SAS Journal of Surgery
Abbreviated Key Title: SAS J Surg
ISSN 2454-5104
Journal homepage: https://www.saspublishers.com

OPEN ACCESS

Visceral Surgery

Hepatic Colic outside Lithiasis: Which Diagnosis?

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DOI: 10.36347/sasjs.2024.v10i03.004 | **Received:** 22.03.2023 | **Accepted:** 29.04.2023 | **Published:** 06.03.2024

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Abstract **Case Report**

The vesicular diaphragm is a very rare and unrecognized malformation due to an anomaly in the embryogenesis of the gallbladder. This malformation represents 0.1% of gallbladder anomalies in adults. It can remain asymptomatic for a long time and be discovered incidentally or be revealed by chronic abdominal pain or by a complication. We report the observation of a 21-year-old woman who presented with chronic hepatic colic. Morphological examinations concluded an uncomplicated vesicular diaphragm. Laparoscopic cholecystectomy was performed. Intraoperative findings by opening the cholecystectomy specimen confirmed the diagnosis of a diaphragmatic gallbladder. In this document, we recall the clinical and radiological aspects characterizing this very rare anomaly.

Keywords: Diaphragm, Gallbladder, Hepatic colic, Cholecystectomy.

1. INTRODUCTION

The congenital abnormalities of the gallbladder are uncommon. They are classified into malformations of the form, the number, the location and the size. These abnormalities may remain asymptomatic or may involve a large range of complications [1]. We report the case of a patient admitted for chronic colic hepatic. Hepatic sonography made the diagnosis of a gallbladder diaphragm.

2. CASE REPORT

The patient was 21 years old and presented with chronic right hypochondrium pain that had been evolving since adolescence and was exacerbated postprandially.

Clinical examination found a positive Murphy's sign. Abdominal ultrasound had diagnosed an uncomplicated gallbladder diaphragm (Figure 1). Biological explorations came back without abnormality. A laparoscopic cholecystectomy was performed (figure 2).

The postoperative course was simple with discharge at day 2. The histological examination came back without any abnormality except for the finding of a gallbladder diaphragm.

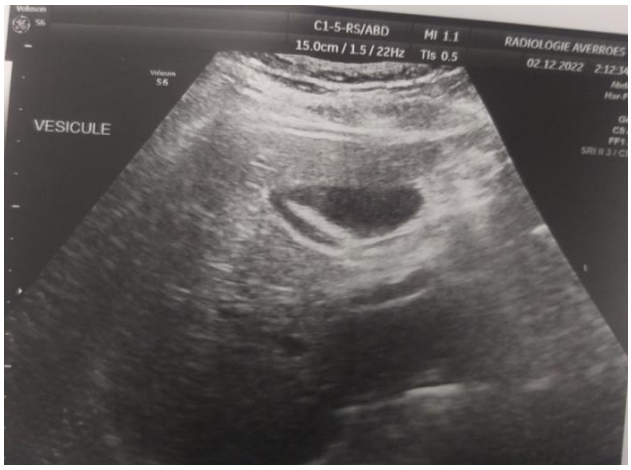

Figure 1: Ultrasound image showing a diaphragm of the gallbladder

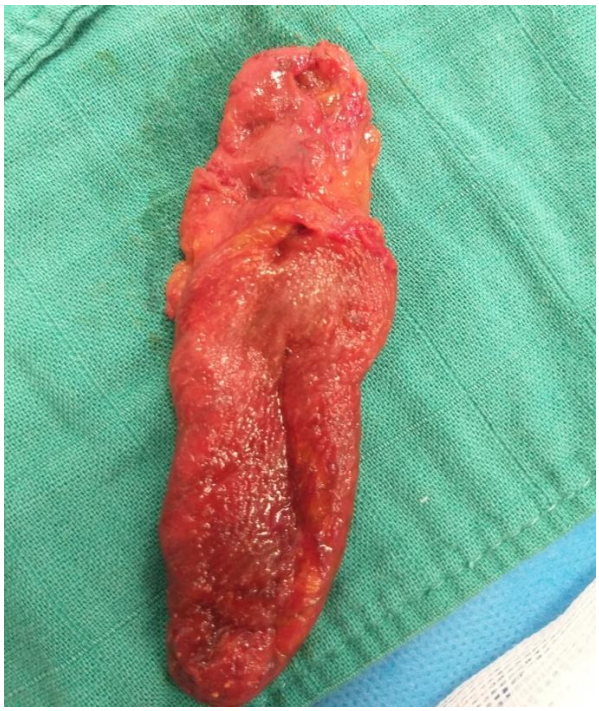

Figure 2: Cholecystectomy specimen showing a gallbladder diaphragm with two fundial and infundibular segments

3. DISCUSSION

The occurrence of hepatic colic is most often synonymous with gallbladder lithiasis. Exceptionally, they may reveal an anomaly in the embryogenesis of the gallbladder. The gallbladder develops from the middle part of the hepatic embryo. This part vacuolates after the seventh week of gestation and alteration of this embryonic process may be the cause of gallbladder abnormalities [2]. Thus, the gallbladder diaphragm can be explained by an incomplete vacuolation giving an hourglass-shaped gallbladder with two segments fundial and infundibular [3]. This malformation is very rare in adults and represents 0.1% of gallbladder anomalies. It may remain asymptomatic for a long time or may be discovered incidentally or manifested by chronic liver colic or by a complication (cholecystitis or biliary peritonitis) [4]. The revealing symptomatology in our patient was chronic liver colic.

The radiological diagnosis is confirmed by ultrasound which remains the examination of choice because it is the most accessible, least invasive and the cheapest allowing the study of the morphology of the gallbladder and its contents. It shows intraluminal septa dividing the gallbladder into two or more compartments. The CT scan shows, in addition to malformations, the presence of associated complications such as acute pancreatitis or peritonitis. Magnetic resonance imaging is currently the best examination for the study of biliary malformations with less accessibility than the first two examinations [5]. In our case, ultrasound examination was sufficient to make the diagnosis by showing a gallbladder septum.

The radical treatment of a symptomatic gallbladder diaphragm is laparoscopic cholecystectomy. However, in case of severe complications or technical difficulties, laparotomy takes the lead. Our patient underwent a laparoscopic cholecystectomy, which was performed without incident or notable difficulty. The opening of the surgical specimen showed the presence of a diaphragm separating the gallbladder into two segments, the fundic and infundibular. The anatomopathological examination of the surgical specimen came back without any anomaly.

4. CONCLUSION

The gallbladder diaphragm is a rare and often unrecognized congenital malformation, which can exceptionally be responsible for chronic and recurrent liver colic. Thanks to imaging, its diagnosis can be made preoperatively. Laparoscopic cholecystectomy remains the treatment of choice in uncomplicated forms.

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