Bilateral ovarian fibromas associated with meigs syndrome: report of a case and review of the literature

Received: 1/12/2010 Accepted: 14/5/2011

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Abstract

Objective: To present a case of bilateral ovarian fibromas associated with Meigs syndrome.
Design: Descriptive case study
Setting: Soran private hospital & Medya diagnostic centre in Erbil.
Patient: A 49-year-old woman presented with bilateral ovarian masses, ascitis and hydrothorax.
Intervention: Surgical removal of both ovaries with 15 cm left ovarian mass & 5.5 right ovarian mass with total abdominal hysterectomy.
Results: Histopathological examination revealed bilateral ovarian fibromas with foci of calcification
Conclusion: The clinician should be aware about rare benign syndromes, like Meigs, which may mimic malignancy when ovarian masses associated with ascitis and mislead the diagnosis and management plan.

Keywords: Meigs syndrome, ovarian fibroma, Ascitis, Hydrothorax.

Introduction

Meigs syndrome is an ovarian fibroma accompanied by ascitis and hydrothorax [1], occurs in approximately 1% of ovarian fibromas. [2-4] Ovarian fibroma is a rare benign tumor that is derived from ovarian stroma and is composed of fibroblasts and collagen fibers. Removal of ovarian fibroma results in disappearance of hydrothorax and ascitis. [5] Ascitis is present in association with 10% - 15% of ovarian fibroma and pleural effusion in 1% especially with large fibroma. [6, 7] Bilateral ovarian fibromas may also be associated with the nevoid basal cell carcinoma syndrome which includes multiple basal cell carcinomas of the skin, and odontogenic keratocysts.[8, 9] We report this case of bilateral ovarian fibromas associated with Meigs syndrome, because it is rare and to the best of our knowledge it is the first case to be reported in Erbil city, Kurdistan Region, north of Iraq.

Case presentation:

49-year-old female presented with big lower abdominal mass. She was menopaused for the last two years with seven children and no miscarriage. Physical examination revealed decrease air entry in the lower third of the right lung. The abdomen was distended with big hard mobile mass measuring 15 cm in diameter in the lower abdomen reaching the umbilicus with signs of ascitis. The laboratory tests results were within normal range. Pleural fluid for cytology was negative for malignant cells. Chest X ray revealed right-sided pleural effusion. Ultra sound of the abdomen showed a mass measuring 15X13X11 cm near the uterus with cystic degeneration and small mass measuring 5.5 cm in diameter in the pelvis, with free fluid in the abdomen and pelvis. Other abdominal organs were normal. CT scan of the chest, abdomen and pelvis with contrast revealed: Right-sided pleural

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effusion but the adjacent lung and the left lung were normal. In the abdomen there was a moderate amount of ascitis with large well defined mass in the pelvis extending into the abdomen with heterogeneous enhancement. The patient was admitted to the hospital and a laporatomy was done through a lower median incision. Ascitic fluid was clear, and a sample was taken for cytology. There were two lobulated ovarian masses, the left was hard with smooth surface measuring 15 cm. in diameter and the right was 5.5 cm in diameter. The uterus was of normal size and shape (Figure 1). There were no pelvic or abdominal adhesions. Bilateral salpingo-oophorectomy was performed in the beginning as the tumor was heavy and interfere with our procedure. Total abdominal hysterectomy was done and the specimen was sent for histopathological examination.

Pathological Examination:

Gross examination: The specimen consisted of two ovarian masses almost with smooth lobulated surface, firm in consistency, the larger measuring 15 cm in maximum diameter and the smaller 5.5 cm in maximum diameter.

The cut surface was solid, whitish in color and had fascicular appearance with areas of cystic degeneration and calcification (Figure 2)

Microscopic examination: Showed interlacing bundles of spindle shaped cells arranged in storiform pattern and separated by collagen fibers with foci of calcification (Figure 3).

A diagnosis of bilateral ovarian fibromas was made.

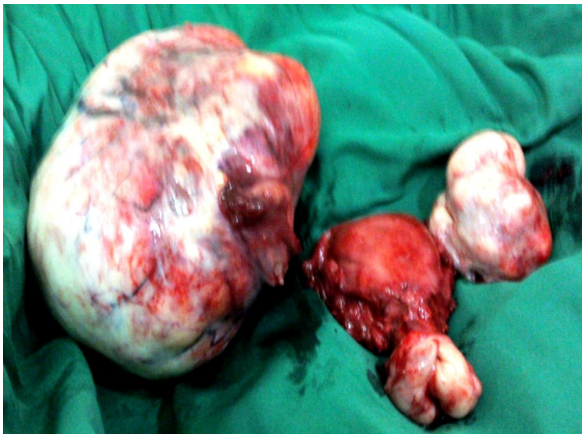

Figure 1: Uterus with bilateral ovarian masses with smooth lobulated surface.

