



Primary renal lymphoma in an immunocompetent patient

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ABSTRACT

Renal lymphoma is rarely primary, but its diagnosis is critical because it requires specialized medical treatment. We present the case of a 59-year-old man who was admitted to the hospital for a painful left renal mass revealed by isolated chronic low back pain. A clinical examination revealed left lumbar tenderness. A non-lymphoma Hodgkin's type B was discovered during a renal biopsy. As part of the extension workup, a PET scan was performed, which revealed no secondary location, and the patient underwent chemotherapy. Following the start of chemotherapy, a complete remission was observed, as well as a reduction in the size of the kidney.

1. Introduction

Lymphomas are uncommon cancers (5% of cancers). They are distinguished by the fact that they are derived from the hematopoietic system.

The digestive tract, skin, bone marrow, and the ear, nose, and throat are the most common extranodal localizations (ENT). Primary renal involvement, in contrast to disseminated lymphoma infiltration, is extremely uncommon.

With the help of a literature review, we present a rare case of giant primary renal lymphoma in an immunocompetent patient and discuss diagnostic, therapeutic, and prognostic aspects.

2. Medical observation

Mr. A.M. is a 59-year-old man with no comorbidities and a long-term smoker (40 packs per year). The patient was seen for an isolated left lower back ache that has been bothering him for the past two months. An awake, eupneic patient with a blood pressure of 13/7 mm Hg and normoclorinated conjunctiva was found on clinical examination.

The urogenital exam revealed left lumbar pain without any other physical signs, and the prostate was judged to be 40 g soft.

Renal function was normal biologically, with urea at 0.4 g/L and creatinemia at 11 mg/L. The hemoglobin and white blood cell counts were both within normal ranges (Hb: 14 g/dl, WBC: 7400 elements/mm³).

A uroscanner revealed a rounded, iso dense left medio-renal and inferior polar mass exerting a mass effect on the pelvis and in close contact with the spleen and the left psoas muscle without invading the renal vascular pedicle, measuring 12.5 cm in antero-posterior diameter, 9 cm in transverse diameter, and extending over nearly 15 cm in height with left latero-aortic adenopathies.

The uro-MRI revealed a lesion process measuring 16 × 13 cm and extending over 13 cm (Fig. 1), with hyposignal in T1 and heterogeneous signal in T2. This process encompasses the left renal pedicle, which remains permeable, infiltrates the lumbar head of the psoas, and comes into direct contact with the spleen, implying a lymphomatous origin.

In light of the diagnostic uncertainty and following a multidisciplinary consultation meeting, a renal biopsy was performed, the results of which revealed a type B non-Hodgkin's lymphoma (Fig. 2).

As part of the extension workup, a PET scan was requested, which revealed a hypermetabolic left renal tumor process with a volume of 1484 cm³ and no suspicious secondary metabolic foci at the thoracic or bone levels (Fig. 3).

The R-CHOP protocol was followed for the patient's treatment sessions (R: Rituximab, C: Cyclophosphamide, H: DoxorubicinHydrochloride, O: Vincristine Sulfate, P: Prednisone).

A follow-up PET scan was requested two months later, which revealed a moderately hypermetabolic left renal lesion with a decrease in kidney size. (Good response to chemotherapy).

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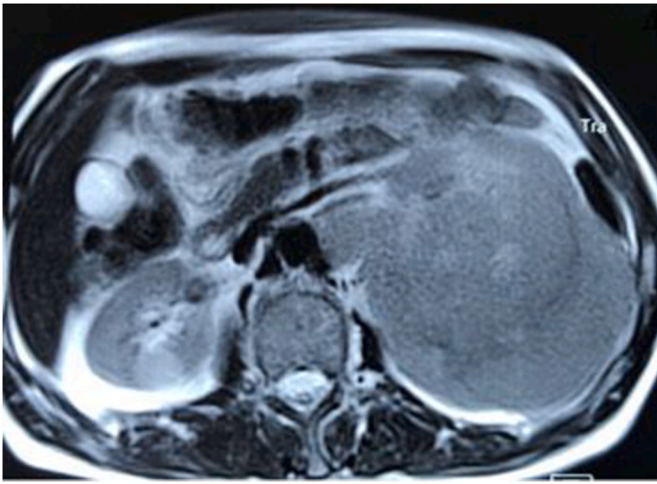


Fig. 1. A lesion process measuring 16 × 13 cm and extending over 13 cm, with hypointense in T1 and heterogeneous signal in T2, encircling the left renal pedicle.

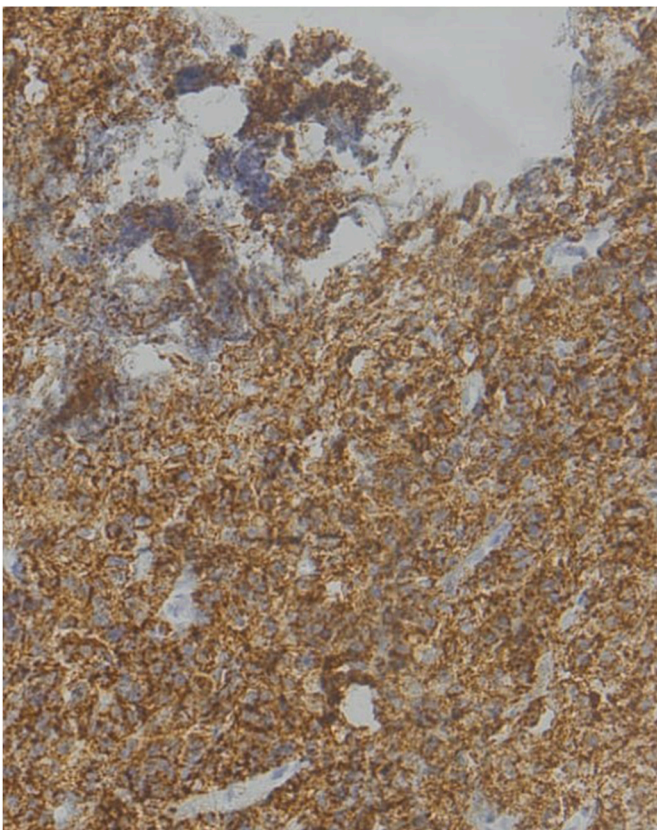


Fig. 2. Immunohistochemical image showing diffuse CD20 expression confirming the B phenotype of the lymphocytes.

