Urology Case Reports 37 (2021) 101623

Contents lists available at ScienceDirect

Urology Case Reports

journal homepage: http://www.elsevier.com/locate/eucr

Oncology

Mucosa-associated lymphoid tissue lymphoma of the bladder: Case report

Atsushi Yamamoto [a,*], Ryoma Nishikawa [a], Rina Hosoda [b], Hiromi Omura [b], Takayuki Tanaka [b], Kuniyasu Muraoka [a]

[a] Department of Urology, Tottori Prefectural Central Hospital, 730 Ezu, Tottori, 680-0901, Japan
[b] Department of Hematology, Tottori Prefectural Central Hospital, 730 Ezu, Tottori, 680-0901, Japan

ARTICLE INFO

Keywords:
NHL
MALT lymphoma
MALT lymphoma of the bladder
TUR-BT
CD20

ABSTRACT

We report the cases of patient with primary mucosa-associated lymphoid tissue (MALT) lymphoma of the bladder who successfully treated with local radiation therapy after transurethral resection of the bladder tumor. She maintains good activity of daily living without relapse. We recommend this strategy for localized MALT lymphoma of the bladder, because it provide better quality of life for elderly patients.

Introduction

Malignant lymphoma is a general term for malignant tumors originating from cells that make up lymphoid tissue, and they can be divided into two broad categories: Hodgkin lymphoma and non-Hodgkin lymphoma (NHL). NHL occurs in various organs, and the most common sites of NHL are the tonsil (24.8%), stomach (13.4%), and pharynx (11.6%).[1] NHL can also occur in the mucosa-associated lymphoid tissue (MALT). Primary malignant lymphoma of the bladder is an extremely rare disease, accounting for 0.2% of extra nodal malignant lymphomas and 0.2% of primary bladder tumors. To date there is no established standard treatment strategy for bladder MALT lymphoma.

Case presentation

Case

In February 2019, a 74-year-old woman visited her family doctor with a chief complaint of residual urine. She was referred to our hospital for further examination. Ultrasonography (US) showed a 4 cm mass in the right wall of the bladder (Fig. 1A and B). Her urine cytology was shown to be normal, but cystoscopy revealed a nodular lesion on the outer side of the right ureteral orifice. Abdominal contrast-enhanced computed tomography (CT) and pelvic contrast-enhanced magnetic resonance imaging demonstrated a mass lesion with contrast in the posterior wall of the bladder. The patient underwent transurethral resection for bladder tumor (TUR-BT) in April 2019 without any complications. Histopathology showed infiltration of small-to-medium-sized lymphoid cells. Plasmacytic differentiation and lymphoepithelial lesions were present. Immunohistochemical studies revealed that tumor cells were positive for CD20, and BCL2, and negative for CD3, CD5, CD10, and CylinD1 (Fig. 2A and B). Postoperative positron emission tomography-CT (PET-CT) showed no 2-fluoro-2-deoxy-d glucose (FDG) uptake except in the bladder, and the patient was diagnosed with primary MALT lymphoma of the bladder (stage IE). She received radiation therapy with 24Gy for bladder starting in September 2019. She is still alive one year after surgery without recurrence.

Discussion

The number of cases of primary MALT lymphoma of the bladder is small, which means that it is difficult to conduct large-scale clinical trials. Furthermore, treatment for the condition has changed over time.[2] In the past, surgical treatment, such as total cystectomy or partial cystectomy, was principally used; however, it was found that there was no difference in the recurrence rate between surgical and non-invasive treatments. Since 1990, chemotherapy or radiation therapy, which can preserve the bladder, has become the mainstay of treatment.[1]

In Japan, decisions on how to treat MALT lymphoma are also based on consideration of the clinical stage of the tumor, the presence and severity of lesions, and the clinical symptoms of each patient. For patients having localized MALT lymphoma with tumors designated as

* Corresponding author.
E-mail addresses: yamamotoat@tp-ch.jp (A. Yamamoto), nishikawar@tp-ch.jp (R. Nishikawa), hosoda-ri@tp-ch.jp (R. Hosoda), omura-h@tp-ch.jp (H. Omura), tak@tp-ch.jp (T. Tanaka), muraokak@tp-ch.jp (K. Muraoka).

https://doi.org/10.1016/j.eucr.2021.101623
Received 13 February 2021; Accepted 1 March 2021
Available online 4 March 2021
2214-4420/© 2021 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

