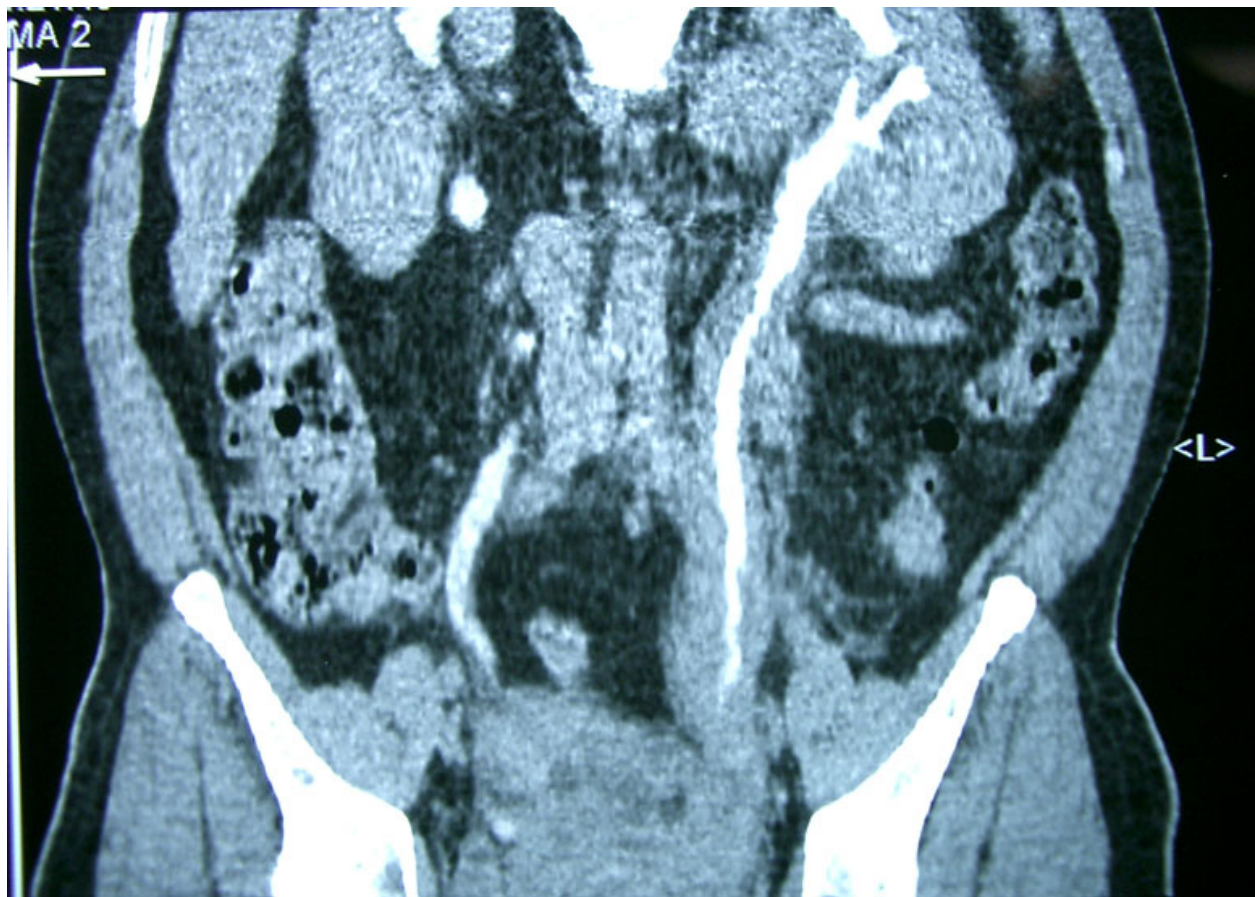
A 44-year-old male petrochemical worker presented with 3 weeks of right loin pain and lethargy. Excessive consumption of nonsteroidal anti-inflammatory medications for analgesia resulted in upper gastrointestinal bleeding, renal failure, and anaemia. After medical stabilisation, abdominal computed tomography (CT) demonstrated a soft tissue mass arising from the left kidney, infiltrating the ureter with diffuse bladder wall thickening (Figs. 1 and 2). The obstructed left collecting system was relieved initially with a percutaneous nephrostomy that was later substituted by an antegrade ureteric stent. Rigid cystoscopy revealed a featureless and intact bladder urothelium, but biopsy demonstrated diffuse large B cell lymphoma, later confirmed on bone marrow aspiration. Chemotherapy was instituted (CHOP: Cyclophosphamide, Doxorubicin, Oncovine, Prednisolone) and repeat CT after two cycles of chemotherapy and ureteric stent removal demonstrated complete resolution of disease (Fig. 3).

