CASE REPORT

Primary lymphoma of the gallbladder accompanied by cirrhosis: CT and MRI findings

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SUMMARY

A 60-year-old patient with cirrhosis due to chronic hepatitis B was admitted to the hospital for routine controls. An ultrasonographic examination demonstrated a soft tissue mass originating from the gallbladder. A CT scan and after 3 months a dynamic liver MRI were performed for the possible diagnosis. Based on these imaging studies, laparoscopic cholecystectomy was performed. The histopathological examination diagnosed non-Hodgkin's lymphoma.

BACKGROUND

Primary lymphoma of the gallbladder is an extremely rare disease. There may be an association between hepatitis virus infections and the occurrence of lymphoma.

CASE PRESENTATION

A 60-year-old patient with cirrhosis due to chronic hepatitis B had been followed up for 2 years and was admitted to the hospital for routine controls. An ultrasonographic examination demonstrated a soft tissue mass, sizing 14 mm and originating from the gallbladder. Tumour markers were not studied except for α -fetoprotein that was not elevated. A CT was performed because of suspected malignancy, showing a soft tissue mass inside the gallbladder with a density of 60 Hounsfield units (HU) after administration of iodinated contrast medium (figure 1). After 3 months, a dynamic liver MRI was performed. The mass had increased to a size of 31 mm, showed an intermediate signal intensity on T2-weighted images (figure 2) and contrast enhancement (figure 3). Based on these imaging

studies, laparoscopic cholecystectomy was performed. The histopathological examination diagnosed a non-Hodgkin's lymphoma.

A potential association between hepatitis viruses and non-Hodgkin's lymphoma has been previously reported.^{1 2} Furthermore, primary lymphoma is a rare differential diagnosis in malignancies of the gallbladder.³ To the best of our knowledge, however, no case of primary gallbladder lymphoma accompanying liver cirrhosis has been previously reported in the literature. We raise the question of whether hepatitis B has been the reason not only for the liver cirrhosis but also for the gallbladder lymphoma in this case.

INVESTIGATIONS

An ultrasonographic examination, a CT and a dynamic liver MRI demonstrated a soft tissue mass originating from the gallbladder.

DIFFERENTIAL DIAGNOSIS

Primary lymphoma is an extremely rare differential diagnosis in malignancies of the gallbladder, and the associated radiological findings are not well described in the literature. A method for preoperative diagnosis has not been established. All cases in previous reports were diagnosed after surgery by pathological examination. The differential diagnosis should include adenocarcinoma with an incidence of 98% of the gallbladder malignancies.

TREATMENT

Laparoscopic cholecystectomy was performed.

Figure 1 Contrast-enhanced CT scan demonstrating a soft tissue mass with density of 60 Hounsfield units (HU).

Figure 2 Axial T2-weighted MRI showing the lesion with intermediate signal intensity.

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Figure 3 Contrast-enhancement of the lesion on T1-weighted MRI.

OUTCOME AND FOLLOW-UP

The patient died of cirrhosis.

DISCUSSION

Primary lymphoma of gallbladder is extremely rare. Normally, lymphoid tissue cannot exist in the gallbladder; thus, it is thought that malignant lymphoma of the gallbladder is related to chronic inflammation, such as chronic cholecystitis. On imaging, it is difficult to differentiate from adenocarcinoma. Because of its rarity, a method for preoperative diagnosis has not been established. Therefore, surgical resection of the gallbladder is usually performed without previous pathological examination.

Learning points

- ▶ Primary lymphoma of the gallbladder is an extremely rare disease.
- ▶ There may be an association between hepatitis virus infections and the occurrence of lymphoma.
- ▶ Lymphoma should be added to the differential diagnosis of gallbladder masses.

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Competing interests None.

Patient consent Obtained.

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