Case Report

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Pedunculated hepatocellular adenoma in an accessory lobe of liver presenting as mesenteric mass: A rare case report

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Abstract:

Accessory lobe of liver is an uncommon condition and 'symptomatic heptocellular adenoma in an accessory lobe of liver' is probably the first case. A 53 year old female patient presented with acute pain abdomen with history of recurrent pain abdomen since many years. USG & plain CT scan abdomen reported as right anterior abdomen mesentric adenoma. Intraoperatively surgeon found a mesentric mass (measuring 11x9x8 cm) with attached pedicle to liver inferiorly. On histopathological examination it is surprisingly found to be hepatocellular adenoma.

Key words: Accessory lobe; Adenoma; Hepatocellular adenoma

Introduction

Anomalies of the liver are rare. Variations in the size and configuration of both lobes are common .Accessory lobes are extremely rare and may be found incidently during an operation or a post-mortem examination. Most cases with accessory liver tissue are not detected since they do not cause symptoms. However, they can give rise to various clinical symptoms like recurrent abdominal pain and impaired liver function. Usually, the diagnosis is made after laparotomy by histopathological confirmation [1].

During the last three decades liver cell adenoma and liver cell adenomatosis have emerged as new clinical entities in hepatological practice due to the widespread use of oral contraceptives and increased imaging of the liver. On review of published series there is evidence that 10% of liver cell adenomas progress to hepatocellular carcinoma, diagnosis is best made by open or laparoscopic excision biopsy [2].

We are presenting a very rare case of pedunculated hepatocellular adenoma in an accessory lobe of liver presenting as mesenteric mass.

Case report:

A 53 year old female patient presented with acute abdomen, since 7 days. She had a history of recurrent pain abdomen since many years for which no cause had been found .At admission, her vital signs and laboratory studies were normal. Her abdomen was soft, nondistended, without rigidity, but she had tenderness on palpation in the right upper quadrant.

USG & Plain CT scan reported as "Right upper anterior abdomen mesenteric desmoid".

On laparatomy surgeon saw a round mass with attached pedicle to inferior margin of left lobe of liver. Mass was surgically resected and sent for histopathological examination.

Pathological features:

Gross: An oval mass measuring 11x9x8 cm, partially capsulated. On cut section large areas of haemorrhage & lobulations were seen.

Microscopy: Hepatocytes with feathery and fatty changes are seen. Portal tract showing absence of bile duct. Variable amount of fibrosis and dilated vasculature are noted. Also areas of haemorrhages are

seen. A diagnosis of 'Hepatocellular adenoma in an accessory lobe of liver' was made.

Discussion

Anomalies of the liver are uncommon. In a laparoscopic series of 1060 cases, the incidences of ectopic liver and accessory lobe of the liver were 0.47% and 0.09%, respectively[3,4]. Accessory liver lobe may be found in various locations like gallbladder, umbilical cord, pancreas, gastro hepatic ligament, adrenal gland, oesophagus and rarely in the thoracic cavity. Most commonly, the accessory lobe is found in the infra hepatic location. Supra diaphragmatic location is rare and if present is most commonly seen in the right costophrenic angle [5]. According to COLLAN et al. [6], liver tissue continuous with the main liver is termed an accessory lobe of the liver, while liver tissue in the vicinity of the liver, without such communication, is termed ectopic liver. In most cases, these anomalies are small and asymptomatic. Therefore detection of these entities by imaging studies is rare.

There are only a few reported cases of a symptomatic accessory hepatic lobe. Most of these are diagnosed at surgery in patients presenting with nonspecific complaints of recurrent abdominal pain and impaired liver functions [1,7,8]. The presence of an accessory hepatic lobe occurs from an error in the formation of the endodermal caudal foregut in the third gestational week and segmentation of the hepatic bud [1,9].

HCAs are consistently monoclonal tumors, which have been divided up into three subtypes depending on the molecular alteration detected in the tumors: HNF1a inactivation, β-catenin activation and/or an acute inflammatory response [10]. These molecular features are closely related to clinical and pathological characteristics, and one of the most critical correlations is the higher risk of malignant transformation for β-catenin activated HCA cases. Moreover, various risk factors, such as oral contraception and obesity, are associated with HCA occurrence and may collaborate with constitutional genetic predisposition related to HNF1a or CYP1B1 germline mutations [10].

Hepatocellular adenoma (HCA) is a benign neoplasm that arises in a normal liver and is composed of cells that closely resemble normal hepatocytes. When multiple (usually >10) adenomas are present, the condition has been called 'liver adenomatosis' [11].HCA typically developed in women in the reproductive age group (15–45 years), nearly always associated with oral contraceptive steroid use [11,12]. The exact mechanism by which adenomas are produced is not known, but experimental evidence suggests that sex hormones are promoters rather than initiators of hepatocellular neoplasms [11].

