

MEIGS' SYNDROME WITH ELEVATED SERUM CA125: CASE REPORT AND REVIEW OF THE LITERATURE

Ercan YILMAZ¹, Emrullah TANRIKUT¹, Abdullah Karaer¹, Yavuz SIMSEK¹, Onder CELIK¹, Yagmur MINARECI²

¹ Department of Gynecology and Obstetric, Faculty of Medicine, Turgut Ozal Medical Center, Inonu University, Izmir, Turkey

² Mediguven Hospital, Manisa, Turkey

SUMMARY

Background: Elevated serum CA125 levels in postmenopausal women with solid adnexal masses, ascites, and pleural effusion are highly suggestive for malignant ovarian tumor. We aimed, malignant ovarian tumors clinically mimicking a case of syndrome Meigs.

Case: Forty-four years old patient with diagnosis of Meigs syndrome

Conclusion: Adnexal mass in patients with high CA 125 levels should be consider malignancy. Presence of pleural effusion increases suspicion of malignancy.

Key words: ascit, fibroma, Meigs syndrome

Journal of Turkish Society of Obstetrics and Gynecology, (J Turk Soc Obstet Gynecol), 2012; Vol: 9, Issue: Supplement 1, Pages: 22- 5

SERUM CA125 YÜKSEKLİĞİ İLE BİRLİKTE OLAN MEİGS SENDROMU: OLGU SUNUMU VE LİTERATÜRÜN GÖZDEN GEÇİRİLMESİ

ÖZET

Amaç: Serum CA125 değerleri yüksek olan postmenapozal kadınlarda solid adneksiyel kitle, asit ve plevral efüzyonun birlikte bulunması malign over tümörü varlığını desteklemektedir. Malign over tümörünü klinik olarak taklit eden Meigs sendromlu bir olguyu tartışmayı amaçladık.

Olgu: Meigs sendromu tanısı alan kırkdört yaşındaki hasta

Tartışma: CA125 yüksekliği ile birlikte adneksiyel kitle saptanan hastalar malignite açısından değerlendirilmelidir. Özellikle plevral efüzyon varlığı malignite şüphesini arttırmaktadır.

Anahtar kelimeler: asit, fibrom, Meigs sendromu

Türk Jinekoloji ve Obstetrik Derneği Dergisi, (J Turk Soc Obstet Gynecol), 2012; Cilt: 9, Sayı: Ek 1, Sayfa: 22- 5

Address for Correspondence: Dr. Ercan Yılmaz, Malatya 06500 Ankara

Phone: + 90 (536) 955 61 80

e-mail: ercanyilmazgyn@yahoo.com

Received: 13 June 2011, revised: 13 June 2011, accepted: 25 August 2011, online publication: 20 September 2011

INTRODUCTION

Ovarian cancer, despite in terms of frequency 6th common gynecological cancer in women worldwide, is the most common cause of death in women with gynecological cancers⁽¹⁾. The risk of ovarian cancer for whole life is 1.3% in the USA⁽²⁾. Especially, solid adnexal masses with raised Ca-125 presently suggest that in the forefront of malignancy in pre- or postmenopausal women. Pleural effusion mostly supports metastasis of lung. However, Meigs and Cass in case series including 7 patients showed that pleural effusion can be with ovarian fibromas⁽³⁾. This condition, known as Meigs syndrome, is defined by triad of benign ovarian mass, reduction of ascites after removal of mass and pleural effusion. We presented the case with ovarian fibroma, presented in 1% of women, and reviewed the literature⁽⁴⁾.

CASE

A woman, 40-year-old premenopausal, with complaints of abdominal pain and distention for 3 months was referred to our clinic due to myoma uteri. She had a regular menstrual period and her gynecological history was unremarkable. There was a solid bilobule pelvic mass, probable origin of the right adnexal, 154x115 mm in diameter, with ascites on the examination by transvaginal ultrasonography. The level of Ca125 was 823 U/ml on the laboratory test. The chest radiography for preoperative preparation taken for malignant ovarian tumor in mind showed a pleural effusion on the right side but she did not have any complaint on the respiratory system (Figure 1). Video-assisted thoracoscopy (VATS) and biopsy of parietal pleura was performed to the patient considering advanced ovarian cancer and sera-hemorrhagic fluid was noted. The chronic pleuritis, proliferation of mesoepithelium and invagination were reported on the biopsy of parietal pleura. The whole abdominal computerized tomography (CT) showed that a well-circumscribed solid-cystic mass, filling the midline and arising from anterior uterus along superior umbilicus 16x10x12 cm in diameter, was suggested as malignant tumor from the right ovary (Figure 2). Colonoscopy and endoscopy, performed for metastasis screening were normal.

