SAS Journal of Surgery (SASJS) **ISSN 2454-5104**
Abbreviated Key Title: SAS J. Surg.

A Unit of Scholars Academic and Scientific Society, India

Synchronous Dermoid Cysts of the Greater Omentum and the Ovary

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Case Report

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Article History
Received: 08.02.2018
Accepted: 18.02.2018
Published: 28.02.2018

DOI:
10.21276/sasjs.2018.4.2.3

Abstract: Dermoid cyst of the omentum or benign cystic teratomas is very rare. We report a case of omental dermoid in a 47 years old lady associated with right ovarian dermoid cyst and multiple uterine fibroid.
Keywords: Right ovarian dermoid, Omental dermoid.

INTRODUCTION

Dermoid cysts are among the most common ovarian tumors; however, dermoid cysts of the omentum and mesentery are extremely rare. We report a case of synchronous right ovarian and omental dermoid cyst.

CASE REPORT

47 years old lady was investigated for irregular heavy uterine bleeding and on and off lower abdominal pain. She had abdominal and pelvic ultrasound which showed an oval lesion of heterogeneous echogenicity in the uterus measuring 7.3 x 6.0 x 7.0 cm consistent with a fibroid, and a rounded lesion measuring 4.6 x 4.0 x 4.2 cm with a solid and cystic component in the right ovary consistent with a dermoid cyst. In addition, there is a large lesion, which is rounded and has heterogeneous echogenicity noted in the right side of the lower abdomen, measuring about 11.3 x 8.0 x 9.9 cm. It is not certain on ultrasound whether this lesion was a separate lesion or it is a part of the described ovarian cyst that was seen in the right ovary (figure 1-A&B)

The patient was further investigated with abdominal and pelvic CT scan and MRI. The CT scan (figure 2A, B and C) and the MRI (figure 3 A and B) confirmed the ultrasound findings and clarified the relation of the two cysts to each other, the right ovary and abdominal viscera.

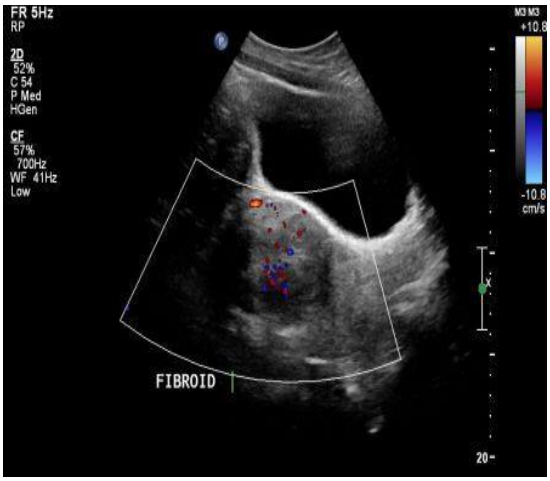

Fig-1 A: The ultrasound of the pelvis showing an oval lesion of heterogeneous echogenicity in the uterus measuring 7.3 x 6.0 x 7.0 cm consistent with a fibroid

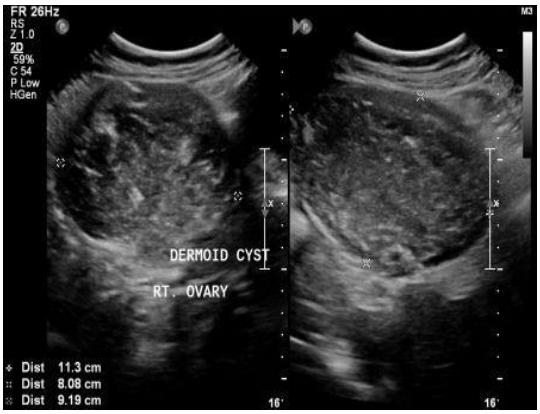

Fig-1-B: The ultrasound of the pelvis showing a rounded lesion measuring 4.6 x 4.0 x 4.2 cm with a solid and cystic component in the right ovary consistent with a dermoid cyst

Fig-2 –A, B and C: The CT scan of the abdomen and pelvis showing a round shaped solid lesion measured about 128 x 96 x 84 mm occupying the right sub hepatic area with well-defined borders which shows linear peripheral capsular like calcification with some calcification inside it together with heterogeneous density before and after IV contrast injection, with no identified fluid content. The lesion is not related to the liver, gallbladder and the ovaries and in direct contact with the right side of the anterior abdominal wall. On CT scan the lesion appears to be most likely originating from the mesentery

Otherwise, the pelvis findings have been re-noted again similarly to the ultrasound findings as multiple uterine fibroids, the posterior fibroid shows hypodense center and right ovarian dermoid cyst.

