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Teratoma quístico del omento. Informe de un caso

Cystic teratoma of the omentum: A case report

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Abstract

Objective: To report a case of mature cystic teratoma of the omentum.

Setting: Second-level health care hospital.

Case report: Benign cystic teratomas of the omentum are an extremely rare condition. We report a case of a mature cystic teratoma of the omentum. A 47-year-old woman was evaluated because of a three-month history of increasing abdominal girth and urinary incontinence. Physical examination revealed a non-painful, large, mobile, well-circumscribed abdominal mass. Ultrasonography of the abdomen showed an 8 by 6.5 by 6 cm cystic mass in the right upper abdomen. At surgery through a median laparotomy, a large mass embedded in the tissue of the greater omentum was removed. The tumor consisted of a multiloculated and heterogeneous cystic mass, containing hair and sebaceous material as well as calcifications. Examination by light microscopy revealed a benign germ cells neoplasm, classified as a mature teratoma. The patient was sent home four days after surgery and was asymptomatic at the four-month follow-up visit.

Conclusion: The two most useful diagnostic tools to suspect a teratoma are ultrasonography and computed tomographic scan of the abdomen. Treatment of mature omental teratomas consists of local excision, with partial omentectomy. Postoperative chemotherapy is recommended for immature teratomas due to their high malignant potential.

Key words: Teratoma, cystic, omentum.
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Introduction

Teratomas have been described in a variety of locations throughout the body, and have an estimated occurrence

Resumen

Objetivo: Informar un caso de teratoma quístico maduro del omento.

Sede: Hospital de segundo nivel de atención.

Descripción del caso: Los teratomas quísticos maduros del omento son una situación poco frecuente. Informamos el caso de una mujer de 47 años de edad, la cual fue estudiada por historia de tres meses de distensión abdominal en aumento e incontinencia urinaria. Al examen físico se encontró una masa abdominal, grande, no dolorosa, móvil y bien circunscrita. El estudio de ultrasonido abdominal reveló una masa quística abdominal de aproximadamente 8 x 6.5 x 6 cm en el cuadrante superior derecho del abdomen. Se realizó laparotomía exploradora en la que se encontró una masa voluminosa en el espesor del omento, la cual se resecó. El tumor estaba formado por una masa quística, multiloculada, heterogénea que contenía pelo, material sebáceo y calcificaciones óseas. El examen al microscopio de luz reveló una neoplasia germinativa benigna, clasificada como teratoma maduro. La paciente se egresó a su domicilio cuatro días después de la cirugía y se encontró asintomática al cuarto mes de seguimiento.

Conclusión: Las dos pruebas útiles para diagnóstico, ante la sospecha de un teratoma, son el ultrasonido y la tomografía abdominal computada. El tratamiento de un teratoma maduro del omento consiste en excisión local con omentectomía parcial.

Palabras clave: Omento, teratoma, quiste.
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of nearly 3.4 cases out of 1,000 biopsies performed. The most frequent anatomic location of teratomas are the ovaries, with 83.2% of all reported cases, followed by

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the sacrococcygeal region in 6.3% of the cases. Other sites of occurrence include the neck, the mediastinum, and the abdominal and oral cavities, in decreasing order of frequency.¹ Only rarely have cystic teratomas been reported in the greater omentum.^{2,3}

Cystic teratomas of the omentum can be classified as mature and immature, the latter being both extremely rare and with malignant potential which correlates with the degree of immaturity and the presence and quantity of neuroectoderm within the tumor mass.⁴ The usual clinical presentation is a palpable mass in the lower abdomen and diffuse abdominal pain. However, small cysts are generally asymptomatic and discovered incidentally at laparotomy or at autopsy. Complications are more frequent in children and often produce a clinical picture of an acute surgical condition of the abdomen. Treatment consists of local excision with partial resection of the omentum.^{4,5} This report describes the case of a mature cystic teratoma of the omentum probably arising from ectopic ovarian tissue.

