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Duplication of Gall Bladder: A Case Report.

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ABSTRACT

Gall bladder duplication is a rare anatomic malformation, which can now be detected by preoperative imaging study. We report a case of asymptomatic duplicated gall bladder; Anatomical variants of gall bladder duplication are differentiated according to Boyden's classification. Type I: Vesica fellea divisa (Bilobed / bifid gall bladder, double gall bladder with a common neck) Type II: Vesica fellea duplex (Double gall bladder with two cystic ducts). Y shaped in which two cystic ducts are united before entering the common bile duct. H shaped in which two cystic ducts enter separately in to common bile duct or hepatic duct.

Keywords: Double gall bladder, Cystic duct, Anatomical variant, Boyden's classification.

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INTRODUCTION

Double gall bladder is a rare congenital anomaly with an incidence of 1:4000 in autopsy studies of humans [1]. It is important to diagnose this anomaly pre-operatively because the second gall bladder may be overlooked during surgery [2].

Lack of awareness, non-specific clinical manifestations and inadequacy of imaging methods are the possible reasons for overlooking of additional gall bladders before and during surgery [2]. Accurate, preferably pre-operative diagnosis, identification and removal of all gall bladders during laparoscopy are mandatory to prevent inadvertent damage to the biliary ductal system and possible overlooking of the second or third gall bladder.

Case Report

A 60 year old female patient who was asymptomatic came for master health checkup. On ultrasound of abdomen, incidentally two oblong anechoic structures closely abutting each other were noted in the gall bladder fossa. MRCP was performed for further evaluation, which revealed two gall bladder which were opening into a single cystic duct. Cystic duct was seen to insert normally into the CBD. No other coexisting pathology was identified.

ULTRASOUND ABDOMEN



Figure 1: Ultrasound images of abdomen showing, two oblong anechoic structures closely abutting each other in the gall bladder fossa.

