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Oncology

A case of mucosa-associated lymphoid tissue lymphoma of the bladder successfully treated with radiotherapy

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Introduction

Primary lymphoma of the bladder is extremely rare. It represents less than 0.2% of all extranodal primary lymphomas and is usually extranodal marginal-zone B cell lymphoma of mucosa-associated lymphoid tissue (MALT).[1] We herein report a case of primary MALT lymphoma of the bladder in a 77-year-old female patient who was successfully treated with radiotherapy. This lymphoma was not diagnosed earlier because it coincided with chronic cystitis.

Case presentation

A 77-year-old female had suffered from pollakisuria, voiding pain, and gross hematuria and had presented to several hospitals. As a result, she had been diagnosed with chronic cystitis and treated for 2 years with antibiotics and anticholinergics. She was referred to our hospital because her symptoms had not improved.

At the initial presentation, the patient still had pyuria and urine culture was positive for levofloxacin-resistant *Escherichia coli*. She was given cefcapene, but pyuria and gross hematuria persisted. Cystoscopy revealed reddish edematous mucosa on the posterior wall of the bladder (Fig. 1A) and pelvic MRI showed mass lesions on the anterior and posterior walls (Fig. 1B). Cytological examination was negative for urothelial cancer.

For pathological diagnosis, the bladder masses were resected transurethrally. Microsections revealed small, monotonous lymphocyte-like tumor cells with irregularly shaped nuclei (Fig. 2A). Immunohistochemical study demonstrated that the tumor was positive for CD20 (Fig. 2B), CD79a (Fig. 2C), and bcl-2 (Fig. 2D). On the basis of these results, the patient was diagnosed as having MALT lymphoma of the bladder. Because fluorodeoxyglucose-positron emission tomography (FDG-PET) showed that the lymphoma was confined to the bladder, the patient was treated with radiotherapy (30.6 Gy in 17 equal daily fractions).

The patient's post-treatment course was uneventful. For 5 years she has remained asymptomatic and neither cystoscopy (Fig. 3A) nor pelvic MRI (Fig. 3B) has shown evidence of recurrence.

Discussion

Primary MALT lymphoma originating in the bladder is rare,[1] and its etiology is unclear because there is normally no lymphoid tissue in the bladder. 22–40% of primary lymphomas of the bladder are preceded by chronic cystitis,[2] as was the lymphoma in the present case. Chronic inflammation may be a precursor because in some cases there are lympho-epithelial lesions and reactive lymphoid follicles.[3]

The most common presenting symptoms of bladder lymphoma are weight loss, fatigue, hematuria, dysuria, nocturia, pollakisuria, and suprapubic or abdominal pain.[3] Making a definitive diagnosis of bladder lymphoma is therefore especially difficult when the lymphoma coincides with active or recurrent cystitis because the symptoms are similar. In the present case, the patient had for 2 years been treated to no avail as having chronic cystitis.

In the present case, bladder masses were detected by pelvic MRI. MALT lymphoma of the bladder frequently presents as a large

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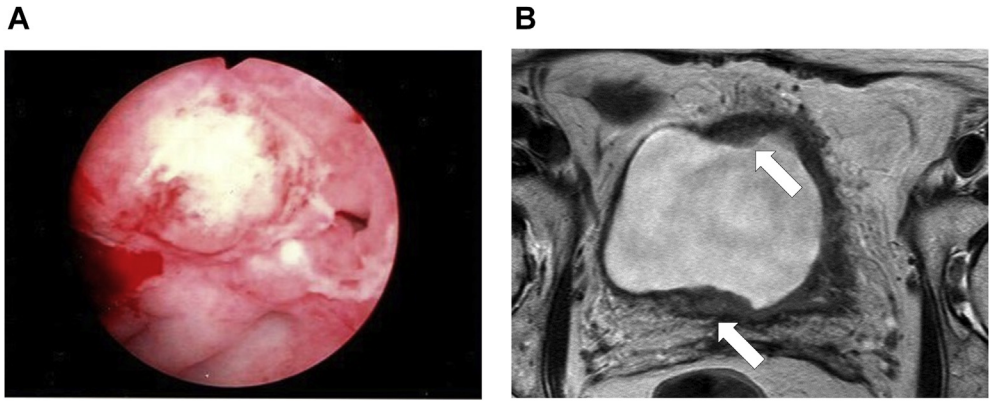

Fig. 1. Cystoscopy and MRI at presentation. Cystoscopy showed reddish edematous mucosa on the posterior wall of the bladder (A). MRI showed mass lesions on the anterior and posterior walls (B, arrows). T2-weighted image.

sessile solitary tumor and does not typically involve the entire bladder wall, whereas urothelial carcinoma tends to be multiple and involve any part of the bladder.[4] It is difficult to distinguish MALT lymphoma from urothelial carcinoma radiologically, however, so pathological examination is needed for definitive diagnosis.[4]

Treatment of bladder lymphoma depends on its clinical stage. FDG-PET and pelvic MRI are used to rule out disseminated disease.[5] Because our patient had Stage I disease (i.e., the lymphoma was confined to the bladder), she was treated with radiotherapy. Unfortunately there is no generally recommended optimal treatment of primary MALT lymphoma of the bladder. For localized lymphoma, cystectomy is also a treatment option.[5] Radiotherapy is the most appropriate treatment for organ preservation unless the patient is of reproductive age.[5]

The optimal follow-up strategy for patients with MALT lymphoma of the bladder is also not clearly defined. After the radiotherapy in our case, cystoscopy was performed every 3 months and pelvic MRI was performed every 6 months. This follow-up schedule was well tolerated by the patient.