Case report

A 47-year-old woman was referred to our institution because of a three-month history of increasing abdominal girth and urinary incontinence. Her medical history was negative for pregnancy, fever, chills, weight loss, or other manifestations related to the gastrointestinal tract. Physical examination revealed a non-painful, large, mobile, well-circumscribed abdominal mass, 8 cm in diameter. The remainder of the physical examination was unremarkable. Results of admission laboratory studies, including serum alpha-fetoprotein and -human chorionic gonadotropin levels, as well as simple X-ray films were otherwise normal. Ultrasonography of the abdomen showed an 8 by 6.5 by 6 cm cystic mass in the right upper abdomen, at the level of the renal silhouette, with areas of more density. At surgery through a median laparotomy, a large mass embedded in the tissue of the greater omentum was removed (**Figure 1**). Whole inspection of the abdominal cavity revealed that the mass did not arise in the ovaries, which were completely normal and totally uninvolved. The tumor consisted of a multiloculated and heterogeneous cystic mass with a 2 mm-thick wall, containing hair and sebaceous material as well as calcifications (**Figure 2**). Examination by light microscopy (hematoxylin and eosin staining, X120) revealed a benign germ cells neoplasm, classified as a mature teratoma. The epithelial component of the tumor consisted of cystic patterns lined by stratified squamous epithelium, with areas of granular stratum and laminar keratinization. Abundant hair structures along with mature bony scales were also observed (**Figure 3**). The patient was sent home four days after surgery and is asymptomatic after four months of follow-up.

Discussion

Benign cystic teratomas of the omentum, also called Dermoid Cysts, are an extremely rare condition with a female to male ratio of 18: 1(1), while cystic teratomas of the ovaries are the most frequent germ cells neoplasms.³



Fig. 1. A large mass embedded in the tissue of the greater omentum is clearly demonstrated.



Fig. 2. Tumor resected from the greater omentum. Multiloculated cysts with hair and sebaceous material are present.

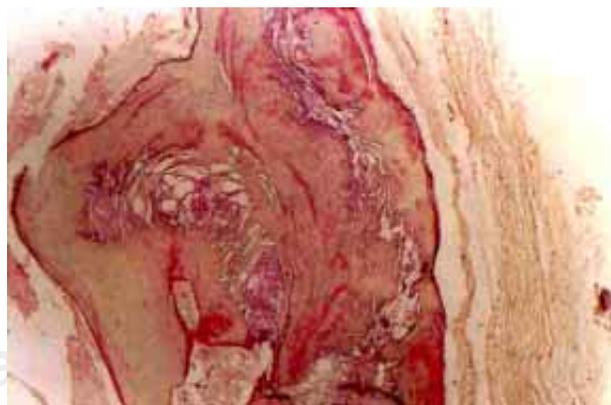


Fig. 3. Epithelial component of tumor. Cystic patterns lined by stratified squamous epithelium are observed. Abundant hair structures along with mature bony scales are also present (hematoxylin and eosin staining, X120).

To the best of our knowledge, only few cases of benign cystic teratomas of the omentum have been reported in the literature.⁶

Pathogenesis of omental teratomas is unclear, but several theories have been advocated. According to one theory, the tumor arises from primitive germ cells that become trapped in the omentum during embryologic development as they migrate from the yolk to the urogenital ridge.⁵ Another proposed theory states that omental teratomas arise in normally situated ovaries; the teratoma then becomes detached and implanted in the omentum.⁵ Last, it has been suggested that the tumor may arise from a supernumerary ovary located in the omentum; although, this is a very infrequent gynecologic abnormality. The second theory might explain our case. Pathologic findings indicate that the omental teratoma might have become detached from the right ovary. In a review of the literature, Ushakov⁷ found 23 cases of omental teratomas; occurring mostly in women and, as in our case, he demonstrated the existence of ovarian stroma in the tumor. Thus, it is generally accepted that the most common cause of omental teratomas is both a autoamputation of an ovarian dermoid cyst and subsequent reimplantation in the greater omentum. During the surgical procedure, we concluded that the omental teratoma of our case arose from ectopic ovarian tissue since both ovaries were found in their normal anatomic location. Histopathologic analysis of surgical specimens reveals that 88% of teratomas are classified as mature, and only 8% as immature. Recently, a case of mature mediastinal teratoma was reported in a 22 year-old patient.⁹ In regard to the biological aggressiveness of the tumor, it has been reported a malignant potential of 4%.^{1,5}

The two most useful diagnostic tools to suspect a teratoma are ultrasonography and computed tomographic scan of the abdomen. The former usually reveals a large

mass of mixed ecogenicity; while CAT scan (when available) demonstrates a heterogeneous mass with cystic and solid areas within the abdominal cavity, containing fatty material along with calcified accumulations.¹⁰ Treatment of mature omental teratomas consists of local excision, with partial omentectomy. Since immature teratomas of the omentum have a high malignant potential, both postoperative chemotherapy and radiotherapy are recommended.^{4,6}

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