The tumours often bulge from the surface of the liver and occasionally are pedunculated. They may measure up to 30 cm in diameter, although the majority are 5–15 cm(10).The adenomas are more often symptomatic and can lead to severe and even fatal peritoneal hemorrhage. Surgical excision is usually advised for HCA to avoid possible rupture and haemorrhage and because of the risk of malignant transformation [11,12]

Most adenomas are not specifically diagnosed at ultrasonography (US) and are usually further evaluated with computed tomography (CT) or other imaging modalities. Color Doppler US may help differentiate hepatocellular adenoma from focal nodular hyperplasia. Multiphasic helical CT allows more accurate detection and characterization of focal hepatic lesions. Hepatocellular adenomas are typically bright on T1-weighted magnetic resonance images and predominantly hyperintense relative to liver on T2-weighted images [13]. Histopathological confirmation after surgical resection is needed.

Conclusions

The incidence of accessory hepatic lobes is rare & hepatocellular adenoma in an accessory hepatic lobe is even much more rare. No cases have been reported in the English literature. An accessory lobe is usually of little clinical importance, as it is asymptomatic. However, symptoms are reported such as abdominal pain that recurs over several years.

Considering mass with attached pedicle to liver, gross & microscopic features we are reporting a very rare case of symptomatic hepatocellular adenoma in an accessory lobe of liver.

Figure A: Mesentric mass with attached pedicle

Figure B: Fresh specimen showing haemorrhage & lobulated areas

Figure C (40X): Variable amount of fibrosis & dilated vasculature

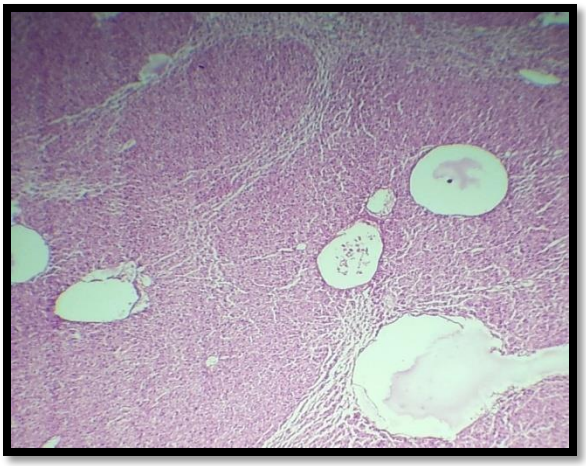


Figure D (400X): Feathery degeneration

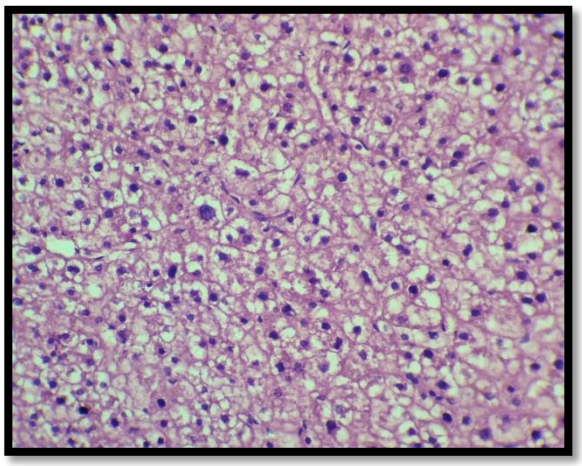


Figure E (400X): Fatty change in hepatocytes

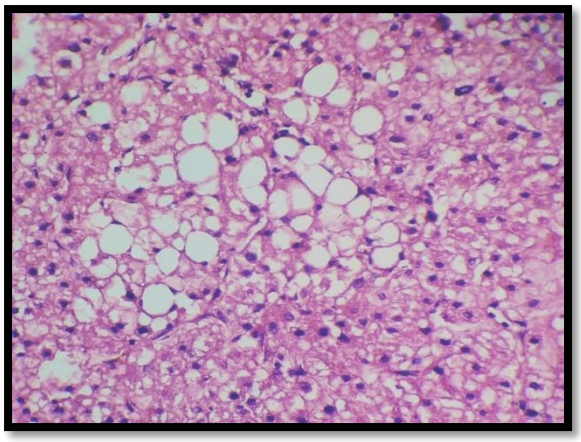
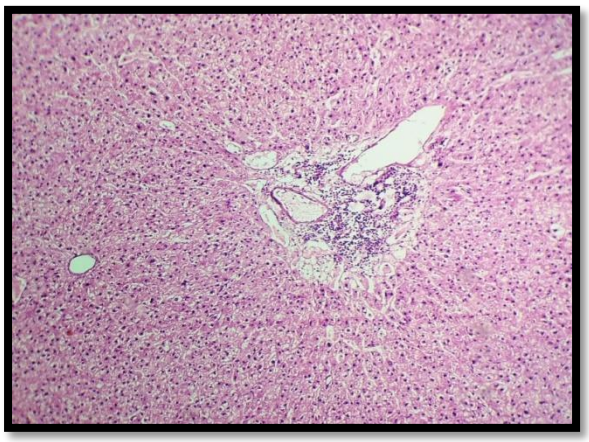


Figure F (100X): Bile duct absence in portal tract



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