Concurrent RCC with tuberculous para-aortic lymphadenopathy: A pleasant surprise

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Cite as: *Can Urol Assoc J* 2015;9(3-4):E210-2. http://dx.doi.org/10.5489/cuaj.2439 Published online April 13, 2015.

Abstract

A middle-aged man with end-stage renal disease presented with biopsy-proven left renal cell carcinoma (RCC) and extensive lymphadenopathy on ultrasound/magnetic resonance image. He and his family were counselled on his poor prognosis based on imaging findings, which showed multiple enlarged lymph nodes, appearing metastatic. He underwent laparoscopic radical nephrectomy along with lymph node dissection. Biopsy revealed RCC with all tuberculous lymph nodes. It was a surprise for the patient and treating clinician as the lymph node involvement was a poor prognostic factor for RCC.

Introduction

The association of tuberculosis and renal cell carcinoma (RCC) is uncommon.¹ While the incidental discovery of RCC in a tuberculous kidney is well-described,² the discovery of tuberculous lymph nodes after radical nephrectomy for RCC is exceptional. We describe a rare case of RCC with extensive para-aortic lymphadenopathy of tubercular etiology managed laparoscopically. To the best of our knowledge, this is the first such case report.

Case report

A 44-year-old man, known hypertensive and end-stage renal disease, presented with a history of loss of weight and loss of appetite for the last 2 months. He had an abdominal ultrasound which revealed a left renal mass with large multiple para-aortic lymph nodes. Fine needle aspiration biopsy was done outside and revealed RCC. A magnetic resonance image was done at our centre and showed a left mid polar mass of $4.5 \times 3.2 \times 2.8$ cm with large multiple

para-aortic, pre-aortic and inter-aorto caval lymph nodes associated with renal vein thrombus (Fig. 1, Fig. 2, Fig. 3). He underwent single hemodialysis followed by laparoscopic left radical nephrectomy with lymph node dissection extending from renal hilum to the bifurcation of aorta. During lyphadenectomy it was noticed that the lymph nodes were matted together and adhered to great vessels as well as to retroperitoneal tissues. Postoperative recovery was smooth, but the patient had increased drain output and lymphorrhea which settled in 6 days. Histopathological examination revealed Type 1 papillary RCC (Fuhrman s nuclear grade 2), pathologic stage, pT1b, N0, Mx without lymphovascular invasion. There were 22 lymph nodes in the specimen and all lymph nodes showed caseating tubercular lymphadenitis with no evidence of metastasis (Fig. 4).

He was started on anti-tuberculous treatment postoperatively. His follow-up ultrasound at 3 and 6 months did not reveal any recurrence of disease. He is planned for renal transplant once he is disease-free for the next 2 years.

Discussion

RCC comprises 2% to 3 % of malignant neoplasms in adults. About 20% to 30% of patients with RCC present with metastatic disease,³ but this ranges from 3% in surgical series to 63.6% in autopsy series.³ Of these patients with metastatic disease, historically 40% have distant metastases only without evidence of lymph node involvement, 50% have both distant metastases and lymph node involvement, and about 3% to 10% present with lymph node involvement only.⁴⁻⁷

When lymph node dissection is performed, a number of studies have shown that positive lymph nodes have an independent adverse effect on outcome, irrespective of other variables.⁸⁻¹⁰ Patients with node-positive disease have 5-year survival rates ranging from 5% to 35%.¹¹



Fig. 1. A magnetic resonance image (T2W) showing left renal mass.

Conclusion

This case highlights the fact that extensive lymphadenopathy associated with RCC on imaging may not necessarily be metastatic in origin. Tuberculosis should be kept in mind especially in developing countries where tuberculosis is widely prevalent.

Competing interests: The authors declare no competing financial or personal interests.



Fig. 2. A magnetic resonance image transverse section showing large left para-aortic lymph nodes.

This paper has been peer-reviewed.

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Fig. 3. A magnetic resonance image showing left renal mass with extensive lymphadenopathy.



Fig. 4. Low power (4×) magnification of lymph node showing multiple granulomas with few Langerhan's giant cells. One granuloma is showing central caseation.

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