A giant fibroma associated with Meigs’ syndrome misdiagnosed as a giant myoma: a case report

S.G. Kim¹, Y.S. Kim¹, H.J. Lee²

¹Department of Obstetrics and Gynecology, ²Department of Pathology,
University of Soonchunhyang, College of medicine, Soonchunhyang University Cheonan Hospital, Cheonan (South Korea)

Summary
Meigs’ syndrome is a fibroma associated with ascites and/or pleural effusion. Ovarian fibromas are uncommon sex cord-stromal neoplasms. Most of them are benign, and often found in postmenopausal patients. Abdomino-pelvic computerized tomography (APCT) scan shows hypodensity or isodensity of the tumors. However, the preoperative diagnostic rate is rather low due to its low incidence, diverse clinical symptoms, and the great differences existing in tumor size and shape. It is therefore often misdiagnosed as uterine myoma. When the tumor size is large, with ascites, and elevated cancer antigen 125 (CA125) level, it is also misdiagnosed as malignancy. The authors report a 57-year-old woman who presented with palpable giant pelvic mass. APCT showed a heterogenous giant mass measuring 17×17 cm with moderate amount of ascites. No pleural effusion was detected on chest X-ray. CA 125 level was normal. The patient underwent laparotomy during which a mass measuring 17×17 cm was detected in her right ovary with 500 ml of ascites. Histology showed ovarian fibroma. The authors performed total abdominal hysterectomy with bilateral salpingo-oophorectomy. Postmenopausal woman with ovarian tumor, ascites may indicate malignancy, but Meigs’ syndrome must be considered as differential diagnosis.

Key words: Meigs’ syndrome; Fibroma; Ascites.

Introduction
Ovarian fibroma are uncommon sex cord-stromal neoplasms, constituting 1.0-4.0% of all ovarian tumors [1]. Clinical presentations of ovarian cancer include palpable pelvic mass, pelvic, and abdominal symptoms such as abdominal bloating, distension, urinary urgency, dyspnea, and pelvic pain. Postmenopausal woman with adnexal mass, ascites may indicate myoma or even ovarian cancer. However, Meigs’ syndrome must be considered as differential diagnosis. Meigs’ syndrome is a benign disease that disappears after removal of the pelvic mass [2]. The authors report a case of Meigs’ syndrome caused by a right ovarian fibroma, misdiagnosed as myoma in a postmenopausal woman.

Case Report
A 57-year-old woman visited the outpatient clinic because of progressive abdominal distention. She had no vaginal bleeding. Her obstetric history included three uncomplicated vaginal deliveries and menopause occurred at the age of 52 years. She had previously been in good health with no medical history and had no specific familial history.

On physical examination, the patient had a body weight of 69 kg, a blood pressure of 135/80 mmHg, a pulse rate of 72 beats/minute, a respiratory rate of 20 breaths/minute, and a normal body temperature. Her abdomen was distended. On gynecological exam, a large pelvic mass was palpated in the abdomen. Pelvic ultrasonography showed a solid mass measuring 17×17 cm in the entire pelvic area with moderate amount of ascites (Figure 1). The contrast enhanced APCT showed a giant solid heterogenous mass and ascites (Figure 2). The patient showed hemoglobin was 12.3 g/dl (12.0-16.0 g/dl), WBC 9.5 10^3/µl (4.0-10.8 10^3/µl), and platelets 312 /mm³ (130-400 /mm³). Serum biochemistry and coagulation profiles were within normal limits. The patient was neg-
ative for hepatitis B, syphilis, and human immunodeficiency viruses. CA 125 level was 19.23 IU/ml (0-35 IU/ml) and other tumor markers were within the normal range. The authors suspected a giant myoma, but unlikely could not exclude ovarian malignancy. She underwent explorative laparotomy. During surgery, a right adnexal solid mass measuring 17 × 17 cm without excrescences and without ruptured material was found. The mass was too large and it was cut into a vinyl bag (Figure 3). 500 ml of ascites was discovered and aspiration cytology was done. The left adnexa was normal and small uterine myoma was seen. Frozen section of the mass was reported as benign ovarian fibroma. The bowels and omentums were grossly free of disease. The left adnexa was normal and small uterine myoma was seen. Frozen section of the mass was reported as benign ovarian fibroma. The patient was discharged on the fifth postoperative day. She was very healthy at three months after discharge.

