Ectopic Liver Associated with the Gallbladder

- A Brief Case Report -

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Ectopia is defined as the occurrence of normal tissue in an abnormal location. Ectopic tissue has been described in the gallbladder such as gastric mucosa, liver, pancreas and adrenal gland. Less than 30 examples of ectopic liver associated with the gallbladder have been reported in the literature, including the case described herein. We report here on a case of ectopic liver involving the gallbladder. To the best of our knowledge, this is the first such case reported in Korea.

CASE REPORT

A 66-year-old woman had a 10-day history of intermittent abdominal pain in the right upper quadrant with jaundice. Physical examination revealed a soft, but tender abdomen. On the laboratory test, the total bilirubin, direct bilirubin, aspartate aminotransferase (AST), alanine aminotransferase (ALT), alkaline phosphatase, gamma-GT and amylase were slightly elevated. An abdominopelvis computed tomography revealed a small nodule on the other side of the gallbladder bed, and this showed the same attenuation as liver (Fig. 1). The postoperative course following cholecystectomy was uneventful and the patient was discharged on the sixth hospital day. The gallbladder measured 7.0 cm long and 4.0 cm wide. The removed gallbladder showed an encapsulated serosal nodule that measured $10 \times 7 \times 4$ mm on the other side of the gallbladder bed (Fig. 2A). Histologically it was an ectopic functioning liver. This nodule had no connection with the main liver. The gallbladder showed chronic cholecystitis with several calculi. A section of the serosal nodule showed normal liver parenchyma with portal tracts and central veins (Fig. 2B, 3). There was no evidence of fatty change or cholestasis and there was no direct involvement of the muscular layer of the gallbladder. The patient is currently alive without evidence of disease relative to the gallbladder.

DISCUSSION

Ectopic liver associated with gallbladder is rare. Boyle et al. reported on one case with a previous literature review of 18 cases.¹
Sporadic cases have been reported since then.\textsuperscript{2-4} The majority of the cases of ectopic liver are attached to the gallbladder, especially at the serosal surface or in the wall. However, one case report demonstrated ectopic liver attached to the mucosal surface of the gallbladder.\textsuperscript{5} The other reported locations include the adrenal glands, pancreas, spleen, falciform ligament, pylorus, umbilicus, retroperitoneum, intrapleural, extrapleural, esophagus and pericardium.\textsuperscript{6-12}

The sizes of the gallbladder-associated ectopic livers have ranged from 0.5 cm to 1.5 cm.\textsuperscript{1} However, a 3.7-cm sized mass associated with the fundus of the gallbladder was reported.\textsuperscript{3} Sometimes liver fragments are attached to the surface of the gallbladder during performance of cholecystectomy, and especially in the area of the liver bed; these should not be mistaken for true ectopic liver tissue.

The specific findings of ectopic liver tissue are representative of the main liver. The spectrum of microscopic findings in ectopic liver includes normal parenchyma, fatty infiltration, cirrhosis and hepatocellular carcinoma.\textsuperscript{3}

The cause of ectopic liver is controversial. However, it is thought to be caused by aberrant tissue migration during embryogenic development of the liver proper.\textsuperscript{13} The hepatic diverticulum emerges from the foregut endoderm and this extends into the septum transversum. The hepatic tissue divides into a large cranial and a smaller caudal portion. The caudal portion will become the gallbladder with the cystic duct. This explains why ectopic liver is commonly present in the gallbladder.

We report here on a case of ectopic liver that was associated with the gallbladder. To the best of our knowledge, this is the first such case report in Korea.

\textbf{REFERENCES}