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(CASE REPORT)

Secondary urinary bladder involvement by diffuse large B-cell lymphoma presenting with obstructive acute kidney injury: A case study

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Abstract

Objective: To describe a rare case of secondary urinary bladder involvement by diffuse large B-cell lymphoma presenting as an infiltrative bladder mass with bilateral obstructive uropathy.

Methods: This single anonymized case study was prepared from clinical, radiological, endoscopic, histopathological and immunohistochemical data obtained during routine patient care. Written informed consent for publication was obtained.

Results: A 71-year-old woman with a remote history of treated breast cancer presented with lower urinary tract symptoms, gross hematuria, bilateral flank pain, asthenia and weight loss. Computed tomography showed severe bilateral ureterohydronephrosis caused by an approximately 5-cm infiltrative bladder mass involving both ureteral orifices. Bilateral nephrostomy was performed, followed by transurethral resection. Histopathology showed sheets of large atypical lymphoid cells, and immunohistochemistry demonstrated diffuse CD20 expression with a Ki-67 proliferation index of 80%, supporting diffuse large B-cell lymphoma. Staging revealed supra- and infradiaphragmatic lymphadenopathy and a suspicious subhepatic peritoneal lesion, consistent with secondary bladder involvement.

Conclusion: Secondary bladder lymphoma is a rare but clinically important differential diagnosis of an infiltrative bladder mass. Histopathology with immunohistochemistry is essential when bladder carcinoma and lymphoma cannot be distinguished clinically or radiologically.

Keywords: Urinary Bladder; Diffuse Large B-Cell Lymphoma; Secondary Bladder Lymphoma; Bladder Mass; Obstructive Uropathy

1. Introduction

Lymphomatous involvement of the urinary bladder is rare [1,2]. Most reported bladder lymphomas represent secondary manifestations of systemic disease, whereas primary bladder lymphoma is distinctly uncommon [1,3]. Clinical manifestations such as hematuria, irritative lower urinary tract symptoms, flank pain and hydronephrosis overlap substantially with those of urothelial carcinoma, making preoperative distinction difficult [2,4,5]. The objective of this case study is to describe secondary urinary bladder involvement by diffuse large B-cell lymphoma (DLBCL) presenting as an infiltrative bladder mass with bilateral obstructive uropathy.

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2. Materials and methods

This is a single-patient anonymized case study. Clinical information, laboratory findings, computed tomography data, cystoscopic findings, histopathological results, immunohistochemical findings and staging results were reviewed from routine clinical care. The diagnosis was based on histopathological examination of transurethral resection specimens supported by immunohistochemistry. Written informed consent was obtained from the patient for publication of the case and accompanying images. According to local institutional policy, formal ethics committee approval was not required for publication of a single anonymized case study.

3. Results and discussion

A 71-year-old woman with a history of breast cancer treated in 2006 and in complete remission was referred for obstructive acute kidney injury. She reported a 3-month history of lower urinary tract symptoms, gross hematuria, bilateral flank pain, asthenia and weight loss.

On admission, she was conscious and hemodynamically stable. Her general condition was poor, with an Eastern Cooperative Oncology Group performance status of 4 and conjunctival pallor. Vaginal examination revealed an infiltrated bladder base fixed on the left side. Laboratory testing showed renal impairment, with a serum creatinine level of 48.8 mg/L.

Contrast-enhanced computed tomography demonstrated severe bilateral ureterohydronephrosis related to an approximately 5-cm infiltrative bladder mass involving both ureteral orifices (Figure 1). Initial urinary drainage was achieved with bilateral nephrostomy. The patient then underwent transurethral resection of the bladder lesion. Endoscopically, the tumor appeared as a solid infiltrative trigonal mass extending to the left bladder wall and bladder neck (Figure 1).

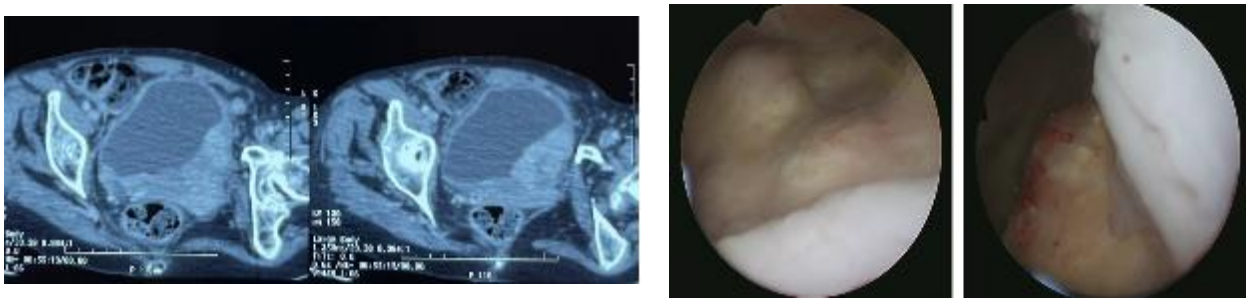

Figure 1 Radiologic and cystoscopic appearance of the lesion. Left: contrast-enhanced computed tomography showing an infiltrative bladder mass with bilateral obstructive uropathy. Right: cystoscopic view showing a solid infiltrative trigonal lesion extending to the left bladder wall and involving the ureteral orifices

Microscopic examination showed diffuse proliferation of large atypical cells with scant basophilic cytoplasm and hyperchromatic nuclei arranged in sheets and nests. Immunohistochemistry demonstrated diffuse CD20 expression and a Ki-67 proliferation index of 80%, establishing the diagnosis of DLBCL involving the bladder (Figure 2). Extension work-up revealed supra- and infradiaphragmatic lymphadenopathy and a suspicious subhepatic peritoneal lesion, supporting secondary rather than primary bladder lymphoma. The patient was subsequently referred for hematologic management and received rituximab-based systemic chemotherapy.

