

Case Report

ACCESSORY CAUDATE LOBE

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ABSTRACT

The liver is the largest of the abdominal viscera, occupying a substantial portion of the upper abdominal cavity. It occupies most of the right hypochondrium and epigastrium, and frequently extends into the left hypochondrium as far as the left lateral line. Many of its anomalies go unnoticed in life as it remains asymptomatic. The aim of our study is to find out the accessory caudate lobes of liver prevailing here and their importance. Present study was conducted by keen examination of 20 cadaveric livers obtained from the routine dissection of MBBS first year students in Department of Anatomy, International medical School, Management and science University, Malaysia. Our observation shows out of 20 livers accessory lobe was found in one liver. The study is to add on the knowledge of this rare variation for the anatomists, surgeons and imaging specialists.

KEY WORDS: Accessory lobe, Caudate lobe, Liver, Congenital, Hepatic.

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INTRODUCTION

The liver is the largest abdominal viscera, occupying a substantial portion of the upper abdominal cavity, that is, right hypochondrium and epigastrium, and extending into left hypochondrium as far as left lateral line [1]. Gross abnormalities of the liver were rare inspite of its complex development [2]. These accessory lobes might be attached to the liver by a mesentery or by its parenchyma. If attached by a mesentery it must contain hepatic artery, hepatic vein, portal vein and a bile duct. Accessory lobe in some cases found in the vicinity of gallbladder or fossa or solitary lobe connected with liver by pedicle or mesentery containing vascular supply and arised

from superior surface [3].

These congenital anomalies could cause diagnostic confusion for physicians, radiologists, surgeons and anatomist during procedures like biopsy, transplantation and lobectomies.

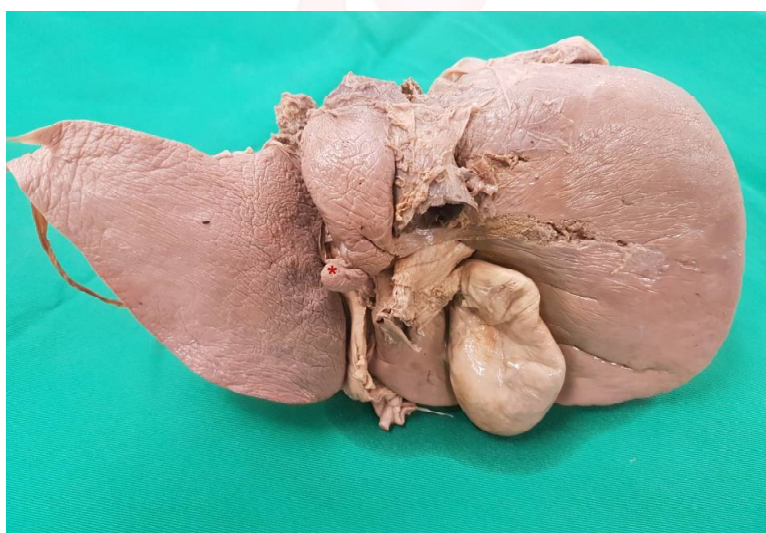
CASE REPORT

This study was conducted in the Department of Anatomy of International medical school of Management and science university, Malaysia. 20 pre-embalmed cadavers were taken for the study. The livers were carefully studied for the presence of Accessory lobes.

OBSERVATIONS

Our observation shows out of 20 livers accessory lobe was found in one liver. It was located posterior to the left of the porta hepatis and to the left of the caudate lobe separated from it by a well-defined fissure. Its size was 32mm × 15mm. This lobe is visible as a prominence on the inferior and posterior surfaces to the right of the groove formed by the ligamentum venosum. It lied posterior to the left to the porta hepatis. The attachment of falciform ligament and position of gall bladder were found normal. The caudate lobe has an accessory fissure on its lower part.

Fig. 1: shows the visceral surface of the liver with the accessory caudate lobe.



* Accessory caudate lobe

DISCUSSION AND CONCLUSION

The variations in the anatomy of human liver have been classified as congenital or acquired[5]. The congenital anomalies of liver can be divided into anomalies due to defective development and anomalies due to excessive development. Defective development of left lobe of liver can lead to gastric volvulus, whereas defective development of right lobe may remain latent or progress to portal hypertension [6]. The excessive development of liver results in the formation of accessory lobes of liver which may carry the risk of torsion [6].

Accessory lobes of the liver vary in size [7-10]. Accessory liver tissue is often connected to the main organ, although cases that are completely separate from the normal liver have been reported in the previous studies [7,11].

ectopic liver tissue, which is situated outside the liver without any relations with it, is attached to the gallbladder or intraabdominal ligaments has also been reported [7,12].

Sato et al. [13] in a series of 1800 laparoscopies described that the accessory lobe was a and accessory liver lobe being 0.7% [13]. In the present study it is found in 4.76% of cases only, whereas Muktyaz et al. [14] 14.6% of cases reported by them [14].

Dodds et al. gave a hypothesis to explain the formation of caudate liver. According to them during second trimester the ductus venosus rotates rightward as the liver enlarges, so that a small portion of the liver becomes inserted behind the mesentery for the ductus venosus. This

part of liver gives rise to caudate lobe of liver [15]. During the formation of caudate lobe, a small portion of caudate lobe may have become separated from it and included in mesentery of ductus venosus to form the accessory lobe.

An accessory lobe of liver is a congenital anomaly, which can be present as acute surgical emergency due to torsion. Due to its non-specific presentation of symptoms the torsion of the accessory lobe is commonly discovered during laparotomy, autopsy or on a radiological investigation [16,17].

The accessory lobe of liver may mimic a tumour., depending on the location, it can mimic an intra-abdominal, pelvic and intra-thoracic (particularly lung) tumors. Abnormal lobes may lead to wrong diagnosis radiographically. Fitzgerald et al. [18] have reported the presence of an additional lobe. The preoperative imaging

of this lobe had led to the misdiagnosis as a lesser omental lymphadenopathy.

Thus knowledge of such variations is important for surgeons for planning surgery involving liver, and radiologists for avoiding misinterpretation of CT and MRI.

Conflicts of Interests: None

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