Discussion

In 1934, Salmon described the association of pleural effusion with benign pelvic tumors. It was not until the report by Meigs and Cass in 1937 that widespread attention of the medical profession was drawn to the significance of pleural effusion and ascites in benign ovarian fibroma [3]. Fibromas mostly occur in postmenopausal women, often with a good prognosis [4]. Chen et al. report that 63.93% of the lesions occur after menopause, with 65.57% in women aged 51 to 70 years. Most patients visited the hospital because of pelvic palpable masses, while 64% of these patients showed no obvious clinical symptoms [5, 6]. Symptoms such as abdominal pain and abdominal bulging may occur in cases with large tumors with a diameter over 5 cm. Most of fibromas show no postmenopausal bleeding or menstrual disorders. The most tumors were unilateral, and few were bilateral [7]. Meigs’ syndrome occurred in about 1-2% of all fibromas. The diameter of tumors was statistically significantly correlated with CA125 level and the amount of ascites [8]. Irritation of the peritoneal surface by the tumor may explain the increased CA 125 levels. Ascites formation may be due to transudation through the tumor surface which exceeds the peritoneum’s resorptive capacity. Also, fluid accumulation is probably related to substances like vascular endothelial growth factor (VEGF) that raise capillary permeability [9]. On ultrasound examination, these types of tumors showed on ultrasound imaging, usually described as adnexal hypoechoic masses. Like the present case, it can appear as heterogeneous. The most common treatment for an ovarian fibroma is unilateral salpingo-oophorectomy. For women who desire preservation of the ovary, an ovarian cystectomy may be performed with complete excision of the fibromatous tissue by laparotomy or laparoscopy [10]. Pathologically, fibromas were described to be more a component of fibroblast and less of theca cells. Usually, among tumors with a diameter larger than 5 cm were diagnosed as fibromas, while among tumors with a diameter larger than 10 cm, they were diagnosed as fibrothecomas. It is important to differentiate
A giant fibroma associated with Meigs’ syndrome misdiagnosed as a giant myoma: a case report

Benign fibroma from cellular fibromas, mitotically active cellular fibromas, and fibrosarcomas. Cellular fibromas show hypercellularity, but can have up to 3 mitoses per 10 high power field (HPF) and benign. Mitotically active cellular fibroma demonstrate > 4 mitoses per 10 HPF, which should be considered a tumor of uncertain malignant potential. Fibrosarcoma is a malignant tumor that has a marked nuclear pleomorphism and ≥ 4 mitoses per 10 HPF [11]. The present authors performed total hysterectomy with bilateral salpingo-oophorectomy. The aim of this study was to emphasize on difficulty in diagnosis of a large benign ovarian fibroma. This is because so far there are few reports of a giant fibromas associated with Meigs’ syndrome over 17 cm in length and width.

Figure 4. — Microscopic findings
(A) Cut surface of fibroma shows a firm and solid white surface.
(B) Low magnification reveals fibromas composed of spindled fibroblastic cells that are continuous with ovarian stroma (arrow, ×40, Hematoxylin and Eosin stain).
(C) Whorled arrangement with a collagenous stroma (×100, Hematoxylin and Eosin stain).
(D) High magnification demonstrates bland-looking wavy spindle cells with no cytologic atypia (×400, Hematoxylin and Eosin stain).

Figure 5. — Immunohistochemical stain of fibroma.
(A) Wilms’ tumor 1 (WT-1) is positive with nuclear stain (×200).
(B) Ki-67 labeling index is less than 1% (×200).
(C) Desmin is negative (×200).
(D) Inhibin is negative (×200).
Conclusion

Postmenopausal women with clinical symptom of palpable giant pelvic masses, ascites, even if CA 125 is normal, have the possibility of being a giant myoma or malignancy. However, Meigs’ syndrome also has to be placed into a differential diagnosis as in this situation.

Acknowledgement

The authors are grateful to Soonchunhyang University Cheonan Hospital for its assistance and encouragement. This work was supported by the Soonchunhyang University Research Fund (200180007).

References


Corresponding Author:
Y.S. KIM, M.D., PHD.
Department of Obstetrics and Gynecology
Soonchunhyang University Cheonan Hospital
31 Soonchunhyang 6-Gil, Dongnam-gu
Cheonan-city, Chungnam
31151 (South Korea)
e-mail: drsook@schmc.ac.kr