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Mesothelial cyst in the liver round ligament: A case report and review of the literature



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ABSTRACT

INTRODUCTION: Cysts of the liver round ligament are rare and they are benign in the majority of cases. Current literature has been reviewed on this subject.

PRESENTATION OF CASE: A 22-year-old woman with a history of epigastric pain was admitted at our institution. Computed tomography (CT) of the abdomen showed a 14-mm cystic lesion in the epigastrium. A large cyst of the liver round ligament was successfully removed during exploratory laparoscopy and histopathology revealed a benign mesothelial cyst.

DISCUSSION: Mesothelial cysts of the liver round ligament are rare entities and we found a total of 5 cases from the literature. Diameter varies from 5 to 14 cm. Most patients were asymptomatic or may complain abdominal pain in the upper quadrants. Ultrasonography and CT scan are the most useful diagnostic tools, however differential diagnosis between various abdominal cystic lesions can be difficult. Treatment is usually surgical excision.

CONCLUSION: Mesothelial cysts of the liver round ligament are extremely rare but should be taken in consideration in the differential diagnosis of intra-abdominal cystic lesions. We stress the importance of exploratory laparoscopy that can allow both diagnosis and radical surgical excision.

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1. Introduction

Liver round ligament's cysts are rare entities. In most cases they are benign lesions such as lipomas [1], hydatid cysts [2], abscesses [3], or mesothelial cysts [4–8]; only a few malignant tumors originating in the round ligament of the liver have been reported [9–12]. Mesothelial cysts are generally considered developmental disorders, however due to the low incidence of this pathology the true etiology is unclear.

We report a case of a young woman with a mesothelial cyst of the round ligament of the liver that has been treated laparoscopically at our institution. Current literature has been reviewed on this subject.

2. Case report

A 22-year-old woman was admitted to our institution with a history of epigastric pain non responsive to medical treatment during the previous 3 months. Both past medical history and phys-

ical examination were unremarkable. Laboratory tests and tumor markers like Carcinoembrionyc-Antigen (CEA), Cancer antigen 19-9 (CA 19-9), Cancer Antigen 125 (CA 125), alfa-fetoprotein were within the normal range. Computer tomography (CT) scan revealed a 14 cm low-density fluid-filled bilobate cyst located in epigastrium among the gallbladder, liver, aorta, inferior vena cava, transverse colon, and some bowel loops (Fig. 1a–c). The patient underwent laparoscopic exploration through two 12 mm ports, and a large cystic lesion within the round ligament of the liver extended to the anterior abdominal wall has been found. The cyst was aspirated (400 cc serous fluid), isolated by sharp dissection, and removed with endobag. Macroscopically, the lesion was a serous cyst with a thick wall (Fig. 2). Cytology of the serous fluid was negative for malignancy and histopathology of the cystic wall revealed a single layer of mesothelial cells without any atypia. Postoperative course was uneventful, the patient was discharged after 3 days, and there is no evidence of recurrence after 18 months.

3. Discussion

Mesothelial cysts of the liver round ligament are rare and information comes mainly from case reports. We reviewed other 5 cases published in the literature [4–8], overall male/female ratio is 1:1, mean age is 37.5 years (range 22–57 years), and cyst diameter

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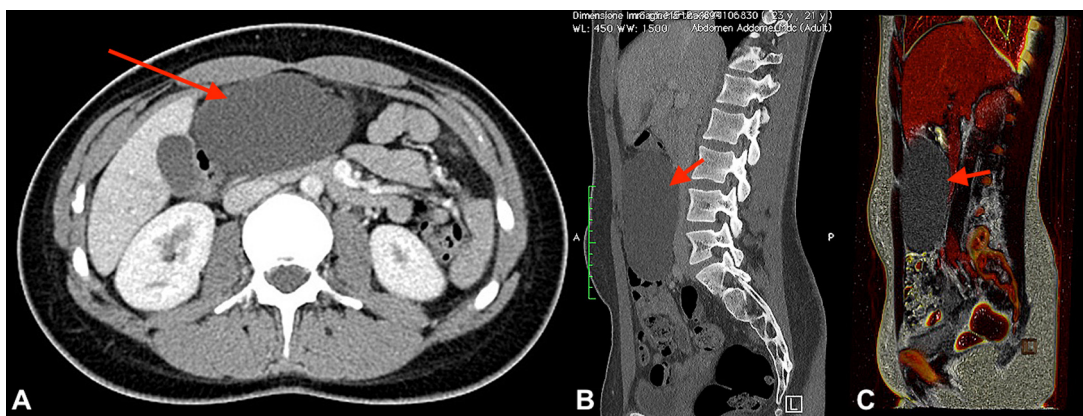


