RENAL LYMPHOMA IN AN HIV POSITIVE PATIENT

Chirote SUCHATO[1], Patchrin PEKANAN[1,2], Udom HARINSUT[3]

ABSTRACT

Renal lymphoma was presented in an HIV positive patient. The patient was a 52-year-old man with right upper quadrant tenderness. An infiltrative border soft tissue mass was found mainly at right renal hilum. The mass showed lower signal on both T1W and T2W images and created no significant contrast enhancement.

INTRODUCTION

Primary renal lymphoma is very rare, because kidneys do not contain lymphatic tissue.[1,2] Secondary renal involvement, especially in non-Hodgkin lymphoma is more common and is found in one third of patients with this disease at autopsy.[3,4] Eleven percent of patients with AIDS and lymphoma have renal involvement.[5] The kidney involvement in lymphoma may be caused by hematogenous dissemination, or by direct infiltration originating from neighboring lymph nodes. The clinical symptoms are fairly nonspecific.[1,6]

CASE REPORT

A 52-year-old man had tenderness at right upper quadrant. Bimanual palpation showed fullness sensation of right side. The patient was a known case of chronic viral B hepatitis and positive anti HIV. Complete blood count and urine examination showed no abnormality. Bulgy and blurred contour of right psoas muscle, lateral deviation of right kidney, pressure effect on distal right renal pelvis and upper ureter was seen at IVP study. I.V. contrast enhancement CT scan revealed an infiltrative border, soft tissue mass, size 5X7X10 cm, between right kidney and right psoas muscle, extending to renal sinus region or from central sinus to medial perinephric area (Fig. 1). Involvement of the renal parenchyma was probably present at middle-lower pole area. The mass did not enhance significantly (Fig. 2). On T1W, and T2W the signal of the mass was lower than the renal parenchyma; the mass is slightly brighter on T2WI and showed no significant contrast enhancement with Magnevist (Fig. 3).

Malignant lymphoma involving medial and lower aspect of right kidney, perinephric and peripelvic fatty tissue, and the wall of renal vein was found at surgery and pathology. There was no lymph nodes involvement.

DISCUSSION

On CT, renal lymphoma may manifest in various ways, with bilateral renal involvement in about 75% of cases. Various patterns of involvement are detected only after i.v. contrast medium is administered.[1,4,7-15] The following types of renal involvement may be seen: (1) multinodular changes (45%-mild to moderate enhancement after i.v. contrast administration is seen in the mostly 1-5 cm large, mainly cortical nodules, (2) Circumscribed intrarenal lesions (15%) (3) diffuse bilateral involvement without circumscri-

[1] Department of Radiology, Samitivej Hospital, Sukhumvit 49, Bkk. Thailand.
[2] Department of Radiology, Ramathibodi Hospital.
[3] Department of Medicine, Samitivej Hospital.

bed tumors (10%), with pronounced kidney enlargement and unilaterally or bilaterally decreased or absent contrast excretion (4) infiltration of the kidney originating from other retroperitoneal lymphoma localization (25%): soft tissue tumor extending into the kidney, often without changes in renal function, but with obstruction (depending on the site of the involvement), (5) renal sinus lymphoma: soft tissue infiltration surrounding the renal pelvis and the proximal ureter, infiltrating the pyramids.

Samelka[16] studied non-Hodkin's lymphoma of the kidneys in twelve patients by MRI, observed three types of renal involvement: (1) large paraaortic retroperitoneal masses with extension into the renal hilum, the subcapsular space, or both (2) unilateral diffuse infiltration of the renal parenchyma (3) focal rounded intraparenchymal masses. Untreated lymphoma was slightly hypointense relative to the renal cortex on T1-weighted images and was heterogenous and slightly hypointense or isointense on T2-weighted images. Enhancement of lymphomatous tissue was mildly heterogenous and was minimal on early images after gadolinium enhancement and remained minimal on late contrast enhanced images in most tumor masses. No central necrosis of tumor was identified, and no renal vein thrombus was present. The patients who presented as a large paraortic mass showed diminished renal cortical perfusion of the involved kidney. All of these patients also had tumor extension into the renal hilum.

Lymphoma is characterized by conglomerate masses of monotonous cellularity that usually contain few small blood vessels.[16,17] Hypovascular solid tissues have long T1 values and are generally low in signal intensity of T1-weighted images. Such tissue enhances minimally with contrast agents, particularly on early enhanced images.[18] Untreated tumors that were hypointense to isointense in signal intensity relative to the renal cortex on T2-weighted images also reflected the hypovascular nature of those untreated tumors.