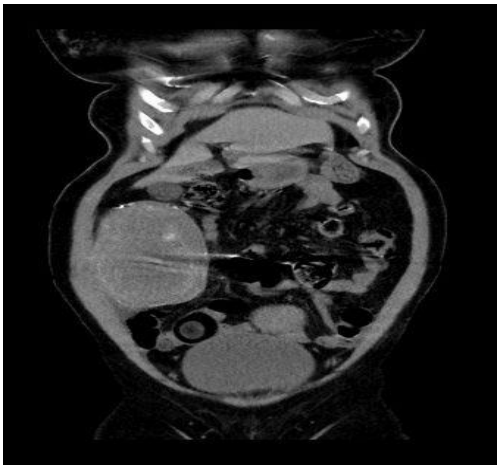

Fig-2 B: The abdomen and pelvic CT scan (coronary view) showing the omental cyst and the right ovarian cyst. The omental cyst appears completely separated from the right ovarian cyst

Fig-2C: The abdomen and pelvic CT scan (sagittal view) showing the same finding of figure 2B

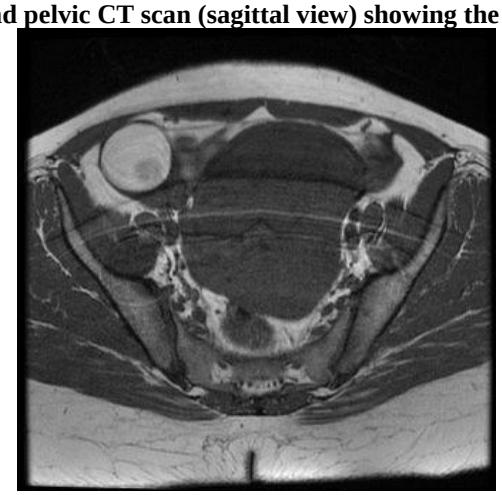

Fig-3A: The pelvis MRI showing the bulky uterus and the right ovarian cyst

Fig-3B: The pelvis MRI showing the uterine fibroid, the right ovarian cyst and part of the omental cyst

The patient was taken for laparotomy, total hysterectomy and right ovarian cystectomy dermoid cyst. At laparotomy a large omental cyst was found attached to the lower free border of the greater omentum which was excised and sent for histopathology (Figure 4-A&B)

Fig-4A: Intra operative photograph showing the omental cyst at the lower free border of the greater omentum. The left ovary was rudimentary hence right ovarian cystectomy was done in order to preserve ovarian tissue

Fig-4B: The pathological specimen of the omental cyst

The patient did well in the postoperative period and discharged on the fifth postoperative day. The histopathology confirmed the diagnosis of right ovarian dermoid cyst, largely necrotic leiomyoma of the uterus and omental dermoid cyst consists of an ovoid cyst measuring 13 x 12 x 8 cm. On cut surface it is filled with greyish dark gelatinous material containing growth of hair. Histological examination confirmed typical pattern of benign mature cystic teratoma.

DISCUSSION

Mature teratomas (benign cystic teratomas or dermoid cysts) are among the most common ovarian tumors; however, teratomas of the omentum and mesentery are extremely rare [1]. Coexistence of omental cyst with unilateral teratoma in the ovary is even rarer, reported in only few cases [2]. A review of the published reports reveals that only 31 cases of teratoma of the greater omentum have been published till 2014 and three cases reported wherein omental teratoma and dermoid of the ovary were coexisting [3]. The rarity of the condition deserves each discovered case to be reported. The first case of dermoid cyst of the omentum was described by Lebert in 1734[4].

These cysts are usually observed among reproductive-age women, although few cases were reported in young girls and elderly women [3]. The exact etiology is not known. They are more frequently found in women, suggesting a possible association with the female reproductive organs [1]. The proposed hypothesis is that the primitive germ cells get trapped in the omentum during the embryological development as they migrate from yolk sac to the urogenital ridge giving rise to omental dermoid cyst [5]. An alternative mechanism is that the cyst actually originates in the ovary but later gets detached and implants in the omentum [6]. Cyst may also arise from supernumerary ovary located in the omentum [5].

In our case the left ovary was rudimentary which support the hypothesis of detachment of the

dermoid cyst and implantation in the omentum as the argument for autoamputation is especially compelling in the case of a unilaterally absent ovary [7-8].

In the Extragonadal teratomas occur anywhere along the midline of the body, such as the mediastinum, because of the migration of germ cells in embryonic life. However, parasitic or extragonadal teratomas abdominal cavity are extremely rare, and the most common extragonadal site is the omentum [5].

Omental cysts are usually asymptomatic discovered on radiological investigations done for unrelated conditions unless they are large enough to be felt on clinical examination of the abdomen or cause pressure symptoms on adjacent viscera. Sometimes they may present with vague abdominal pain resulting from dragging and pulling effect on the omentum.The differential diagnosis of a cystic mesenteric mass includes duplication cysts, cystic mesothelioma, cystic lymphangioma and liposarcoma [9].

A preoperative diagnosis of omental teratoma is often difficult. Diagnosis can be established using computerized tomography, MRI, and ultrasound. However, a definite diagnosis usually requires histopathologic examination, which helps distinguish immature from mature teratomas [10].

Teratomas of the greater omentum are benign lesions, but malignant transformation of mature cystic teratomas has been described [11]. Complete excision is curative for mature teratomas. Immature teratomas are potentially malignant, so the patient may require chemotherapy and radiotherapy. Prognosis of benign retroperitoneal teratoma is good after complete resection and recurrences have not been reported [12].

SUMMARY

Dermoid cysts of the omentum and mesentery are extremely rare. Coexistence of omental dermoid cyst with unilateral dermoid cyst in the ovary is even rarer. The etiology of the omental cyst is not yet certain. Omental cysts are usually not symptomatic and discovered incidentally. They are benign lesions, but malignant transformation of mature cystic teratomas has been described. Surgical excision is curative.

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