

Mesothelial cyst of the greater omentum

Quiste mesotelial del omento mayor

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ABSTRACT

We present the case of a 49-year-old female patient with a history of slowly and progressively increasing intra-abdominal volume. A mass of approximately 16 cm, non-painful and mobile in all directions, was palpated in the epigastrium and mesogastrium. Abdominal ultrasound showed a cystic mass; abdominal computed tomography determined its origin and location precisely. A scheduled midline laparotomy was performed, and a 15 × 8 cm multiloculated cyst located in the greater omentum was identified and resected. The anatomopathological study reported a multiloculated cyst covered by the simple columnar epithelium of mesothelial type without cellular atypia resting on a thin layer of fibroconnective tissue, compatible with a simple mesothelial cyst. The postoperative evolution was favorable. Cysts of the greater omentum are rare surgical conditions. They should be considered as a differential diagnosis during the fourth decade of life in any patient presenting a mobile intra-abdominal enlargement in the mesogastrium of slow and progressive growth. The treatment of choice is surgical resection, either conventionally or laparoscopically.

RESUMEN

Se presenta el caso de paciente femenino de 49 años de edad con antecedentes de aumento de volumen intraabdominal de crecimiento lento y progresivo. Se palpó en epigastrio y mesogastrio una masa de aproximadamente 16 cm, no dolorosa y móvil en todas las direcciones. La ecografía abdominal mostró una masa quística; la tomografía computarizada abdominal determinó con mayor precisión su origen y localización. Se realizó laparotomía media programada y se identificó quiste multiloculado de 15 × 8 cm localizado en el omento mayor, el cual se resecó en su totalidad. El estudio anatomopatológico informó un quiste multiloculado recubierto de epitelio columnar simple de tipo mesotelial sin atipia celular que se apoya sobre fina capa de tejido fibroconectivo, compatible con un quiste mesotelial simple. La evolución postquirúrgica fue favorable. Los quistes del omento mayor son afecciones quirúrgicas infrecuentes. Debe tenerse en cuenta como diagnóstico diferencial durante la cuarta década de la vida de toda paciente que presente un aumento de volumen intraabdominal localizado en mesogastrio, móvil, de crecimiento lento y progresivo. El tratamiento de elección es la resección quirúrgica, ya sea de manera convencional o laparoscópica.

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INTRODUCTION

L omentum cysts are rare benign tumors; Garnier published the first case of omentum cysts, and their frequency varies from one in 27,000 to one in 250,000. The highest frequency occurs in the fourth decade of life, although a quarter of the cases are found in children.¹

There are many theories to consider regarding the formation of omental cysts;

among these is the benign proliferation of ectopic lymphatic tissue and lymphatic obstruction leading to large intraperitoneal cysts. Other causes also include failure of peritoneal sheet fusion, occult trauma, neoplasia, and lymph node degeneration.^{2,3}

Histologically, cysts of mesothelial origin have a lining of flat, cuboidal, or columnar epithelial cells; the wall is fibrous and lacks muscle fibers or lymphoid tissue, which allows differentiation from simple lymphatic cysts.⁴

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PRESENTATION OF THE CASE

We present the case of a 49-year-old woman with a history of intra-abdominal volume increase with slow and progressive growth. Physical examination revealed a mass of approximately 16 cm, smooth surface, defined borders, stiff consistency, did not protrude with the Valsalva maneuver, does not pulsate or expand, is not painful, and is mobile in all directions in the epigastrium and mesogastrium. An abdominal ultrasound showed an intra-abdominal cystic mass with partitions inside, measuring approximately 155 mm, located in the epigastrium and mesogastrium, which was corroborated by contrasted abdominal tomography.

Laparotomy was performed, and a 15 × 8 cm multiloculated cyst located in the greater omentum was found (*Figure 1*), which was wholly resected without complications (*Figures 2 and 3*).

The anatomopathological study reported a multiloculated cyst covered by the simple columnar epithelium of mesothelial type without cellular atypia resting on a thin layer of fibroconnective tissue, compatible with a simple mesothelial cyst.

The patient evolved satisfactorily and was discharged five days after surgery with uncomplicated external follow-up at 12 months.



Figure 1: *Transoperative. Multiloculated cyst in the greater omentum identified by the black arrow. The red arrow shows the stomach.*



Figure 2: *Trans-operative. Greater omentum tractioned by Allis forceps after resection of the cyst.*

DISCUSSION

According to Bannura G et al.,⁴ most mesothelial cysts occur in young or middle-aged women who remain stable over time; however, their location is usually within the mesentery and not in the greater omentum. Few cases of omental cysts have been reported in the Japanese literature. In a study by Uramatsu M⁵ and colleagues, this surgical condition occurs more than 68% of children under ten years of age and more frequently in male patients.

Small cysts are almost always asymptomatic and are detected during a laparotomy performed for another problem, and a palpable abdominal mass sometimes manifests larger cysts. Uncomplicated cysts are usually located in the lower mesogastrium and move freely, have a smooth contour, and are painless.⁶

Imaging studies, consistent with Kumar S and colleagues, establish the diagnosis.⁷ The imaging modality of choice is abdominal ultrasonography. Ultrasonography shows a cystic structure, commonly with thin internal septa and sometimes with internal echoes of hemorrhage and infection; these can be confused with large ovarian cysts in women. Abdominal computed tomography adds little information, although it may reveal that the cyst does not arise from another organ such as the kidney, pancreas, or ovary.

The spectrum of presentation depends primarily on the location and size of the cyst. Any complications, including accelerated growth, intracystic hemorrhage, torsion,



Figure 3: Resected surgical specimen.

infection, or rupture, are common indications for surgical excision.⁸

We agree with other authors that complete resection represents the only correct therapeutic approach.^{9,10} In 1993, Mackenzie described the first laparoscopic complete resection. The advantages of laparoscopic surgery are well known: respect for the abdominal wall, less postoperative pain, and shorter hospital stay, which results in a significant reduction in costs. In all cases, complete cyst resection is mandatory; conversion to “open surgery” is only necessary when laparoscopic resection is challenging to perform due to the risk of cellular leakage or inadequate treatment, which leads to a higher incidence of relapse.

CONCLUSION

Cysts of the greater omentum are rare surgical conditions. They should be considered a differential diagnosis in any patient during their fourth decade of life who presents an intra-abdominal enlargement in the mobile mesogastrium of slow and progressive growth. The treatment of choice is surgical resection, either conventionally or laparoscopically.

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