

CT Demonstration of Peripelvic and Periureteral Non-Hodgkin Lymphoma

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Abdominal CT is often performed for the staging of lymphoma. Retroperitoneal lymphadenopathy is the most common abnormality identified, but various extranodal sites of lymphomatous involvement have been reported, especially in non-Hodgkin lymphoma [1-8]. Renal involvement is not rare, but peripelvic or periureteral involvement in the absence of renal parenchymal involvement or contiguous abdominal adenopathy is extremely unusual. We present two recent patients with non-Hodgkin lymphoma who did show these findings.

Case Reports

Case 1

A 44-year-old man noted an enlarged right cervical lymph node 8 weeks before admission. Excisional biopsy showed nodular poorly differentiated lymphocytic lymphoma. Laboratory evaluation including bone-marrow biopsy was normal. Physical examination was normal, with clinically insignificant axillary and inguinal nodes palpable. Chest CT confirmed small axillary nodes, but was otherwise normal. Abdominal/pelvic CT showed a soft-tissue mass surrounding the left midureter without left hydronephrosis (fig. 1). No other abdominal abnormality was found; specifically, there was no adenopathy. The patient denied previous urologic problems. CT-directed aspiration biopsy of tissue adjacent to the left ureter revealed lymphoma. Systemic chemotherapy was initiated.

Case 2

A 75-year-old man was found to have an irregular-appearing left-upper-pole renal contour at excretory urography. Abdominal CT showed a minimally enhancing mass surrounding the left renal pelvis (fig. 2) without contiguous adenopathy. Aspiration biopsy suggested lymphocytic lymphoma, and at surgery, there was induration of the peripelvic fat without a definite soft-tissue mass. Nodular, poorly differentiated lymphocytic lymphoma of the renal pelvis was found without renal parenchymal involvement.

Discussion

Detection of extranodal non-Hodgkin lymphoma has been greatly improved with the use of CT. CT detection of lymphoma involving the adrenal glands, pancreas, extrahepatic bile ducts, abdominal wall, and peritoneum, among other sites, has been recently reported [4, 5, 7, 8]. Renal parenchymal involvement in non-Hodgkin lymphoma is well demonstrated using CT and may appear as parenchymal mass(es), focal or diffuse infiltration, or engulfment by contiguous retroperitoneal adenopathy [1-3, 6]. Peripelvic and periureteral lymphomatous involvement may occur when lymphoma spreads through the renal capsule or extends from adjacent retroperitoneal adenopathy [2].

Peripelvic and periureteral lymphoma in the absence of renal parenchymal involvement or contiguous abdominal adenopathy is unusual. To our knowledge, this is the first reported case of isolated periureteral lymphoma detected by CT. In addition, we found only one prior report of peripelvic lymphoma without renal involvement [2]. The lack of contiguous disease and the extranodal sites of involvement in our patients are features more typical of non-Hodgkin lymphoma than Hodgkin disease.

Percutaneous aspiration biopsy is less often used in the diagnosis of lymphoma than in the diagnosis of carcinoma. However, aspiration biopsy was performed in both cases and was extremely helpful. In case 1, a positive diagnosis of lymphoma was made using aspiration biopsy, and therapy was initiated. In case 2, surgical confirmation of the tentative diagnosis of lymphoma made by aspiration biopsy was necessary before therapy could be instituted.

Lymphoma should be included in the differential diagnosis of a soft-tissue mass surrounding the renal pelvis or ureter, even in the absence of renal parenchymal abnormality or abdominal adenopathy. Aspiration biopsy may prove or strongly suggest the diagnosis of lymphoma.

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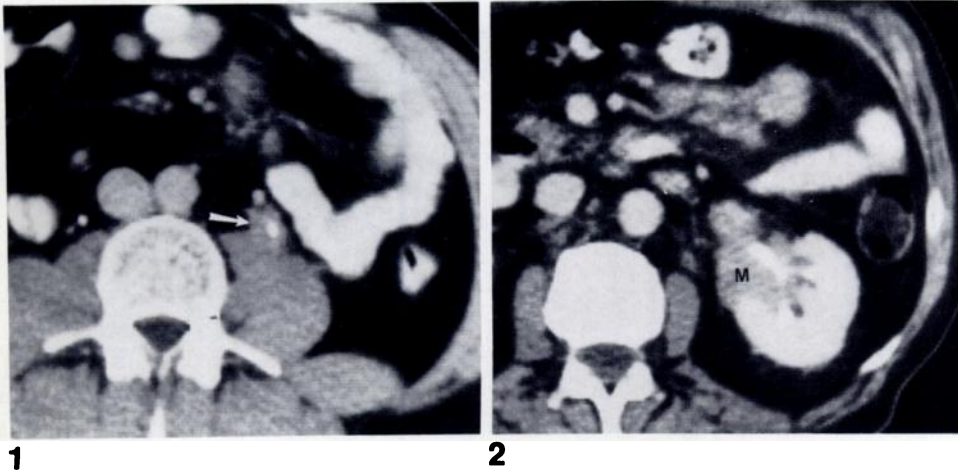


Fig. 1.—Case 1: poorly differentiated lymphocytic lymphoma. CT scan: thickened periureteral soft tissue (arrow) without contiguous adenopathy.

Fig. 2.—Case 2: poorly differentiated lymphocytic lymphoma. CT scan: mass (M) compresses left renal pelvis without renal parenchymal abnormality or contiguous adenopathy.

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