Renal Involvement by Lymphoma as a Renal Mass A Case Report

RENAL LENFOMA

Mustafa ÜNAL*, Cihangir EREM**, Kemal SERÇE*, Gökhan HAROVA***

* MD, Karadeniz Teknik University Faculty of Medicine, Department of Radiology,
** MD. Karadeniz Teknik University Faculty of Medicine, Department of Internal Medicine,
*** MD. Karadeniz Teknik University Faculty of Medicine, Department of Pathology, TRABZON, TURKEY

SUMMARY

Renal disease may be the earliest manifestation of lymphoma. The gross morphology and consequent radiographic images depend upon the mechanism of renal involvement. Computed Tomography (CT) is extremely useful in demonstrating this expansile pattern of tumor growth. CT findings of the expansile lymphomatous mass are nonspesific, but with the regular contour, slightly increasing in attenuation of lymphomatous tissue after contrast material administration, conglomerated paraaortic lymphadenopathies, and no involvement of renal vein and inferior caval vein, the renal lymphoma should be considered.

Key Words: Renal involvement, Lymphoma, Computed tomography, Kidney

T Klin J Med Sci 1995, 15: 359-360

ÖZET

Renal hastalık lenfomanın en erken ortaya çıkma şekli olabilir. Lenfomanın böbreği tutma tarzı meydana gelecek morfolojik değişikliği belirler. BT tümörün büyüme paternini demonstre etmede oldukça başarılıdır. Lenfomatöz kitlenin BT bulguları nonspesifiktir, ancak düzgün kontur, çok az kontrast tutulum, konglomere lenfadenopati paketleri ve renal ven ve vena kavanın tutulmamış olması lenfomayı gösterir.

Anahtar Kelimeler: Böbrek tutulumu, Lenfoma, Bilgisayarlı Tomografi, Böbrek

T Klin Tıp Bilimleri 1995, 15: 359-360

Renal involvement by lymphoma is considered a late manifestation of disease. Various patterns have been encountered with renal lymphoma. Renal involvement as a mass is 5-10% of renal involvement of lymphoma (1).

A 63-year-old man was admitted for evaluating of weight loss and left abdominal mass. He was well until last 6 months. During the following 6 months, his body weight decreased some of 10 kg. Dispnea and malaise were present for 1 month. On physical examination, the thyroid was non-palpable, and no peripheral lymphadenopathy was detectable. In the left abdominal region, there was a palpable mass. Neurologic examination was normal. Laboratory values were as follows: hemoglobin, 10 g/dl; hematocrit, 30.7%; white blood cell count, 5000/ml; erythrocyte sedimentation rate, 130 mm/h; BUN, 62 mg/dl; Glu; 81 mg/dl; Na, 140 mmol/L; K, 4.9 mmol/L; Cl, 105 mmol/L; Cr, 3.8 mg/dl; Alk. P, 74 U/L; SGOT, 23 U/L; SGPT, 13 U/L; T.protein, 9.7 g/dl; Alb, 3.4 g/dl; U.acid, 7 mg/dl; Ca, 9.6 mg/dl; P, 5.8 mg/dl. The peripheral blood smear was as follows: PNL, 70%; Lymphocyte, 30%. The creatinin clearence was 20 ml/min. Urinaanalysis revealed microhematuria. Abdominal computed tomographic scans demonstrated a low-density antero-superior renal mass measuring 15x20x21 cm^3 consistent with tumor, and conglomerated paraaortic lymphadenopathies that displaced abdominal aorta (Fig. 1). The case surgically confirmed (Fig. 2). Left nephrectomy was performed. Pathologic examination of left kidney revealed 20 cm necrotic tumor mass. Microscopic examination revealed a non-Hodgkin's lymphoma with diffuse small-cells.

