Case 10225

Eurorad ••

Renal lymphoma

Published on 11.07.2012

DOI: 10.1594/EURORAD/CASE.10225 ISSN: 1563-4086 Section: Uroradiology & genital male imaging Area of Interest: Kidney Procedure: Diagnostic procedure Imaging Technique: Ultrasound Imaging Technique: CT Imaging Technique: MR Special Focus: Lymphoma Case Type: Clinical Cases Authors: Luís Brito de Azevedo, Pedro Cordeiro, Rosa Cruz Patient: 71 years, female

Clinical History:

A 71-year-old female patient, with hypertension and oesophageal hiatus hernia, is admitted to the ER with a febrile syndrome of unknown origin.

Imaging Findings:

Ultrasound was performed, defining the presence of multiple hypoechoic nodules (Fig. 1). CT shows multiple hypodense and low contrast enhancement lesions (Fig. 2). The findings on MR are overlapping (Fig. 3).

Surgical biopsy is performed and the histological result was: high-grade mitotic centroblastic B-cell lymphoma (CD20, CD10).

The patient starts chemotherapy, with complete remission. **Discussion:**

BACKGROUND: Isolated renal lymphoma is rare, since the kidney lacks lymphoid tissue. Secondary involvement is more frequent, occurring in up to one third of autopsies of patients with lymphoma. Some authors believe that this is the only form of renal involvement, questioning the existence of primary lymphoma. Kidney lymphoma would represent haematogenous metastases or direct invasion of the tumour, resulting in different types of renal lymphoma presentation: multiple nodules (the most frequent), solitary mass, renal invasion from contiguous retroperitoneal disease, peri-renal disease and diffuse infiltration.

CLINICAL PERSPECTIVE: Non-Hodgkin lymphoma is the most frequent type with renal involvement. Symptoms are vague and usually present in advanced stages of the disease – pain; haematuria, hypertension, renal vein thrombosis, obstructive uropathy.

IMAGING PERSPECTIVE: US - Usually, the first detection exam of renal mass - hypoechogenic; Doppler - reduced vascularization of the mass; echo-guided biopsy (preferred, does not involve radiation; real-time manipulation). CT - Definition of renal lesions and extension to adjacent anatomical structures; usually hypodense lesions; CT guided biopsy. MR - Sensitivity and specificity equal to CT; useful if iodinated contrast is contraindicated; hypointense signal on T1; hypo/iso-signal on T2.

PET-CT - It will take major role as a routine technique for evidence of metabolic activity/anatomical detail, with the

possibility of earlier detection.

OUTCOME: Depending on histological type; therapeutic options are limited to chemotherapy.

TAKE HOME MESSAGE: Clinically asymptomatic until advanced stages; multiple differential diagnoses; biopsy is usually required.

Differential Diagnosis List: Renal lymphoma, metastasis, renal infarction, pyelonephritis, extramedullary haematopoiesis, primary neoplasms

Final Diagnosis: Renal lymphoma

References:

José Gastão Rocha de Carvalho; Jean Rodrigo Tafarel; Wilson Beleski de Carvalho; Ana Paula de Azambuja; Elicéia Soraia Zenaro; Rodrigo Bendlin (2006) Acute renal failure as first clinical presentation of Burkitt's renal lymphoma. J. Bras. Patol. Med. Lab v. 42 • n. 3 • p. 179-183 •

Sheth S, Ali S, Fishman E (2006) Imaging of Renal Lymphoma: Patterns of Disease with Pathologic Correlation. RadioGraphics 26, 1151-1168. (PMID: <u>16844939</u>)

Figure 1



Description: Nodular lesions in both renal poles. Origin: Serviço Radiologia - HDES

Figure 2



Description: Multiple hypodense and low contrast enhancement renal lesions, with diffuse distribution. **Origin:** Serviço de Radiologia - HDES



Description: Multiple hypodense and low contrast enhancement renal lesions, with diffuse distribution. **Origin:** Serviço de Radiologia - HDES

Figure 3



Description: Multiple renal pseudo-nodular areas. Origin: Serviço de Radiologia - HDES