Transverse gallbladder: a case report

Shobhana Medhi, Anuradha Baruah, Giriraj Kusre,

Demonstrator, Department of Anatomy, Guwahati Medical College, Guwahati, Assam.
2 Professor and Head, Department of Anatomy, Tezpur Medical College, Tezpur, Assam
3 Associate Professor, Department of Anatomy, Assam Medical College, Dibrugarh, Assam.

Abstract

Ectopic gallbladder or anomalous position of the gallbladder is a rare congenital anomaly. Knowledge and awareness of this anomaly is important as it may predispose to various gallbladder diseases and may lead to diagnostic confusion. Here we present a case of a rare variant of ectopic gallbladder - transverse or horizontal position of the gallbladder in a still born male fetus observed during routine fetal autopsy.

Key words: Ectopic gallbladder, Anomalous position

Introduction

The human gallbladder is reported to present with a wide range of anatomical variations pertaining to its size, shape, number and position. They have been reported to occur in 0.1% of the population. Abnormal gallbladders may predispose to bile stasis, inflammation and formation of gall stones. Ectopic gallbladder or anomalous position of the gallbladder seems to be one of the rare congenital anomalies of the gallbladder, its incidence being 0.1-0.7%. Gallbladder disease in an anomalous or a malpositioned gallbladder may cause diagnostic confusion. Of the different types of ectopic positions of the gallbladder, transverse or horizontal position seems to be of a rare variety with reports of only a few sporadic cases in the existing literature. We present here such a rare case of a transversely placed gallbladder observed during routine fetal autopsy.

Case report

A stillborn male fetus was dissected during routine fetal autopsy as a part of Congenital Malformation Survey in Assam Medical College, after taking the informed consent of the parents of the baby. Ethical clearance for undertaking the study was taken from the Institutional Ethical Committee. On examination of the organs of the fetus in situ, it was observed that the fundus of the gallbladder could not be localized along the inferior border of the liver. In an attempt to visualize the gallbladder, the liver was dissected out by severing its attachments with the anterior abdominal wall and the undersurface of the diaphragm. The liver along with the extra-hepatic biliary tree, the duodenum and the pancreas were dissected out en-mass and examined.

It was seen that the gallbladder was transversely placed, extending laterally from the right end of the porta hepatis, along the inferior surface of the right lobe of the liver (Fig. 1&2). The usual gallbladder fossa and the cystic notch were obliterated. Rest of the extra-hepatic biliary tree was normal. The other systems of the fetus were also found to be normal.

Discussion

The gallbladder is a pear-shaped sac lodged in a fossa on the visceral surface of the liver, between the quadrate lobe and the right lobe of the liver. It extends from near the right end of the porta-hepatis to the inferior border of the liver. Its anterior or upper surface is attached to the fossa by connective tissue, while its posterior or undersurface and sides are covered with peritoneum continued from the surface of the liver. The blind expanded end of the gallbladder, known as the "Fundus of the Gallbladder" is directed downwards, forwards and to the right and normally projects beyond the inferior border of the liver. Any position other than this can be said to be anomalous or ectopic position of the gallbladder.

There are four types of Ectopic gallbladders: (i) Intra-hepatic, (ii) Left-sided, (iii) Transverse, and (iv)
The gallbladder is seen to be placed transversely along the inferior surface of the right hepatic lobe. The usual gallbladder fossa is absent.

Retrodisplaced. Ectopic gallbladders have also been reported in the lesser omentum, the retroduodenal area, the falciform ligament, within the abdominal wall muscles, and within the thorax.

The normal gallbladder configuration is reached after a unique developmental process. Embryologically it begins as a small hollow bud which arises from the duodenum and grows upwards into the septum transversum. This bud then divides into two, of which one forms the gallbladder and cystic duct, and the other gives rise to the main mass of the glandular substance of the liver. Therefore any arrest or deviation from this developmental process or abnormal migration of the bud may result in ectopic or anomalous position of the gallbladder.

Anomalous position of the gallbladder seems to be a rare congenital anomaly. Out of 40,000 upper abdominal ultrasound examinations, only four cases of anomalous positions of the gallbladder were noted. Again, among the different varieties of anomalous positions described by different workers like Blanton et al., Chuang and Haaga et al., transverse or horizontal position seems to be a rare variant with reports of only a few sporadic cases. Gay and Chuang were among those who reported about such cases. However, though rare, these ectopic gallbladders when present may predispose to a wide range of gallbladder diseases, which can turn dangerous, as it can cause diagnostic confusion. Besides, such anomalies of the gallbladder can even result in misinterpretation of imaging findings. Therefore, awareness of the possibility of encountering such an entity is an essence during any diagnostic or surgical intervention in this region.

Conclusion

Transverse position of the gallbladder, though reported very rarely, its existence must be kept in mind during any intervention involving the gallbladder in order to avoid any diagnostic confusion.

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References


Address for Communication :
Dr. Shobhana Medhi,
C/O. Prof. Lakshi Kanta Medhi,
House No. 27, Kekora Nagar, Hengrabari,
P.O. Assam Secretariat, Guwahati - 781 006, Assam.
Mobile : 09508071438
e-mail ID : drshobhana_medhi@rediffmail.com