## DISCUSSION

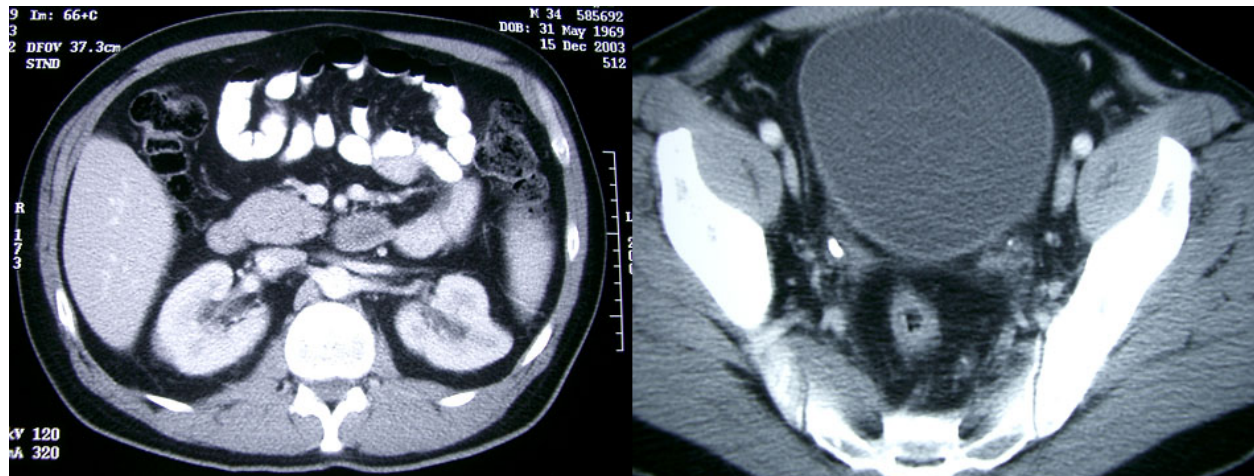
Urologists are rarely consulted about lymphoma due to the paucity of symptoms[1] despite the incidence of genitourinary tract involvement by advanced lymphoma being up to 52% in autopsy series[2]. This case highlights an unusual symptomatic presentation from extensive renal, ureteric, and bladder involvement and the value of CT with coronal reformatting to delineate the extent of disease. Diagnoses other than urothelial tumours need to be considered when confronted with such extensive disease and profound ureteric compression[3]. Finally, with appropriate histological diagnosis and treatment, lymphoma may undergo a dramatic resolution, as demonstrated in this case.



**FIGURE 1.** Axial computed tomography images demonstrating widespread involvement of the urinary tract by lymphoma causing obstruction (left) with widespread bladder wall involvement (right).



**FIGURE 2.** Coronal reformatting of the computed tomography images in Fig. 1 highlighting the extensive involvement of bladder and in particular the left ureter and kidney.



**FIGURE 3.** Axial computed tomography images demonstrating resolution of the previous extensive urinary tract lymphoma and its associated obstruction (left) with the bladder wall now normal (right).

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