3. Discussion

Lymphomas are malignant lymphatic system tumors. They manifest a malignant proliferation of lymphoid tissue cells and are classified as Hodgkin lymphomas and non-Hodgkin malignant lymphomas. Non-

lymphomas Hodgkin's of type B are the most common (85%) and almost the only ones with urogenital involvement.

There are two distinct entities, each with a different prognosis. Lymphomas of high malignancy, which are most commonly represented by diffuse large cell B lymphomas, and lymphomas of low malignancy. Lymphoma in the kidney can be primary, extra lymph node, or lymph node with secondary renal dissemination. Renal primary lymphoma is uncommon, accounting for only 0.7% of all extra lymph node lymphomas.¹

Because the kidney does not contain lymphoid tissue, the renal localization was initially hotly debated. Pathophysiological hypotheses have been proposed, such as the formation of lymphoid follicles from a renal parenchymal inflammatory process or parenchymal invasion from renal capsule lymphatics.²

According to the literature, the average age of diagnosis is 60 years. Criteria for the diagnosis of renal lymphoma include: increased renal volume without obstruction, absence of extrarenal lymphomatous involvement, absence of another cause of renal failure, histological evidence, and regression of symptomatology after treatment.

The average age of diagnosis, according to the literature, is 60 years. Increased renal volume without obstruction, absence of extrarenal lymphomatous involvement, absence of another cause of renal failure, histological evidence, and regression of symptomatology after treatment are all criteria for the diagnosis of renal lymphoma.

Compression of the renal artery may cause arterial hypertension, while infiltration of the renal vein or inferior vena cava causes nephrotic syndrome or anuria.¹

Ultrasound is particularly useful in the radiological diagnosis of hydronephrosis and its follow-up after specific treatment. On CT, lymphomas are most commonly seen as a dense mass of tissue, but they can also be hypodense without calcification or necrosis.

Although CT and MRI are the most commonly used examinations for extension assessment and follow-up, some teams now recommend PET scan for early detection of other extra-renal lymphomatous localizations and follow-up during the remission phase.³

Only a renal biopsy can confirm the presence of a primary renal lymphoma. The main differential diagnosis is renal adenocarcinoma, and the nephrectomy specimen is often the only one that confirms the positive diagnosis.

There are several treatment options for renal lymphoma. Some authors recommend surgical or radiotherapy treatment for low-grade primary renal lymphoma, whereas monochemotherapy can be used for high-grade primary renal lymphoma.⁴

According to studies, improvement in renal function and reduction in kidney size can be seen within one to four weeks of chemotherapy treatment. However, the prognosis remains bleak, with a nine-month survival rate.⁵ Our patient benefited from the chemotherapy sessions, as evidenced by a favorable therapeutic response (decrease in kidney size). In contrast to some published studies, the prognosis was favorable.

4. Conclusion

Although primary renal lymphoma is uncommon, it must be recognized and treated in order to avoid complications (renal failure, hematuria due to excretory tract rupture) or secondary localization.

Renal biopsy confirms the diagnosis and allows for the avoidance of an invasive surgical procedure in a disease where medical treatment is sufficient.

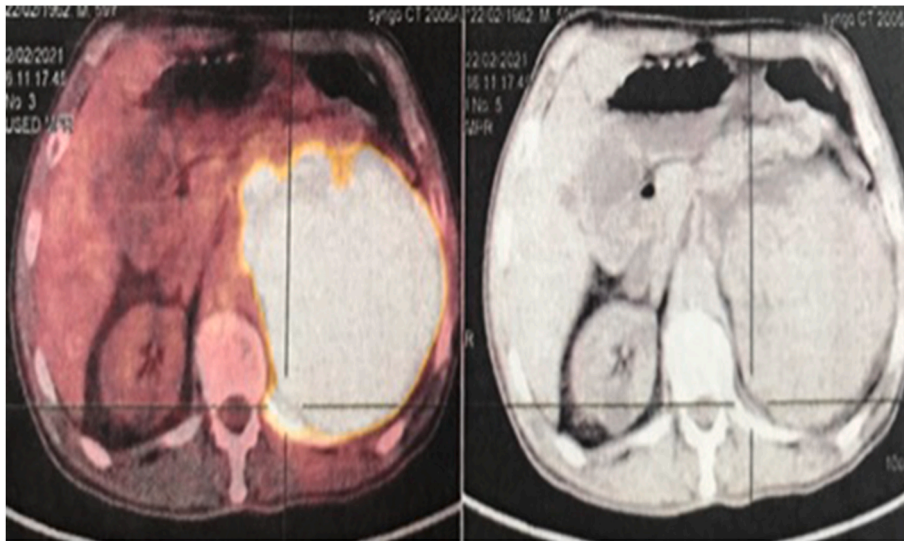


Fig. 3. A 1484 cm³ hypermetabolic left renal tumor process.

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