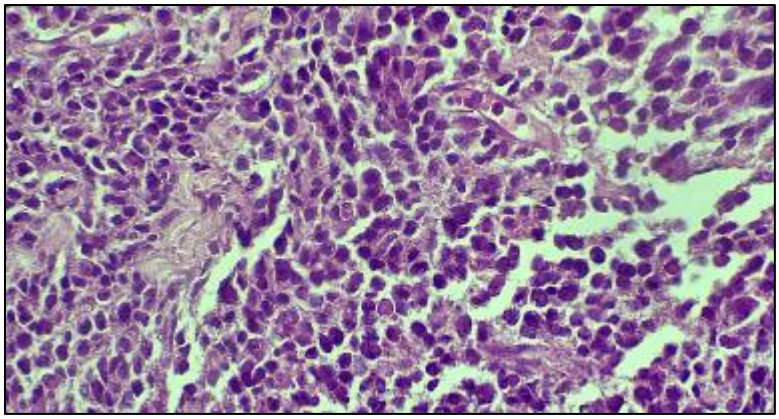

Figure 2 Histopathological appearance of bladder involvement by diffuse large B-cell lymphoma (hematoxylin and eosin stain, original magnification x40)

Bladder lymphoma should be considered in the differential diagnosis of an atypical bladder mass, particularly when imaging shows diffuse wall infiltration or when systemic disease is suspected. In the largest classic clinicopathological series, secondary bladder lymphoma was frequently associated with diffuse large cell histology and had a less favorable outcome than primary mucosa-associated lymphoid tissue lymphoma [1]. Reviews and case-based syntheses also show that bladder lymphoma usually affects older adults and often presents with hematuria, irritative symptoms, pain or obstructive uropathy, closely simulating urothelial carcinoma [2-5].

This case is clinically instructive because the radiological and cystoscopic appearances strongly suggested muscle-invasive bladder carcinoma. As in most reported cases, definitive diagnosis was established only after histopathological and immunohistochemical assessment [2,4,5]. Demonstration of a B-cell phenotype with CD20 positivity and a high Ki-67 index was essential to distinguish lymphoma from poorly differentiated urothelial carcinoma and other malignant bladder tumors.

Once secondary bladder involvement by DLBCL is recognized, management should be driven by disease stage and the patient's general condition. Local urologic procedures remain useful for diagnosis and relief of obstruction, but definitive treatment is primarily systemic. Current lymphoma guidelines support rituximab-based chemoimmunotherapy as the backbone of treatment for DLBCL, adapted to stage, fitness and extranodal disease burden [6-8].

List of abbreviations

- CT: Computed tomography
- DLBCL: Diffuse large B-cell lymphoma
- ECOG: Eastern Cooperative Oncology Group

4. Conclusion

Secondary urinary bladder involvement by DLBCL is rare and may closely mimic infiltrative bladder carcinoma. This case highlights the need for tissue diagnosis with immunohistochemistry in patients presenting with a bladder mass and bilateral obstructive uropathy. Early recognition is important because treatment and prognosis differ substantially from those of urothelial carcinoma.

Compliance with ethical standards

Acknowledgments

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Disclosure of conflict of interest

The authors declare that they have no financial or non-financial conflicts of interest related to this work.

Statement of ethical approval

According to local institutional policy, formal ethics committee approval was not required for publication of a single anonymized case study. This work was conducted in accordance with the ethical principles of the Declaration of Helsinki. Written informed consent was obtained from the patient

Statement of informed consent

Written informed consent was obtained from the patient for publication of this case study and accompanying images.

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References

[1] Kempton CL, Kurtin PJ, Inwards DJ, Wollan P, Bostwick DG. Malignant lymphoma of the bladder: evidence from 36 cases that low-grade lymphoma of the MALT-type is the most common primary bladder lymphoma. Am J Surg Pathol. 1997;21(11):1324-1333. doi:10.1097/00000478-199711000-00007.

[2] Venyo AKG. Lymphoma of the urinary bladder. Adv Urol. 2014;2014:327917. doi:10.1155/2014/327917.

[3] Bates AW, Norton AJ, Baithun SI. Malignant lymphoma of the urinary bladder: a clinicopathological study of 11 cases. J Clin Pathol. 2000;53(6):458-461. doi:10.1136/jcp.53.6.458.

[4] Simpson WG, Lopez A, Babbar P, Payne LF. Primary bladder lymphoma, diffuse large B-cell type: case report and literature review of 26 cases. Urol Ann. 2015;7(2):268-272. doi:10.4103/0974-7796.152947.

[5] Zanelli M, et al. Primary diffuse large B-cell lymphoma of the urinary bladder: update on a rare disease and potential diagnostic pitfalls. Curr Oncol. 2022;29(2):956-968. doi:10.3390/curroncol29020081.

[6] Tilly H, et al. Diffuse large B-cell lymphoma (DLBCL): ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up. Ann Oncol. 2015;26 Suppl 5:v116-v125. doi:10.1093/annonc/mdv304.

[7] Eyre TA, et al. Lymphomas: ESMO Clinical Practice Guideline for diagnosis, treatment and follow-up. Ann Oncol. 2025;36(11):1263-1284. doi:10.1016/j.annonc.2025.07.014.

[8] Zelenetz AD, et al. NCCN Guidelines Insights: B-Cell Lymphomas, Version 3.2025. J Natl Compr Canc Netw. 2025;23(10):e250048.