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Case Report

Malignant Lymphoma of Mucosa-Associated Lymphoid Tissue (MALT) Type Associated with Ascariasis in the Liver

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Abstract

A 57-year-old woman with a low-grade mucosa-associated lymphoid tissue (MALT) type lymphoma in the biliary system of the liver is reported. This lesion was accompanied by a long-standing biliary ascariasis in the center of the lesion. Lymphoma cells showed marginal zone distribution, lymphoepithelial lesions in the bile ducts, centrocyte-like and monocytoid features, and a B-cell phenotype. Follow-up study revealed no evidence of disease 4 years and 7 months after surgery.

Key words: MALT type lymphoma, Liver, Ascariasis

Introduction

Primary lymphomas in the liver and biliary tract are very rare and account for only 0.4% in a large serics of 1,467 cases of extranodal lymphomas[1)]. Aozasa et al. found only 69 reported cases of primary hepatic malignant lymphomas in the literature and noted that diffuse large cell B-cell lymphomas were the most common[2)]. Primary lymphomas of the biliary system are also reported to be extremely rare[3,4)], most being high-grade lymphomas[3)].

Among extranodal lymphomas, a considerable proprotion is now believed to be lymphoma of the mucosa-associated lymphoid tissue (MALT) type recently described by Isaacason and Wright[5)]. MALT type lymphomas are considered low-grade lymphomas of B-cell origin with favorable clinical course in contrast to high-grade or large cell lymphomas.

We herein report a case of low-grade lymphoma of the MALT type occrring in the biliary system of the liver which was associated with ascariasis.

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Case report

The patient was a 57-year-old housewife. In the family history, her father had diabetes mellitus, her mother had cholangiocarcinoma, and her sister had cardiac infarct. The patient had cesarean section at 31 years of age. She had been well until about 10 years ago, when she first noticed intermittent pain in the right epigastric region. A diagnosis of chronic hepatitis was made at that time, but she received no treatment. In a health check-up in February 1990, a calcified tumor was incidentally found in the right lobe of the liver by plain x-photo and computed tomography (CT). She was admitted to Kyoto University Hospital for further examination and treatment. The CT scan and the magnetic resonance imaging (MRI) (Fig. 1) revealed an irregular calcified mass in the S7 and S8 area of the right hepatic lobe. Cholangiocarcinoma was suggested as a clinical diagnosis, but reactive inflammatory process, hemangioma, and metastatic tumor were among the differential diagnosis. Blood chemistry and serology data were unremarkable except for a slight elevation of γ-GTP value and positive HBsAb. (Total protein 7.7 g/dl, albumin 4.5g/dl, total bilirubin 0.6mg/dl, GOT 28 IU/L, GPT 18 IU/L, ALP 177 IU/L, γ-GTP 54 IU/L, ChE 361 IU/L, LDH 394 IU/L, HBsAg(−), HBsAb(+), CEA(−), AFP(−)). Right lobectomy of the liver was performed on April 18, 1990. No lymph node swelling was found. Pathological

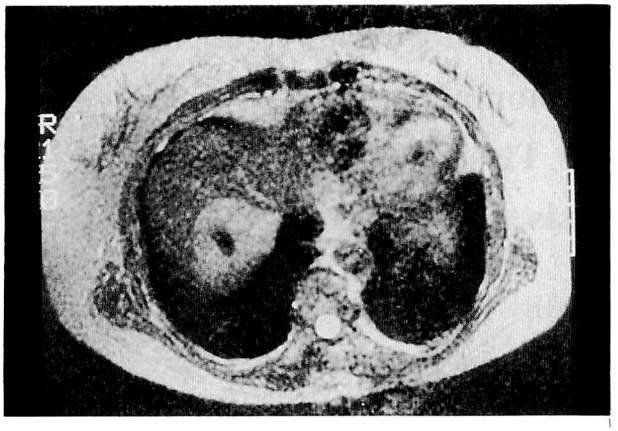

Fig. 1. T2-weighted magnetic resonance imaging scan showing a high signal of the tumor with central low signal area.

diagnosis of a low-grade lymphoma of the MALT type associated with ascariasis was made. No further treatment was given. The patient was well at a regular check-up on November 7, 1994, 4 years and 7 months after surgery.

Pathology

The resected tumor was located in the S7 and S8 area. It was well circumscribed and measured 6.5 × 7 × 8cm. The cut surface was solid, elastic hard and yellowish white with penetration of blood vessels and bile ducts and a central calcification (Fig. 2). Microscopic examination showed multiple nodular configuration of lymphoid cell proliferation containing germinal centers (Fig. 3). Proliferating cells were located outside the reactive germinal centers which were accompanied by remnants of mantle zones in some areas. These cells showed atypical centrocyte-like and monocytoid features (Fig. 4, 5). The so-called lymphoepithelial lesion was also found easily in the interlobular bile ducts (Fig. 4). Immunohistochemical studies revealed that the tumor cells were L26 (CD 20, DAKO, Japan) positive and CD3 (polyclonal, DAKO, Japan) negative. In the calcified area, there was a dead parasite with thick-shelled oval eggs mesuring 40−45×50−55 μm without operculum, which was most probably ascaris (Fig. 6). From these findings, we concluded this was a low-grade MALT type lymphoma of the biliary system in

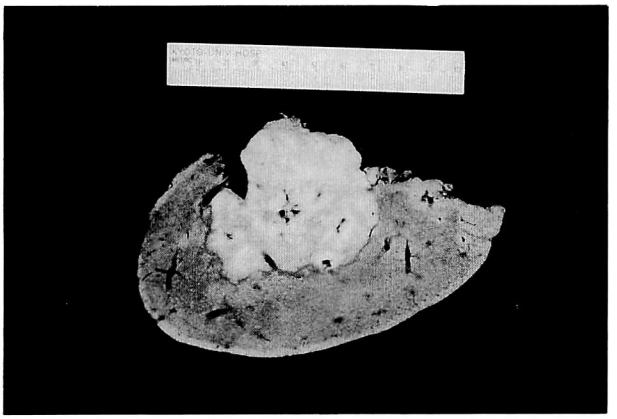

Fig. 2. Gross picture of the tumor.