Fig. 1. (a–c) CT scan show a large cyst located between the gallbladder, liver, aorta, vena cava, transverse colon, and some bowel loops.

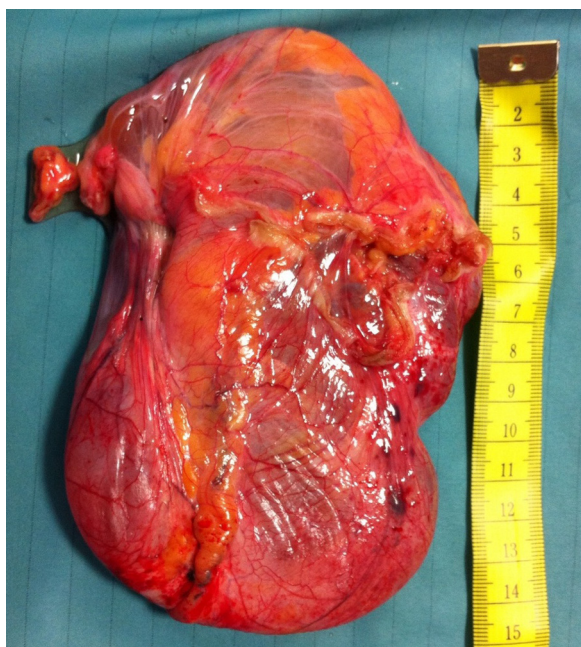


Fig. 2. Macroscopic view of the cyst after excision.

ranges from 5 to 14 cm (mean 9.4 cm). Most cases are generally asymptomatic and represent an incidental finding during investigations for other reasons, therefore the true incidence rate is still unclear [4]. Symptoms, whenever present, are usually non-specific and they include abdominal pain in the upper quadrants (100% of cases) that can be associated with a palpable mass, dyspepsia, or vomiting. The diagnostic suspicion is based on physical examination and radiographic studies, such as ultrasonography or CT scan (100% of cases). However, a correct diagnosis is difficult to achieve preoperatively and it is often obtained only after surgical excision. Laparoscopic removal of a mesenteric cyst within the liver round ligament has been described only recently in 2 subjects [4,5], and it is considered to be safe, effective and less invasive. Today, laparoscopy should be regarded as the treatment of choice for mesenteric cysts and in cases of very large lesions aspiration of cystic fluid by a laparoscopic needle may allow a better visualization.

In conclusion, mesothelial cysts of the liver round ligament are very rare but should be taken in consideration in the differential diagnosis of intra-abdominal cystic lesions. We stress the importance of exploratory laparoscopy that can allow both diagnosis and radical surgical excision.

Authors states that the work has been reported in line with the SCARE criteria [14].

Conflicts of interest

All authors have no substantial direct or indirect commercial financial incentive associated with publishing the manuscript.

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Ethical approval

Whether approval by Institutional Board has been given for this case report.

Consent

Informed consent was obtained from the patient; all authors ensure that all text and images alterations to protect anonymity do not distort scientific mean of the manuscript.

Author contribution

- Claudio F. Feo: Writing paper.
- Giorgio C. Ginesu: Writing paper.
- Giuseppe Cherchi: data collection.
- Maria L. Cossu: Text edit.
- Alessandro Fancellu: data analysis.
- Alberto Porcu: text edit.

Guarantor

Giorgio C. Ginesu.

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