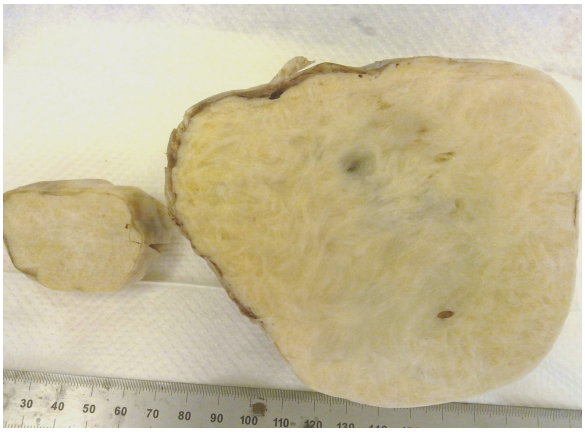

Figure 2: Bilateral ovarian fibromas with solid and white cut surface with areas of cystic degeneration (arrow).

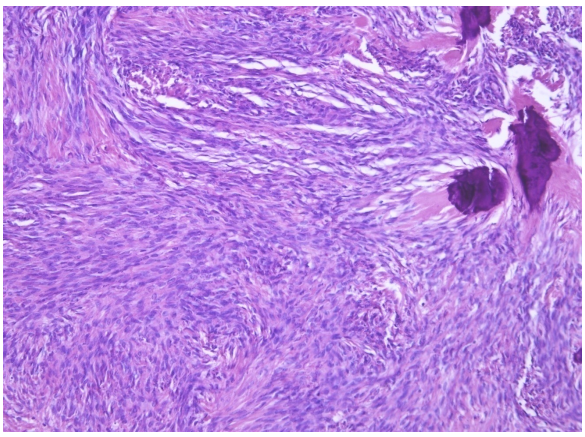

Figure 3: Reveals intersecting bundles of spindle cells producing collage with storiform pattern and foci of calcification (arrow).

Discussion

Ovarian fibroma is an uncommon benign neoplasm; it is the most common sex cord-stromal tumor accounting for 1% - 5% of all ovarian tumors. [5, 10] Ovarian fibroma can occur at all ages with an average age of 50 years or more [10] which is comparable to the age of our patient of 49 years. They can be unilateral in 90% of cases and may vary in size from 3 cm to 15cm. [11] In our case there were bilateral fibromas, the left mass was 15 cm and the right mass was 5.5cm in diameter. 40% to 50% of ovarian fibromas are associated with ascitis generally with tumor greater than 5 cm in diameter [12] and when they are associated with ascitis and right pleural effusion then they are classified as Meigs syndrome. [13,14] The collection of ascetic fluid is thought to be caused by excessive transudate from the tumor surface into the peritoneal cavity in a degree that the peritoneum cannot absorb. [15] There are various theories about the pathophysiology of the pleural effusion of which one support the quick transfer of the ascetic fluid via transdiaphragmatic lymphatic channels or stomas as the foramen of Bochdalek. [16] Ovarian fibromas are important from an imaging stand point because they appear as solid mass, thereby mimicking malignant neoplasms. [17] Our patient was thinking of having stage 4 malignancy making her and her family so depressed thinking of a very bad prognosis, but carful interrogation, assessment and proper management change the situation from hopeless condition to completely curable disease. The principal differential diagnosis includes leiomyomas, thecomas and metastatic tumors. Thecomas have similar histological findings to those of fibromas but they are accompanied by the presence of fat and estrogenic manifestation and appear in the postmenopausal age group. [19] To differentiate fibroma from leiomyomas, the absence of a normal ipsilateral ovary and presence of small follicles surrounding the mass favor fibroma.[11]

Conclusion

In female patients with ascitis, hydrothorax, and ovarian mass, ovarian fibromas are possible diagnosis. The clinician should be aware about rare benign syndromes, like Meigs. It may mimic malignancy when ovarian masses associated with ascitis and mislead the diagnosis and management plan.

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