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Case Report

Laparoscopic cholecystectomy in intrahepatic gallbladder: a case report

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ABSTRACT

Variations in the location of the gallbladder are absence of the gallbladder, location on the left side, intrahepatic (the most common located in the right hepatic lobe) and mobile gallbladder, these anomalies increase the risk of gallstone formation. 22-year-old female, presents symptoms of diffuse abdominal colic pain in the epigastrium and right hypochondrium exacerbated by the consumption of cholecystokinetic foods, physical examination without alterations, laboratories without alterations, ultrasound of the liver and bile ducts reports a gallbladder of small diameters. and presence of lithiasis, subtotal cholecystectomy was performed laparoscopically, leaving the transhepatic segment and resecting supra- and infra-vesicular portions. The intrahepatic vesicle is an anomaly in vesicular development and migration in embryogenesis. This anomaly increases the predisposition to stone formation due to alteration in vesicular motility secondary to incomplete emptying. Since there are no clinical or paraclinical changes, it tends to be underdiagnosed and becomes a challenge for the clinician. The infra and suprahepatic portion was dissected, the intrahepatic portion was not resected, where no complications occurred and it evolved from satisfactorily in subsequent appointments.

Keywords: Intrahepatic gallbladder, Congenital gallbladder abnormalities, Gallbladder malformation

INTRODUCTION

The gallbladder is normally located on the visceral surface of the liver, at the junction of the square lobe and the right lobe. Topographic variations of the gallbladder in a study of 1823 patients showed a prevalence of 3.5%; Variations in location include absence of the gallbladder, left-sided location, intrahepatic, and mobile gallbladder.[1]

Intrahepatic location is the most common cause of site variations, with the most common location being the right hepatic lobe.[2] The finding of an intrahepatic gallbladder is rare; it is often confused with gallbladder agenesis. This anomaly increases the risk of gallstone formation, which predisposes to cholelithiasis, choledocholithiasis, pancreatitis, cholangitis, etc.[1]

CASE REPORT

We describe the clinical case of a 22-year-old female, originally from Mérida Yucatán, with no significant history, who attended a general surgery consultation due to diffuse abdominal colic pain in the epigastrium and right hypochondrium on several occasions, exacerbated after eating food. cholecystokinetic since November 2022, denies acholia, choluria, fever or jaundice, reports 1 episode of hospitalization secondary to vesicular colic. On physical examination, he was hemodynamically stable, with no signs of low output, chest without alterations, cardiopulmonary without alterations, soft depressible abdomen with no signs of peritoneal irritation, globose at the expense of adipose panniculus, peristalsis present, negative Murphy's sign. Laboratory studies are within normal parameters. The abdominal ultrasound reports a gallbladder with preserved

morphology, normal size, diameters of 62×10 mm, regular thin walls with the presence of a mobile 9 mm hyperechoic image that produces posterior sonic shadowing (Figure 1), the rest without alterations.

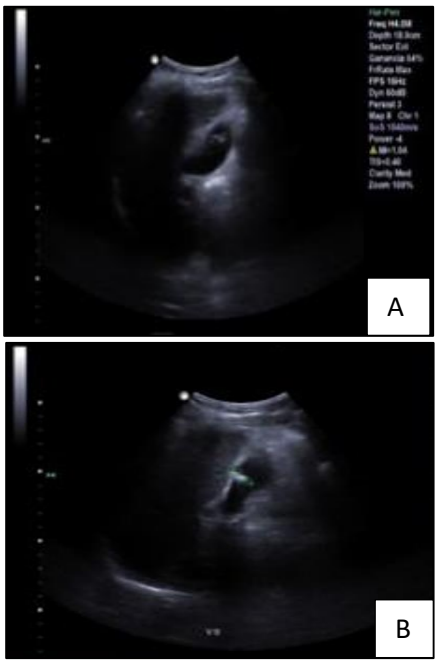

Figure 1 (A and B): USG gallbladder.

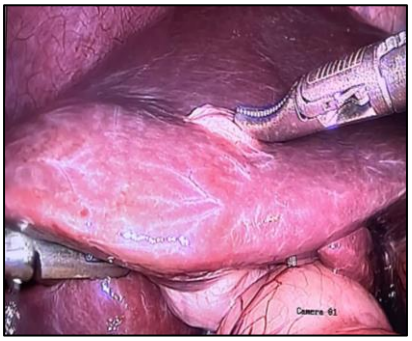

Figure 2: Intrahepatic gallbladder.