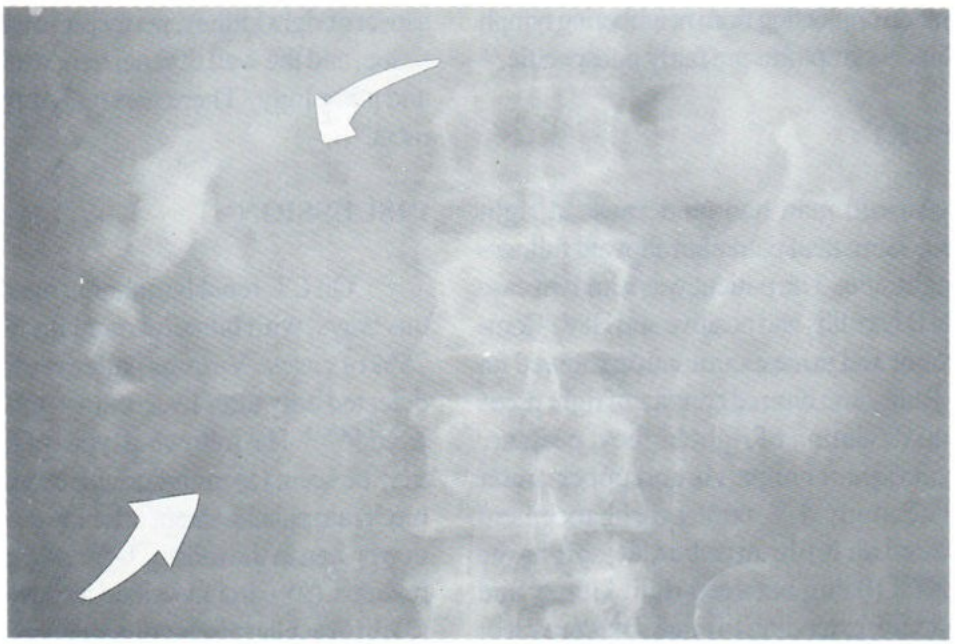

Fig. 1 IVP showed evidence of mass lesion in the region of right renal hilum with mild obstructive hydronephrosis.

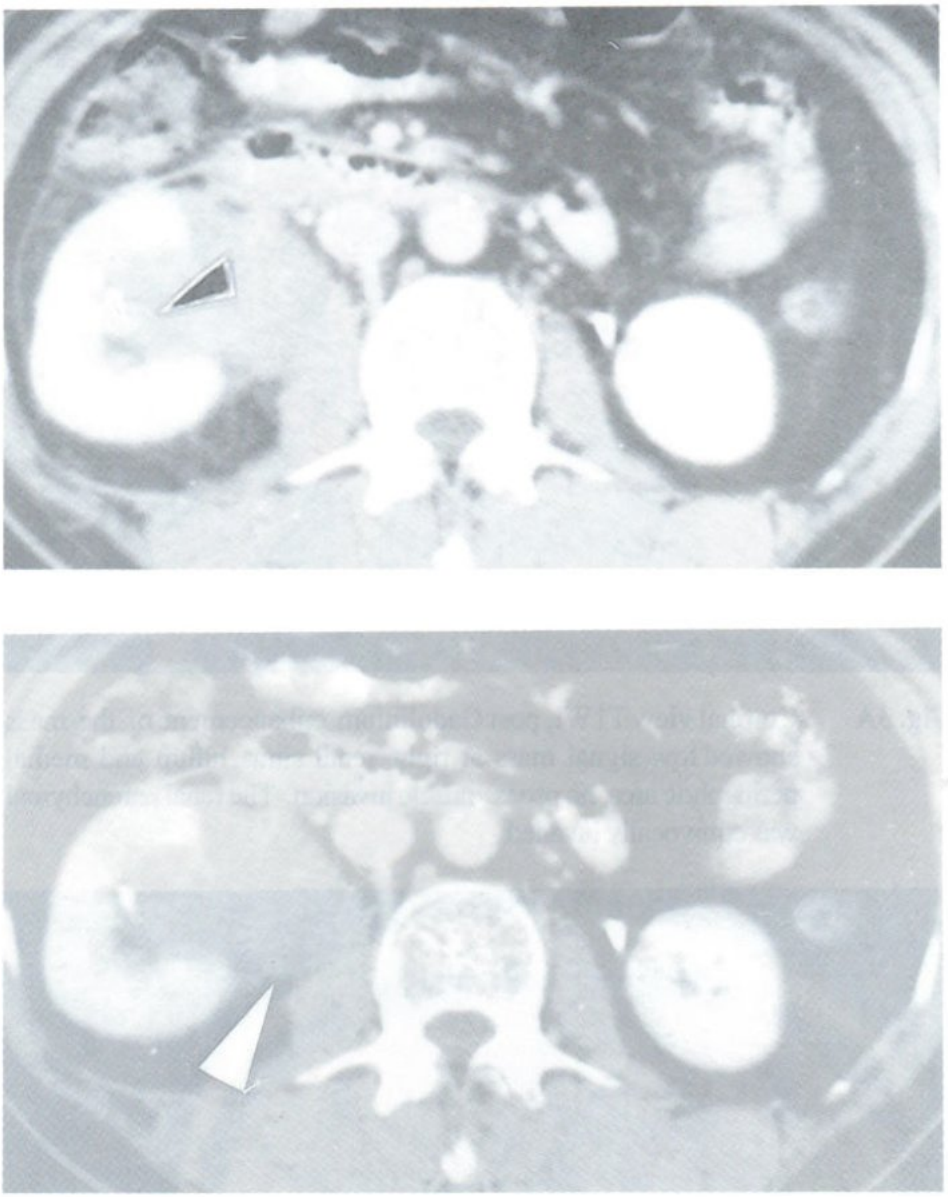

Fig. 2 I.V. contrast enhanced CT scan revealed an infiltrative border solid mass at right renal hilum, extending to renal sinus and medial perinephric tissue.

