

Critical Care 2019: Agenesis of gallbladder and cystic duct: Diagnosed outside the operating room clinical case presentation and review of literature - Puneet K Agarwal - All India Institute of Medical Sciences Bhopal- INDIA

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Abstract:

Introduction: Gallbladder agenesis is a rare congenital abnormality of the biliary tract. The diagnosis is usually made during surgery. It has been proven to be very difficult to make a correct preoperative diagnosis of agenesis of the gallbladder in symptomatic patients. The purpose of this presentation is to share our experience about a case of middle-aged lady who presented with symptoms of biliary colic. Ultrasound examination revealed cholelithiasis with contracted gallbladder. On Contrast CT examination gallbladder could not be visualized. On further imaging as MRCP diagnosis of gallbladder agenesis could be confirmed. This helped in avoiding unnecessary surgery and patient was conservatively treated. **Clinical Case:** A middle-years lady presented to surgical department with symptoms of right upper abdominal pain and dyspepsia. On examination she was hemodynamically stable and there was no fever. On examination abdomen was soft with negative Murphy's sign and active peristalsis. Laboratory tests were within normal limits. Ultrasound imaging revealed cholelithiasis with contracted gallbladder. Subsequently the Contrast CT scan of abdomen was done which revealed non-visualization of gallbladder and cystic duct. Further to confirm MR cholangiogram was done and the gallbladder and cystic duct were found to be absent with rest of the extra hepatic biliary tree to be normal. **Conclusion:** Agenesis of the gallbladder is a very rare condition and can create difficulties for surgical team when diagnosed during Laparoscopic Cholecystectomy. With the development of better imaging modalities it has been possible to diagnose gallbladder agenesis before surgery. Correct preoperative diagnosis can help to avoid unnecessary surgeries and reduce exploration complications. **Discussion:** It is estimated that 23% of patients with gallbladder agenesis present with symptoms of biliary colic. Out of these patients, 90.1% will present colicky

pain in the right hypochondrium, 66.3% with post prandial nausea and vomiting, 37% with acid peptic symptoms and 27% CBD stones. These symptoms can be attributed to the theory of biliary dyskinesia. It is well known that ultrasound is the imaging technique of choice to assess the gallbladder; but difficulty in reporting arises when gallbladder is either contracted or atrophic. WES ((Wall, Echo and Acoustic shadow) triad was described for diagnosis of gallstones. Some ultrasound examinations performed on patients of agenesis of gallbladder can report cholelithiasis and this can be explained owing to the fact that radiologist can misdiagnose the periportal tissue, subhepatic peritoneal folds, duodenum or calcified hepatic lesions with the WES triad.

Gallbladder agenesis without biliary atresia is an amazingly uncommon undeveloped distortion. Patients become suggestive in 23% of cases [1,2], and gallbladder agenesis will quite often be confused as cholecystitis with cystic conduit obstacle or as a sclero-atrophic gallbladder. Misdiagnosis leads superfluous tasks. We checked on 77 instances of gallbladder agenesis. The 75 cases revealed in the writing of "The China National Knowledge Infrastructure (CNKI)" from Jan 1994 to Jan 2006. Catchphrase search utilized was gallbladder agenesis. In 1991 and 2006, 2 instances of gallbladder agenesis were accounted for in our clinic, and these are quickly depicted.

The pathogenesis of gallbladder agenesis isn't completely deciphered at this point. Right now we see it as an innate distortion. Hepatic diverticulum in a 4-week-old incipient organism is viewed as the bud of liver, gallbladder and bile conduit. The finish of hepatic diverticulum extends and isolates into caudal and rostral branches. The caudal branch lengthens to frame a vacuole, which slowly grows. The gallbladder thus takes its shape. Then the proximal tight portion

forms into the cystic channel. The gallbladder is an empty organ at first; however in this manner changes to a contemporary strong state on account of covering epithelial hyperplasia, which later revives going with epithelial liquefaction. Caudal branch hypoplasia will incline to gallbladder and cystic conduit agenesis. Plus, a strong gallbladder can be recognized if the epithelial liquefaction step is missed. Most cases are scattered, however familial grouping marvel likewise exists, advising us that a hereditary factor may have an influence in the pathogenesis of gallbladder agenesis. Anyway no such case was found in our investigation.

Misdiagnosis is answerable for pointless activities. The basic purposes behind misdiagnosis are: clear biliary side effects, for example, right-upper-quadrant torment, sickness and heaving, absence of hunger, jaundice, pyrexia; CA199 may raise in a couple of patients, bogus positive B ultrasound report: intestinal ancient rarities, bile conduit widening and analytics, strip-structure sinewy tissue at the typical situation of gallbladder, Ultrasound specialists and specialists did exclude this conclusion into their legitimate theory in light of the fact that the opportunity to go over this mutation as far as they can tell is so uncommon. Disregard of this innate distortion is a ruling purpose behind misdiagnosis.

There is another perspective proposing laparoscopic investigation, yet we think if no gallbladder can be found during the investigation, open medical procedure ought to be quickly performed. Since ectopic areas for the gallbladder must be rejected before the conclusion of gallbladder agenesis is made, cautious investigation ought to be completed. Ectopic gallbladders might be situated in the liver, between the leaves of the lesser omentum, in the retroperitoneum and retrohepatic district, inside the falciform tendon, or in the retroduodenal and retropancreatic zone. Such areas are hard to reach with a laparoscope; ultrasonography or cholangiography can help with the conclusion. In any case, over the top investigation may welcome on instinctive harm due to the nearness of anatomic variety in the bile conduit framework and the trouble in uncovering the Calot triangle. 4 cases in our investigation endured iatrogenic injury during the investigation.

Result:

Ectopic gallbladder was found in none of these cases, however with the assistance of explorative medical procedure, changing degrees of organ contortion were seen: 3 had lower regular bile channel narrowing, 3 had choledochectasia, 1 was a problem with the lower basic bile conduit valve, and 1 was situs inversus viscerum.