T2 AXIAL MRI

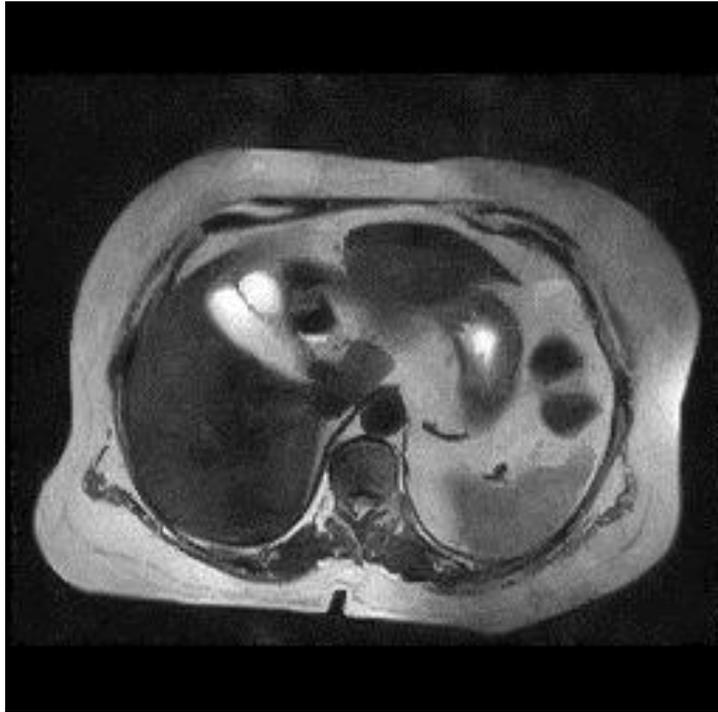


Figure 2

T2 CORONAL MRI

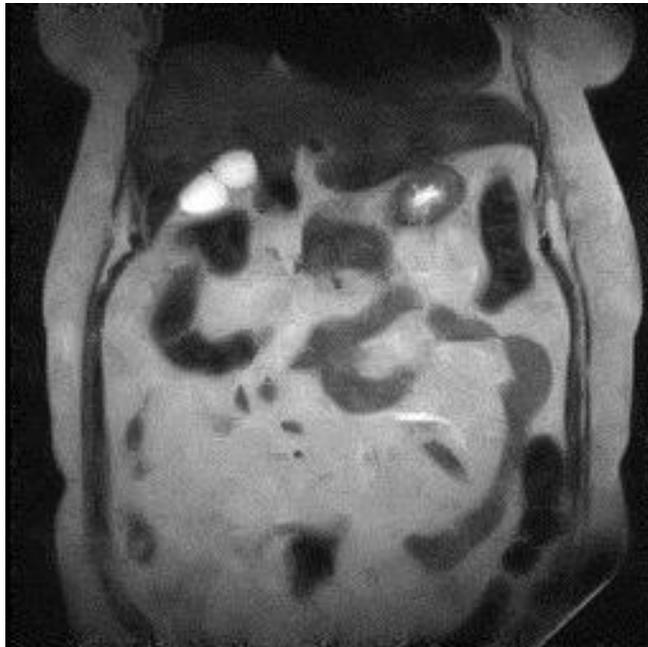
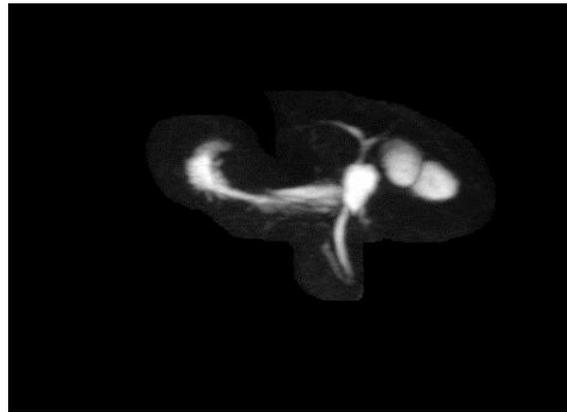
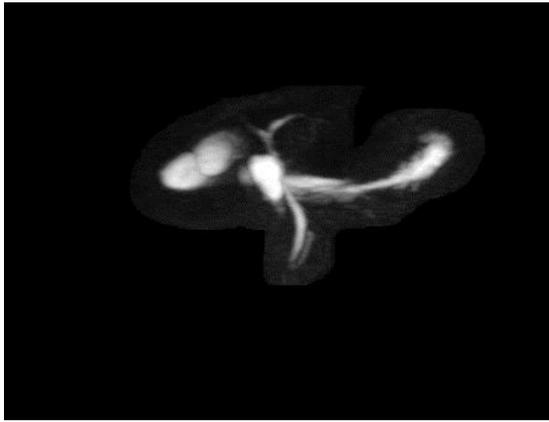


Figure 3

MRCP

MRCP were performed which revealed complete duplication of gall bladder with a single cystic (figure 2) duct (Type I duplication of Boyden's classification) without any co-existing pathology.

MRCP 3D**DISCUSSION**

Double gall bladder is a rare congenital anomaly with an incidence of one in 4000 patients. During the fifth or early sixth embryonic week, occasionally, the gall bladder primordium bifurcates and results in duplication of gall bladder. Duplication results from a split primordium whilst a true accessory gall bladder results from an extra primordium [3].

Anatomic variants of gall bladder duplication are differentiated according to Boyden's classification as follows [1].

Type I: Vesica fellea divisa (Bilobed / bifid gall bladder, double gall bladder with a common neck)

Type II: Vesica fellea duplex (Double gall bladder with two cystic ducts)

- Y shaped in which two cystic ducts are united before entering the common bile duct.
- H shaped in which two cystic ducts enter separately in to common bile duct or hepatic duct.

Ultrasound, MRCP, CT scan, scintigraphy and oral cholecystography have their limitations and are not 100% sensitive in identifying biliary ductal anomalies. ERCP may be a useful adjunct but may not be really indicated in every case of Cholelithiasis or Cholecystitis. The double gall bladders do not present with specific symptoms and the incidence of disease is similar to its normal variant [4].

Gallstone is the commonest complication occurring in one lobe but, both lobes can be involved. There is no increase in the incidence of disease in double gall bladder, so prophylactic cholecystectomy in an asymptomatic patient is not recommended [5]. Differential diagnosis include : Gall bladder diverticula, Gall bladder fold, Phrygian cap, Choledocal cyst, Pericholecystic fluid[6].

CONCLUSION

Double gall bladder duplication is a rare congenital anomaly. In case of any complications such as calculi, complete pre operative assessment is mandatory to prevent any inadvertent surgical complications. In asymptomatic patients surgery is not required.

Congenital anomalies of gall bladder and anatomical variation of their positions are associated with an increased risk of complications after laparoscopic cholecystectomy. Preoperative imaging should be useful for diagnosis.

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