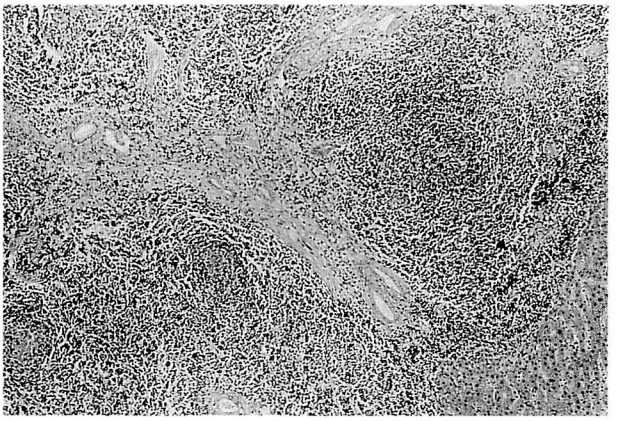

Fig. 3. Low power view of the tumor. Nodular configuration of lymphoid proliferation. (H & E, × 70)

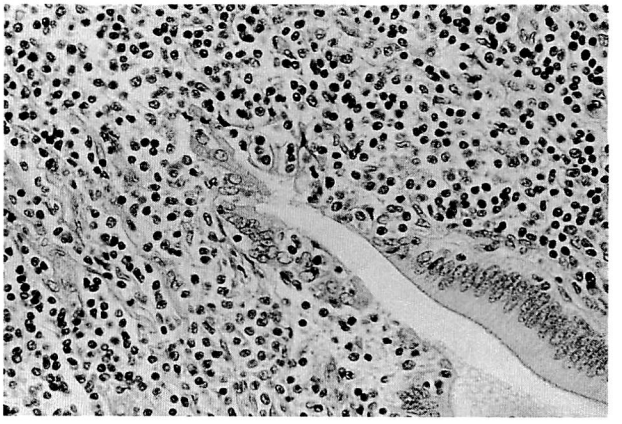

Fig. 4. Centrocyte-like lymphoma cells showing lymphoepithelial lesions. (H & E, × 350)

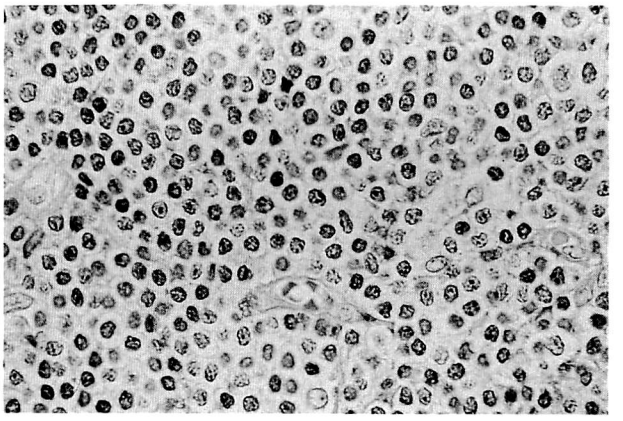

Fig. 5. Lymphoma cells with monocytoid features. (H & E, × 700)

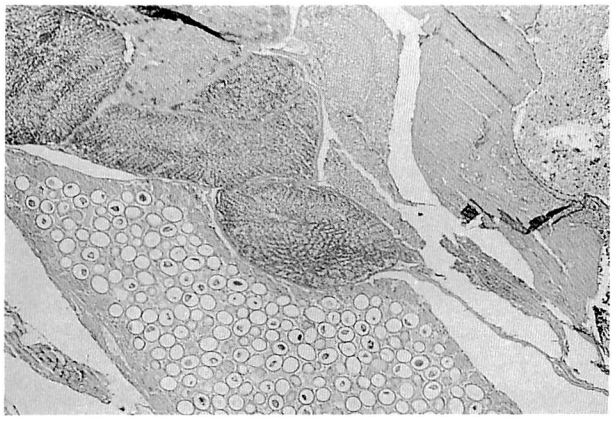

Fig. 6. A parasite (Ascaris) with eggs in the center of the lymphoma. (H & E, × 70)

the liver which developed in a setting of biliary ascariasis.

Discussion

Malignant lymphomas in the liver and biliary system are very rare[1-4]. If they occur, most such lymphomas are large cell or high-grade lymphomas[2,3]. To our knowledge, there is no prior report of low-grade MALT type lymphoma in the hepatic biliary system, although a few cases have been reported in the gallbladder[3,4]. The concept of MALT type lymphoma presented by lsaacson and Wright has now been well accepted[4-7]. The present case fulfils the histological criteria of low-grade MALT type lymphoma[5]. This case is peculiar in that a long-standing biliary ascariais was found in the center of the lymphoma. We have no idea about the relationship between the lesions, but it is very reasonable to speculate that the long-standing inflammatory process caused by ascaris was a forerunner of the lymphoma, since MALT type lymphomas occurring in the stomach, thyroid and salivary gland are thought to have some histogenetic relationship to the chronic inflammatory lesions often seen in the background of these lymphomas[8-10].

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