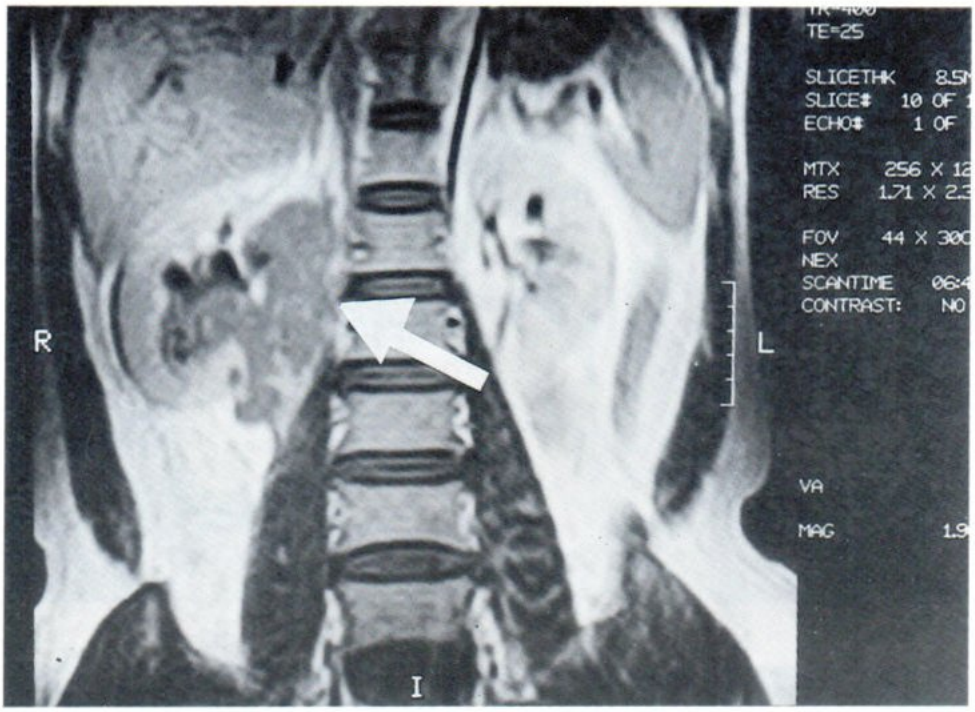

Fig. 3A Coronal view T1WI, post Gadolinium enhancement of the mass showed low signal mass at right renal sinus, hilum and medial perinephric area, no psoas muscle invasion. The renal parenchymal was equivocally invaded.

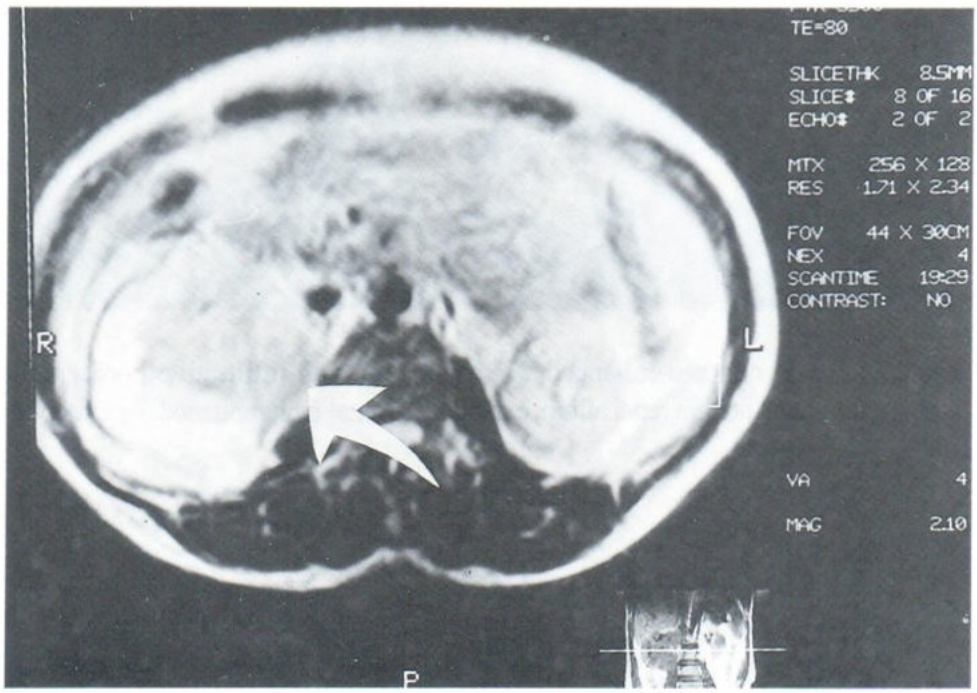

Fig. 3B T2WI axial view of the lesion showed slightly increased signal in the mass, but the signal was still lowered than the kidney

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