RETROPORTAL COMMON BILE DUCT; OPEN/ LAPAROSCOPIC SURGEONS MUST BE CAREFUL: CASE REPORT OF A RARE ANOMALY

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ABSTRACT:
We report the presence of retroportal common bile duct as an incidental anomaly in a young female who was operated for symptomatic gall stones. She had no other associated anomaly and had an uneventful post operative course. She is following our outpatient department for last 7 months now. To the best of our knowledge this is the first reported common bile duct anomaly. Knowledge of this anomaly is of importance in the era of ever increasing laparoscopic biliary surgeries.

Key words: Common bile duct, Portal vein, CBD anomalies

INTRODUCTION:
The number of Laparoscopic cholecystectomies performed has increased globally. Although mortality and morbidity have not increased but the types of complications encountered have changed. The surgeon must take all precautions to avoid common bile duct injuries and recognise bile duct anomalies before surgery. Congenital anomalies and normal variants of the biliary tract are clinically significant. It is important to be aware of these anomalies for a open, laparoscopic surgeon and for liver transplant surgeons as well so that inadvertent ductal ligation is avoided. We describe an incidental detection of retroportal CBD; a very rare anomaly of biliary tract, which to the best of our knowledge, is the first ever reported case in English literature.

CASE REPORT:
A 35-year-old female was admitted to our surgical unit at SMHS Hospital with right hypochondriac pain and fever of 6days duration .She had no history of jaundice, rigors or chills. She was non-diabetic, para 3 and had not been on any medication. Her family history was insignificant. On examination she had temp. of 38 C, right hypochondriac tenderness with no jaundice or lymphadenopathy. She had stable vitals and her systemic examination was normal. On evaluation she had a haemoglobin of12gm/dl and a leukocyte count of 16000/cmm, predominantly neutrophilic. Her liver function and renal function tests were normal. Her serum amylase was also normal. Ultrasonography (USG) of the abdomen revealed multiple gall stones with thick wall of gall bladder suggestive of acute cholecystitis. There was no evidence of intra hepatic or extra hepatic biliary duct dilatation; other viscera were normal. She was managed with IV antibiotics, IV fluids and was discharged after 5 days. Elective open cholecystectomy was done after 3months of discharge respecting the patient’s choice. Per-operatively common bile duct (CBD) was found to be posterior to the portal vein (Fig.1 and 2). The hepaticocystic and calot’s triangle were maintained and there was no anomaly of the hepatic and cystic artery. Intraoperative cholangiogram was done which excluded any other biliary anomaly.
DISCUSSION:
The biliary tract is notorious for its variable anatomy. The extra-hepatic biliary system is said to have more anomalies in one cubic centimetre of the space around the region of the cystic duct than any other part of the body (1). In 4th to 5th week of life, a 4-mm human embryo develops a bud from the foregut that grows cephalad. Its cranial portion becomes liver and the bile ducts. In the caudal portion of the growing bud, there develops a second bud, or diverticulum, and this is destined to become the gall bladder and cystic duct (2). The variable anatomy adds to the operative difficulties, especially in the presence of significant changes occurring as a result of the disease process itself. Although the reported incidence of congenital anomalies of the extrahepatic biliary tract lies between 0.58 % to 47.2 %.3, 4 The exact incidence of anomalies of the biliary system is not known. It is prudent to avoid biliary complications during surgery using preoperative extensive workup to diagnose biliary anomalies. MRCP has emerged as one of the first choices to evaluate hepatobiliary disorders and results are comparable to ERCP. Also 64-channel multidetector CT cholangiography can clearly demonstrate the biliary anatomy, a variety of anatomic variants, and the extent of disease; information that is indispensable for successful hepatobiliary surgery. The routine use of intraoperative cholangiography during laparoscopic cholecystectomy remains controversial. Ciulla et al in a series of 169 patients detected biliary anomalies in approximately 3.5% patients and authors recommended routine use of intraoperative cholangiography. They were of opinion that if a bile duct injury is going to occur
because of misidentification, a properly performed cholangiogram will minimize the extent of the injury (5). The prevention of major duct injury at cholecystectomy relies on the accurate dissection of the cystic duct and artery and avoidance of major adjacent biliary and vascular structures. Innumerable variations in the anatomy of the extra-hepatic biliary tree and associated vasculature have been reported from radiographical and anatomical studies. These are cited as a potential cause of bile duct injury during cholecystectomy Anatomy in the region of the gallbladder neck varies mostly in vascular patterns, however, aberrant ducts or duct abnormalities are occasionally seen during cholecystectomy highlighting the principle that careful dissection and identification is the key to safe cholecystectomy. (6)

**Conclusion:**
We conclude that it is important to clarify the anatomy of the biliary tract by preoperative evaluation and to carefully dissect the cystic duct close to the neck of the gallbladder during open or laparoscopic cholecystectomy. Anatomic variations of the biliary tract are common and can create a rare pitfall during laparoscopic cholecystectomy. Intraoperative cholangiography in laparoscopic cholecystectomy can be an additional tool to prevent disastrous complication during laparoscopic cholecystectomy.

**REFERENCES**


**Authors**
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