

# Burkitt's lymphoma of the ileum with renal cell carcinoma

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The rate at which non-Hodgkins lymphoma and renal cell carcinoma occur together is higher than expected.<sup>1-4</sup> We report a case of Burkitt's lymphoma (BL) of the ileum accompanied by renal cell carcinoma. We review the literature to highlight this rare presentation, and we outline a treatment protocol.

## Case report

A 24-year-old man presented with recurrent lower abdominal pain, abdominal distension and vomiting for 5 months. He was found to have a large mass occupying the left lower abdomen. On rectal examination, there was luminal narrowing with rectal mucosal sparing. Computed tomography (CT) (Fig. 1, Fig. 2) revealed a 20-cm mass, which seemed to

arise from small bowel, and enlarged retroperitoneal lymph nodes. There was also a hyperdense, round lesion measuring 2 cm in the superior pole of the left kidney. This appeared to be solid on ultrasonography, suggesting a renal cell carcinoma.

CT-guided biopsy specimens of both the bowel mass and the renal lesion were obtained. The former was reported as high-grade non-Hodgkins lymphoma, possibly BL, but findings from the latter specimen were inconclusive.

At laparotomy, a tumour measuring 30 × 20 cm was found, possibly arising from the sigmoid colon or ileum. In the upper pole of the left kidney, there was a solid lesion measuring 2 × 2 cm. The patient underwent anterior resection, with anastomosis of a segment of ileum and a

partial left nephrectomy. His postoperative recovery was uncomplicated.

Histopathological evaluation showed a high-grade non-Hodgkins lymphoma, consistent with BL, of the small bowel and mesenteric lymph nodes, with tumour cells positive for CD20 and CD10 and negative for Bcl-2. The MIB-1 labelling index was 100%, indicating a very high proliferation rate. The left partial nephrectomy specimen showed renal cell carcinoma Fuhrman grade 2.

The patient received chemotherapy for BL and was disease-free at follow-up 2 years later.

## Discussion

Patients with renal cell carcinoma seem to be at high risk for the development of

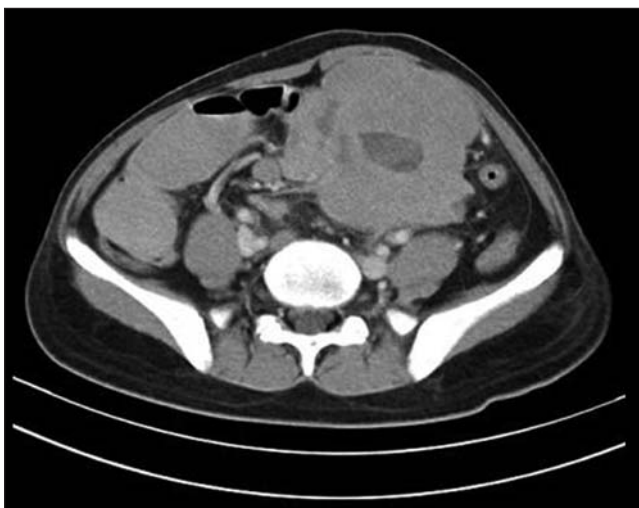


FIG. 1. Contrast-enhanced computed tomography scan showing a circumferential small bowel mass occluding the lumen.



FIG. 2. Contrast-enhanced computed tomography scan showing a left renal mass.

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Accepted for publication July 25, 2007

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subsequent or simultaneous primary tumours such as malignant melanoma, cancer of the prostate and bladder and non-Hodgkins lymphoma.<sup>5</sup> The incidence of co-occurring renal cell carcinoma and non-Hodgkins lymphoma is higher than expected,<sup>1-3</sup> especially within the first year after diagnosis of the first primary tumour. Most of these non-Hodgkins lymphomas are diffuse large cell lymphomas, 85% of which are of the B-cell type and 15% of which are of the T-cell type. When renal cell carcinoma and non-Hodgkins lymphoma occur in the same patient, there is a male preponderance and an increased likelihood of the lymphoma being extranodal.<sup>4</sup> Potential common etiologic factors include environmental factors, genetic disposition and possible immune dysregulation as well as closer scrutiny of these patients or a combination of these factors.<sup>3,4</sup>

Percutaneous biopsy of a renal mass is often unnecessary because it often has a characteristic clinical presentation or radiologic findings. Renal lymphoma is important to include in the differential diagnosis of a renal mass because it is a systemic disease and treatment is nonsurgical. Primary renal non-Hodgkins lymphoma is a rare disease, defined as arising primarily in the renal parenchyma, not resulting from invasion of an adjacent lymphomatous mass. It is usually of B-cell lineage. Differentiating renal lymphoma

from carcinoma, especially in the case of a unilateral lesion, may be an indication for CT-guided biopsy. If a hematologic malignant lesion is found on biopsy, nephrectomy can be avoided and the patient can be treated with systemic chemotherapy.

In our patient, the renal mass was associated with an intestinal mass of uncertain nature. Hence, CT-guided needle biopsy of the renal mass was also done. Because the biopsy findings were inconclusive and both renal cell carcinoma and secondary renal lymphoma were a possibility, we chose nephron-sparing surgery.

Histopathological examination of the surgical specimen revealed BL of the ileum associated with renal cell carcinoma. This lymphoma was considered to be a BL because the patient was young, the abdominal tumour was bulky and CD20 and CD10 positive, the MIB-1 labelling index was 100% and Bcl-2 was negative.

This is the first case of BL of the ileum accompanied by renal cell carcinoma to be reported.

### Conclusions

When a patient with non-Hodgkins lymphoma is found to have a radiologically malignant-appearing renal lesion, the possibilities could be renal lymphoma or

a coexisting renal cell carcinoma. It is necessary to know the histopathology of the renal lesion because secondary renal lymphoma is a systemic disease and treatment is nonsurgical. Conversely, surgical resection, when possible, is the treatment of choice for renal cell carcinoma because the disease is resistant to chemotherapy and radiotherapy.

**Competing interests:** None declared.

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