□ CASE REPORT □

Primary Prostatic Lymphoma of Mucosa-Associated Lymphoid Tissue

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We present a case of primary prostatic lymphoma referring to a 57-year-old man, who was admitted with the symptom of bladder outlet obstruction, and had a history of urination difficulty for two years. The symptoms and signs were compatible with a diagnosis of benign prostatic hypertrophy (BPH). The pathology of the specimen obtained from transurethral prostatectomy showed B-cell lymphoma of mucosa-associated lymphoid tissue (MALT) type. The patient has been asymptomatic and under complete remission after completion of chemotherapy consisting of doxorubicin, cyclophosphamide, vincristine and prednisone for 6 cycles.
(Internal Medicine 37: 628–630, 1998)

Key words: B-cell lymphoma, mucosa-associated lymphoid tissue (MALT), prostate, prostatic hypertrophy

Introduction

Low-grade lymphoma of the mucosa-associated lymphoid tissue (MALT) type is now included in the Revised European-American Classification of Lymphoid Neoplasms (REAL Classification) (1). Two-thirds of MALT lymphomas are derived from the stomach (2), and many of patients have *helicobacter pylori* gastritis (3, 4). On the other hand, primary prostatic lymphoma is a rare malignancy and it is estimated that less than 100 cases have been reported in the world literature (5, 6). We report here a case of primary prostatic lymphoma of MALT type who had the history of prostatic hypertrophy. This suggests the etiology of primary prostatic lymphoma of MALT type.

Case Report

A 57-year-old man presented with the progressing symptom of bladder outlet obstruction. He had noted dysuria, nocturia, and sensation of residual urine for two years. The physical examination was unremarkable except for a firm, moderately enlarged prostate with tenderness and no lymphadenopathy. There was no abnormal laboratory data. Retrograde urethrogram and computed tomography (CT) scan suggested benign prostatic hypertrophy (BPH). Transurethral resection of the prostate was performed. Histological examination of the prostatic gland revealed many hyperplastic glands and infiltration with lymphocytes and plasma cells around the acini (Fig. 1). Moreover, there were centrocyte-like (CCL) cells, lymphatic follicles, and lymphoepithelial lesions (Fig. 2A, B). These are the features of lymphoma arising from the MALT. Immunohistochemical analysis classified it as a B-cell phenotype with selective reactivity for CD 20 antigen (Fig. 2C), and it did not express MT 1 antigen. The pathological diagnosis made was B-cell lymphoma of MALT type. Complete clinical investigation, including bone marrow biopsy, did not show any other involved site. The patient received 6 cycles of chemotherapy consisting of cyclophosphamide, doxorubicin, vincristine, and prednisone (CHOP). The patient has kept complete remission for 18 months after diagnosis.

Discussion

Primary prostatic lymphoma is a rare malignancy. The frequency is reported as 0.1% of non-Hodgkin's lymphomas, and 0.09% of prostatic neoplasms (5). We diagnosed this MALT lymphoma by morphologic features. If we studied the

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Received for publication September 5, 1997; Accepted for publication March 3, 1998
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immunohistologic and genetic features, it could be distinguished from other low grade lymphomas more certainly.

Generally, MALT lymphoma patients have a long survival, and high response rate with local treatment (surgery or radiotherapy) (2). In this case, prostatic lymphoma was resected by means of transurethral resection, thus there was a possibility of remaining of lymphoma cells at the prostate. For this reason, we gave 6 cycles of CHOP.

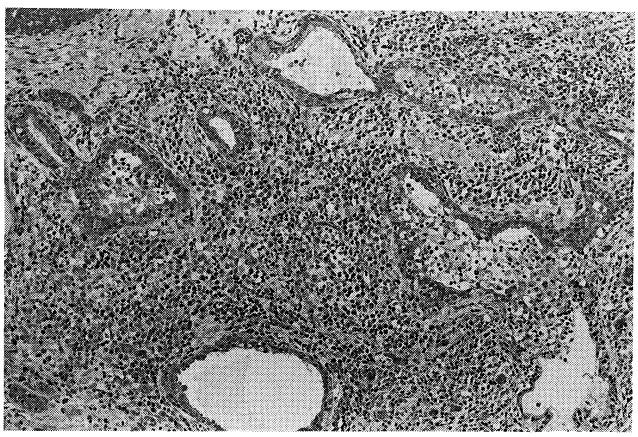

Figure 1. Hyperplastic glands and infiltration with lymphocytes and plasma cells around the acini of the prostate (HE stain, ×20).