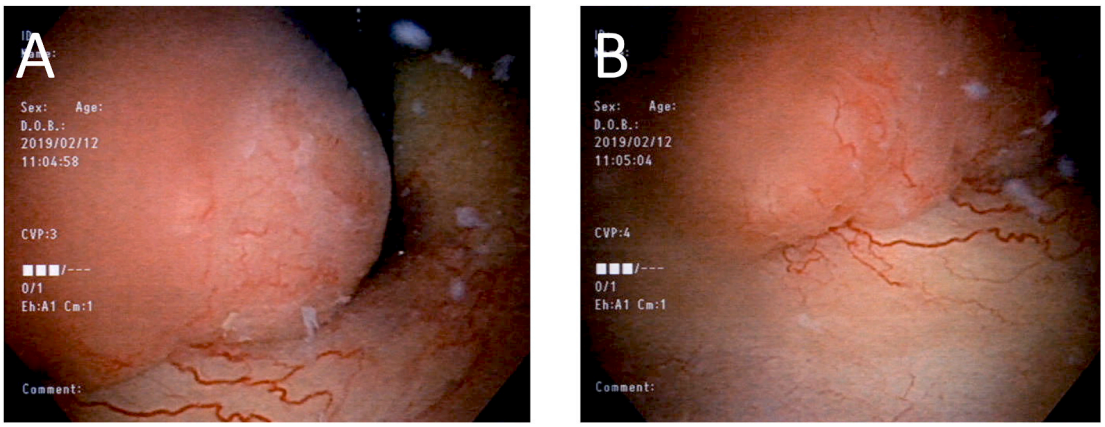

Fig. 1. (A. B) cystoscopy showed a nodular lesion on the outer side of the right ureteral orifice.

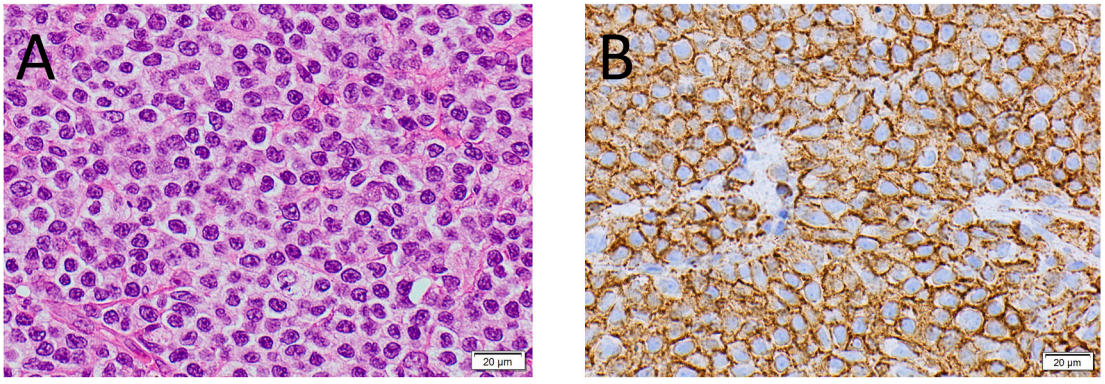

Fig. 2. (A) Hematoxylin–eosin staining of a surgical specimen demonstrated MALT lymphoma. Immunohistochemical staining demonstrated (B) CD-20 expression.

stage I or II via the Ann Arbor classification system, such as in this case, local treatment with TUR-BT or radiation therapy is the mainstay. If the tumor is resected for diagnosis and there is no residual disease, follow-up is also performed. This is because MALT lymphoma is of a low grade. If there is residual disease, additional local treatment is considered. If patients are asymptomatic, careful follow-up is also an option for patients with advanced-stage disease (classified as stage III or IV via the Ann Arbor system).

The median age of patients with indolent primary malignant lymphoma of the bladder is 74 years.[3] In developed countries with an aging population, such as Japan, patients with primary MALT lymphoma of the bladder are expected to be older. Chemotherapy can be difficult for the elderly. This is because the general health of elderly patients is likely to be worse than that of younger patients. For patients with low-grade localized primary malignant lymphoma of the bladder, such as primary MALT lymphoma of the bladder, as in this case, the treatment strategy should be as follows. First, TUR-BT should be performed to determine the histologic diagnosis. Next, PET-CT should be carried out. If there is no residual disease, the patient should be followed up, and if there is residual disease, radiation therapy should be administered. This overlapping of local treatment is likely to preserve the quality of life of patients with low-grade primary malignant lymphoma of the bladder, which is common in the elderly.

Conclusion

We present the case of primary MALT lymphoma of the bladder in elderly patients. These case suggests that based on strict staging with PET-CT, radiation therapy, in addition to TUR-BT, for the treatment of primary MALT lymphoma of the bladder may provide benefit for elderly patient's QOL.

Ethics approval

This report was approved by the Ethics Committee of Tottori Prefectural Central Hospital (reference number 2020–76).

Consent for publication

Not applicable.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Authors' contributions

AY and RN performed the surgery. AY and KM drafted the manuscript. AY and KM finalized the manuscript. All authors have read and approved the final manuscript.

Declaration of competing interest

None declared.

Acknowledgments

The authors thank the patient for allowing us to publish this case report.

References

1. Ozawa M, Suenaga S, Ishii T, Suzuki H, Tsuchiya N, Ohtake H. Primary malignant lymphoma of the bladder diagnosed by transurethral bladder tumor resection: a case report. *Jpn J Urol*. 2018;109(1):45–49. https://doi.org/10.5980/jpnjurol.109.45.
2. Xu H, Chen Z, Shen B, Wei Z. Primary bladder mucosa-associated lymphoid tissue lymphoma: a case report and literature review. *Medicine (Baltim)*. 2020;99(28), e20825. https://doi.org/10.1097/MD.0000000000020825.
3. Sellman DP, Simpson WG, Klaassen Z, et al. Characterization and outcomes of local treatment for primary bladder lymphoma: a population-based cohort analysis. *Urol Ann*. 2018;10(3):249–253. https://doi.org/10.4103/UA.UA_106_17.