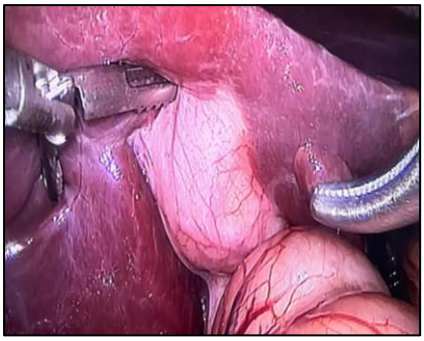

Figure 3: Intrahepatic gallbladder suprahepatic portion.

Elective laparoscopic cholecystectomy was performed with the diagnosis of cholelithiasis, in direct vision by laparoscopy the gallbladder with a segment of the body is visualized trans hepatically (Figure 2-4). The gallbladder is tractioned, the anterior and posterior parietal peritoneum are dissected, the calot triangle is dissected appropriately, structures that enter the gallbladder was identificated, corresponding to the cystic duct and cystic artery, staples are placed and they are sectioned, the hepatic portion of gallbladder is dissected with electrocautery, a subtotal cholecystectomy is performed, leaving a transhepatic segment, the remaining mucosa is burned, a piece is extracted (Figure 5), hemostasis is verified. In the postoperative period he presented a favorable evolution, with no evidence of symptoms related to residual cholecystitis, he was discharged 48 hours after the postoperative period, he was scheduled for outpatient consultation in 6 weeks for follow-up of the surgical wound where he attended and did not report any residual symptoms.

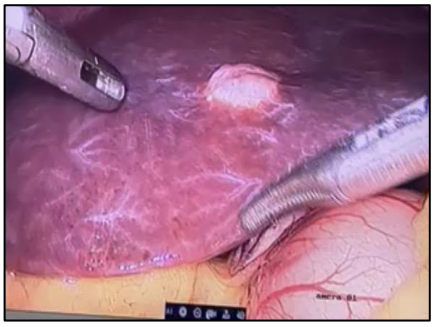

Figure 4: Intrahepatic gallbladder subhepatic portion.

Figure 5: Gallbladder sub and suprahepatic portion post laparoscopic cholecystectomy.

DISCUSSION

The embryogenesis of gallbladder begins at the fourth week of gestational development.[1] The gallbladder detaches from the caudal portion of the embryological hepatic diverticulum and remains intra hepatically until the eighth week, when it moves to the subhepatic portion.[3] The intrahepatic vesicle is an anomaly in vesicular development and migration.[2] Intrahepatic gallbladders are commonly located within segment 6 of the liver and a small portion of the gallbladder fundus may protrude. In its clinical presentation, it tends to be

asymptomatic; however, this anomaly increases the predisposition to stone formation and with this more prone to gallbladder complications such as cholecystitis, the 3 main factors for lithiasis genesis are cholesterol bile supersaturation, accelerated crystallization and alteration in gallbladder motility, this last factor is altered in the pathophysiology of this gallbladder anomaly due to incomplete emptying.[2-4] In the diagnosis of this anomaly, it can be suspected by a cholecystography or if the ultrasound reports a gallbladder with an unusually high location, another useful diagnostic method is tomography, the treatment of the intrahepatic gallbladder is recommended. laparoscopic, is considered the therapeutic method of choice for cholecystectomy even if this anatomical alteration exists.[2,3]

CONCLUSION

Intrahepatic gallbladder is an unusual condition, the bibliography of this anomaly is scarce, however it is the most common alteration in the location of the gallbladder where the probability of complications increases, in imaging studies there is little training for the detection of this abnormality since, in the review of the literature no reports were found using imaging of this abnormality, since it does not have other clinical or paraclinical changes, it tends to be underdiagnosed and becomes a clinical challenge for the surgeon during intraoperatively, the report of a small gallbladder (as it was in this patient) may give us a suspicion, since only a small portion of the gallbladder can be observed (subhepatic in this case), in the surgical treatment used In this patient it was laparoscopically where the sub- and suprahepatic portion was dissected; the intrahepatic portion was not resected to avoid liver injuries. In the postoperative management, no complications occurred and the patient progressed satisfactorily, so the intrahepatic gallbladder remnant showed no apparent complications. It should be an expected anomaly in every cholecystectomy procedure and the clinician should be in adequate capacity to resolve it.

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