Most MALT lymphomas are detected in the stomach, but they may also be observed in the breast, bladder, conjunctiva, kidney, liver, lung, skin, salivary glands, thyroid, and thymus (2). Many patients have a history of chronic inflammatory disorders or autoimmune disease, such as chronic gastritis (*helicobacter pylori* gastritis), Sjögren's syndrome, Hashimoto's thyroiditis, and interstitial lymphoid pneumonia (1, 2). This suggests that autoimmune disease or chronic inflammatory disorders may form the substrate for the development of lymphoma (1, 2, 4).

The present patient had noted dysuria and nocturia for two years that can be considered as symptoms of BPH. In the specimen, there were many hyperplastic glands, as well as infiltration with lymphocytes and plasma cells around the acini, supporting the presence of chronic inflammation in the prostatic glands. In this case, we consider that prostatic MALT was acquired in BPH with prostatitis, which provided the necessary background for MALT lymphoma to develop.

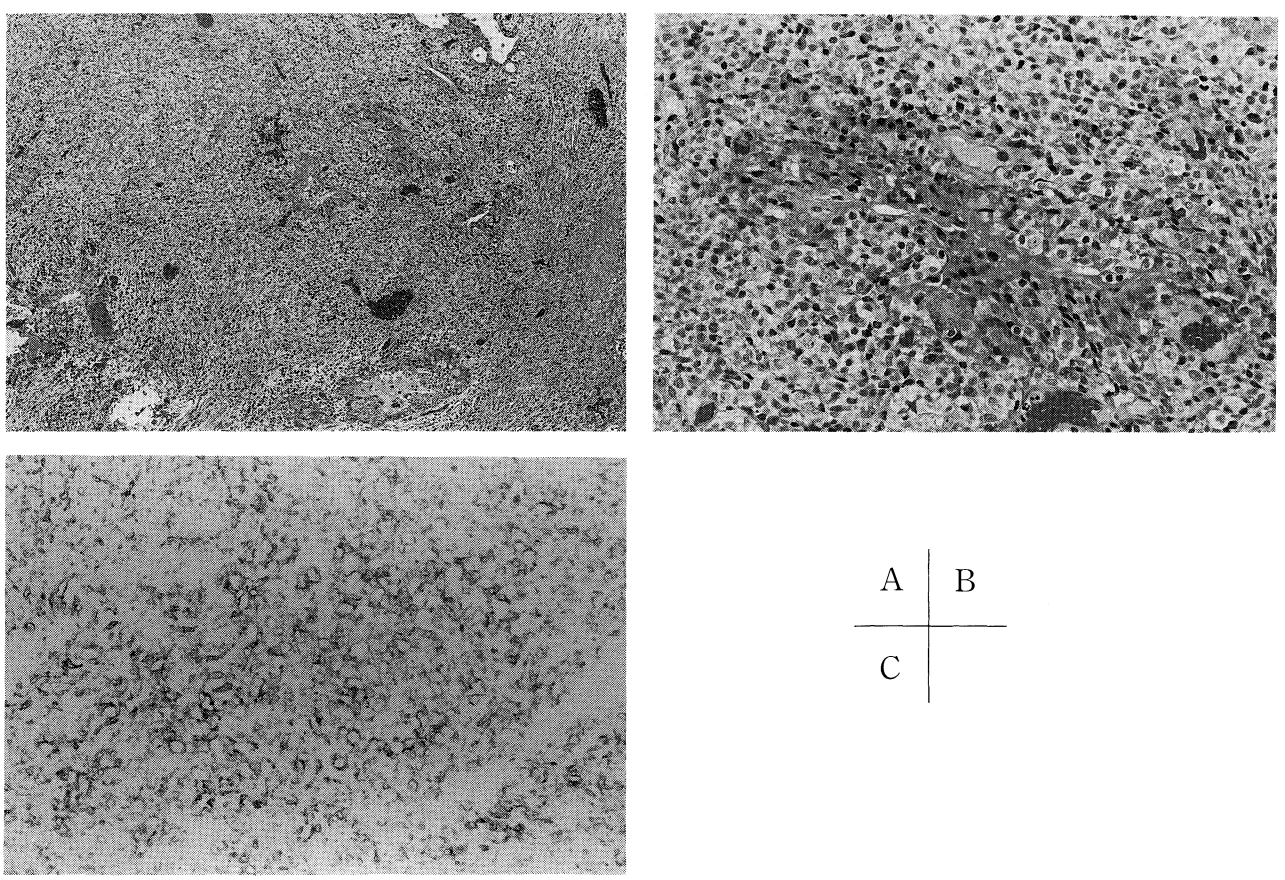

Figure 2. Pathological specimen of the prostate showing lymphatic follicles, CCL cells, lymphoepithelial lesions: (A) (HE stain, ×20), (B) (HE stain, ×80). (C) The lymphoma cells express CD 20 antigen (×100).

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