Finally, MALT lymphoma of the bladder, although a rare disease, should be considered as one of the differential diagnoses when we treat patients with cystitis-like symptoms, especially those with symptoms of chronic cystitis refractory to antimicrobial therapies.

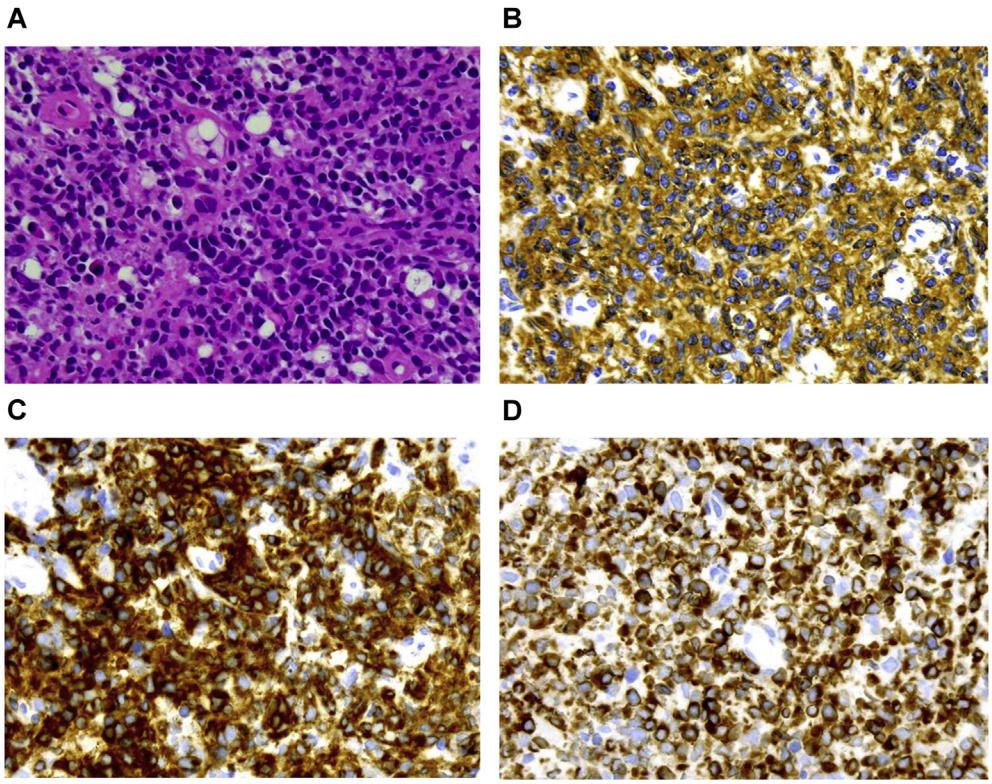

Fig. 2. Pathological findings. Microscopic examination showed proliferation of small atypical lymphoid cells infiltrating bladder submucosa, which is consistent with mucosa-associated lymphoid tissue lymphoma (A, hematoxylin-eosin; magnification: x 200). Immunohistochemically, the tumor cells were positive for CD20 (B, magnification: × 200), CD79a (C, magnification: × 200), and bcl-2 (D, magnification: × 200).

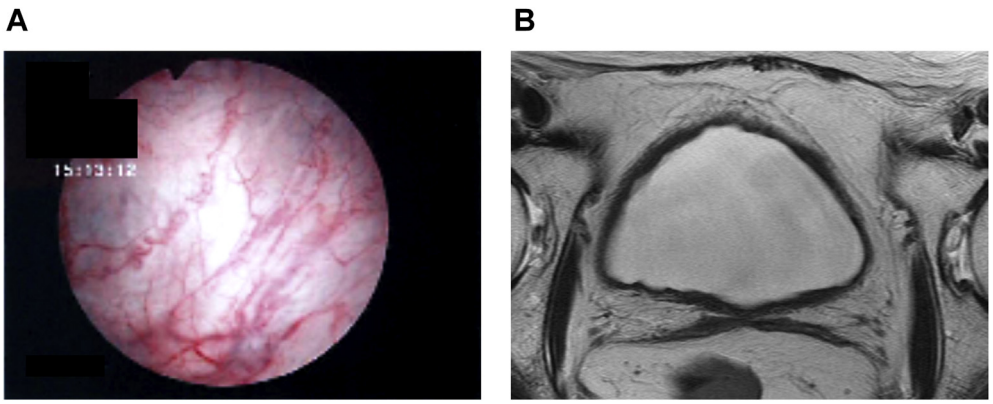

Fig. 3. Cystoscopy and pelvic MRI 5 years after the radiotherapy. Cystoscopy after the treatment showed normal bladder mucosa (A). MRI showed no bladder mass (B). T2-weighted image.

Conclusion

We reported a case of primary MALT lymphoma of the bladder that coincided with chronic cystitis and was successfully treated with radiotherapy.

Consent

Written informed consent was obtained from the patient for publication of this case report.

Conflict of interest

We have no conflict of interest to declare.

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