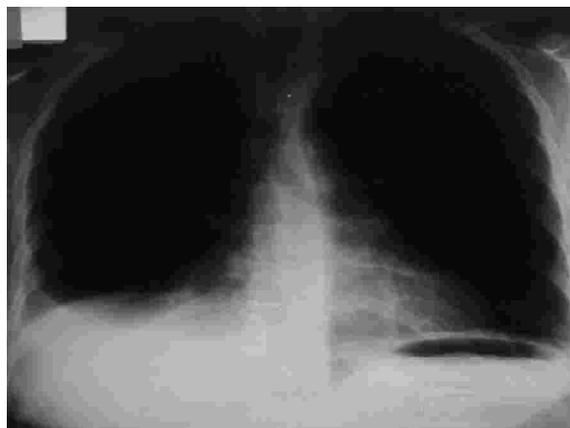


Figure 1: The right pleural effusion.



Figure 2: CT image of the pelvic mass.

In view of all these findings, laparotomy was performed, considering an ovarian malignancy. A bi-lobule solid mass originated from the right ovary and 500 cc abdominal ascites were noted in the exploration. The uterus, bilateral fallopian tubes and the left ovary were normal. The mass was removed and sent to the pathology for frozen which was reported as benign ovarian fibroma. Then, the abdominal wall was closed.

The patient was stable and discharged on the 3rd day of operation. She attended for gynecological examination two weeks after operation and there was not any ascites with 23 U/ml Ca 125. The pleural effusion disappeared on the chest X-ray.

DISCUSSION

Ovarian fibroma is 2-5% of removal ovarian tumors and of approximately 10-15% is with ascites^(5,6). Pleural effusion was detected in approximately 1% of all fibromas, especially cases with a large mass⁽⁴⁾.

Meigs and Cass in 1937 showed a reduction in ascites

and pleural effusion after the removal of ovarian fibroma⁽³⁾. Although there is a clear mechanism of acid formation and pleural effusion, Meigs suggested that ascites in those cases occurred as a result of peritoneal irritation caused by solid ovarian tumor⁽⁷⁾. It has been showed that vasoendothelial and fibroblast growth factor and cytokines play a role in fluid retention in the 3rd compartment⁽⁸⁾. Ishiko et al noted in a case with Meigs syndrome decreased in vascular endothelial growth factor (VEGF) levels of pleural effusion after removal of mass, but no change in peritoneal fluid⁽⁹⁾. Raised Serum VEGF, fibroblast growth factor (FGF) and interleukin 6 levels, and declined in these levels with the regression of hydrothorax and ascites after removal of ovarian mass were determined in the other case⁽⁸⁾. Therefore, vasoactive substances secreted by mass or obstruction of venous return caused by compression of mass may play a role in the formation of ascites⁽⁴⁾.

Occurrence of hydrothorax is suggested as a result of abdominal ascites to pleural compartment via lymphatic channel or through congenital diaphragmatic defects⁽¹⁰⁾ and occurrence of hydrothorax often in the right hemithorax is also explained by developmental diaphragmatic hernia commonly on the right side⁽¹¹⁾.

Firstly, Jones et al reported increased CA 125 in Meigs syndrome in 1989⁽¹²⁾. CA 125, a glycoprotein antigen expressed by celiac epithelium, was noted in ovary, endometrium, endocervix, fallopian tubes, and mesothelium of pleura, pericard and peritoneum⁽¹³⁾. Serum levels of this antigen, a tumoral marker, often increase in epithelial ovarian cancer⁽¹⁴⁾. CA 125 also may increase in the physiological condition like menstruation or benign condition like endometriosis⁽¹⁵⁾.

Hitherto, in literature, raised CA 125 in 17 of 30 patients with Meigs syndrome with ovarian fibroma was reported. The exact reason of increased CA 125 in those cases is unknown. However, it is suggested that irritation of peritoneum caused by a large amount of ascites with expression of mesoepithelium may cause an increase in CA 125 levels⁽¹⁶⁾.

In conclusion, increased CA 125 concentrations with an adnexal mass is suggested fundamentally a malignancy. The presence of pleural effusion is arouse suspicion of metastasis and increases the likelihood of malignancy. Meigs syndrome showed that an adnexal mass with pleural effusion and even increased CA 125

does not require necessarily indicate malignancy. Therefore, even if an adnexal mass is accompanied by ascites and pleural effusion, whether or not the CA 125 level, the malignancy could only be diagnosed by a histopathological examination of mass. In such cases, a possibility of Meigs syndrome, although unlikely, should be considered in the initial diagnosis.

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