Geliş Tarihi: 02.12.1994

Yazışma Adresi: Mustafa ÜNAL
Karadeniz Teknik Üniversitesi
Farabi Hastanesi,
Radyoloji ABD, TRABZON

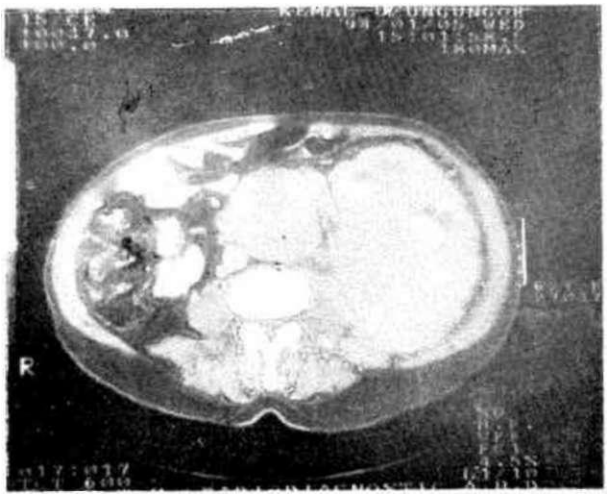

Figure 1. CT scans revealed a bulky mass that slightly enhanced after contrast in the middle and upper pole of the kidney and paraaortic lymphadenopathies

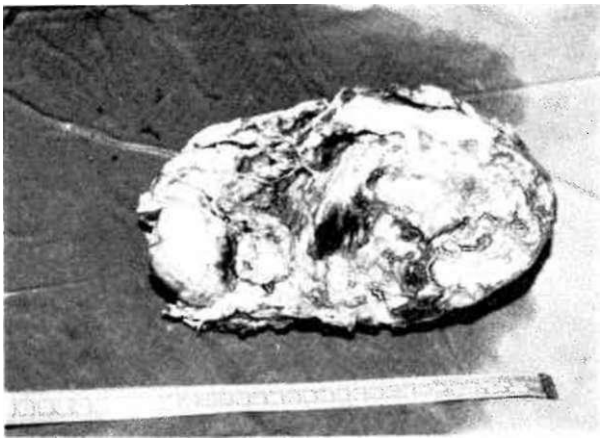

Figure 2. Gross pathologic specimen of the left kidney with lymphomatous involvement.

DISCUSSION

Occasionally, renal disease may be the earliest manifestation of lymphoma (2,3). In our case, there were also hematuria, anemia, weight loss, a mass, and abdominal pain.

The gross morphology and consequent radiographic images depend upon the mechanism of renal involvement (4). CT is extremely useful in demonstrating this expansile pattern of tumor growth (2). The morphologic feature of metastatic disease is infiltration, thereby resulting in an enlarged but still kidney-shaped mass (5). CT findings of the expansile lymphomatous mass are nonspesific, but usually show a solid mass that is less dense normal renal parenchyma but more dense than water. Lymphomatous renal Involvement generally appear homogeneous, with attenuation values similar to those renal parenchyma precontrast CT images (4). After contrast administration, lymphomatous tissue Increases in attenuation only slightly (10-30 HU), whereas normal tissue is enhanced to a greater extent (60-120 HU) (1,2).

Although leslodetection and characterization are similar for contrast-enhanced Magnetic Resonance Imaging (MRI) and CT, routine image quality on MRI is still Inferior to that of CT and unless iodine contrast media contraindicated, CT is considered as the primary imaging modality (6).

A differantial diagnosis of renal lymphoma as a renal mass is a clinical problem. The pattern of renal and perirenal lymphomatous involvement may be mimicked by primary neoplasms, metastatic carcinoma to kidney, multiple angiomyolipomas, infections, leukemia, or sinus histiocytosis, but with the regular contour, slightly increasing in attenuation of lymphomatous tissue after contrast material administration, conglomerated paraaortic lymphadenopathies, and no involvement of renal vein and VCI, the renal lymphoma should be considered.

REFERENCES

1. Heiken JP, McClennan BL, Gold RP. Renal Lymphoma. Semin Ultrasound, CT, MR 1986; 7:58-66.
2. Hartman DS. Davis CJ, Goldman SM, Friedman AC, Fritzche P. Renal Lymphoma: radiologie-pathologie correlation of 21 cases. Radiology 1982; 144:759-66.
3. Suki WN. Renal involvement In leukemia and lymphoma. Perspect Nephrol Hypertens 1976; 3:95-102.
4. Rubin BE. Computed tomography in the evaluation of renal lymphoma. J Comput Assist Tomogr 1979; 3:759-64.
5. Choyke PL, Kressel HY, Pollack HM, Arger PM, Axel L, Mamourian AC. Focal real mass: magnetic resonance imaging. Radiology 1984; 152:471-7.
6. Semelka RC, Hrlcak H, Stevens SK, Finegold R, Tomei E, Carrol PR. Combined gadolinium enhanced at fat saturation MR imaging of renal masses. Radiology 1991; 179:803-9.