Abstract

Introduction

Abnormal peritoneal folds are often found in the abdomen. They may cause serious problems like obstruction of the intestine. This report discusses a case of an omento-cystic peritoneal fold in a male cadaver.

Case report

We report an omento-cystic peritoneal fold seen in an adult male cadaver. The fold extended upwards from the right end of the greater omentum to the gallbladder. It enclosed the gallbladder completely. The gallbladder was slightly larger than its normal size. The quadrate lobe was rudimentary and was represented as a small bar of hepatic tissue between the gallbladder and the fissure for ligamentum teres.

Conclusion

The knowledge of this variation may be of importance during radiological diagnosis, liver transplant surgery and laparoscopic cholecystectomy.

Introduction

Peritoneum is the largest among the serous membranes in the body and is most complexly arranged compared to any other such membranes. It forms folds called omenta, mesenteries and ligaments to support the viscera, allow their movements and to carry blood vessels to them. Most of the peritoneal folds are derived from the embryonic mesenteries. They determine the direction of the flow of fluids in the peritoneal cavity and also the spread of the diseases. Abnormal folds connecting the gallbladder to the neighbouring viscera are very rare. They may result in reducing the size and functioning of the gallbladder. Variation in the liver such as presence of additional lobes, sulci or hypoplasia of any part of the liver has been reported. We report here, the presence of an abnormal peritoneal fold attached to the gallbladder and an associated variation of the quadrate lobe of the liver. Awareness of this variation might reduce the radiological diagnostic errors and minimise the confusions during laparoscopic cholecystectomy.

Case report

During routine dissection classes for medical undergraduates, we noted an abnormal peritoneal fold (omentum-cystic fold) extending from the right end of the greater omentum to the gallbladder. Viewed from the anterior side, it appeared to be triangular (Figures 1 and 2); but as it approached the gallbladder, it totally enclosed the gallbladder within it. The fold did not carry any observable blood vessels. The gallbladder was slightly larger than its normal size and was 9 cm long and 4 cm broad. The quadrate lobe was rudimentary. It was represented as a narrow bar of liver tissue between the gallbladder and the fissure for ligamentum teres (Figure 3). These variations were found in an adult male cadaver aged 65 years, approximately.

Discussion

The development of an abnormal peritoneal fold such as the omento-cystic fold is a complex embryonic event. Usually, during the development of the mesenteries, the cranial part of the ventral mesogastrium

![Image](image_url)

**Figure 1:** Abdominal viscera covered by the greater omentum. Note the omento-cystic fold (OCF) of peritoneum extending from the greater omentum to the gallbladder. Right lobe of the liver (RLL) can also be seen.

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Case report

The greater omentum is a derivative of the dorsal mesogastrium, the fold is probably a derivative of the dorsal mesogastrium. Explanation of such a fold is lacking in the literature. Abnormal peritoneal folds might result in intestinal obstruction. There is a report on such a fold which produced a constriction on the duodenal wall. Abnormal peritoneal folds connecting the greater omentum with the falciform ligament of the liver and jejunum to the root of the mesentery have also been reported. In the present case the gallbladder was situated in the gallbladder fossa, but there are reports on floating gallbladders with mesenteries. In one of the studies performed on 27 patients, there were 13 lumbar, nine pelvic and five iliac gallbladders, with poor function in 20 of them. When gallbladder floats in a mesentery or any abnormal fold like the one being reported here, there is a high chance of volvulus formation.

Abnormality in lobes and fissures of liver has been reported. Absence of lobes or presence of additional lobes might result in clinical misdiagnosis and errors in surgery. It is extremely rare to have a total absence of any lobe of the liver. Recently, a case of total absence of quadrate lobe has been reported.

Conclusion
The present case is unique in having an omento-cystic fold and almost total absence of the quadrate lobe. Awareness of these variations may be of importance to the radiologists and surgeons to minimise the errors in radiologic diagnosis and to prevent iatrogenic injuries during liver transplant surgery and laparoscopic cholecystography.

References