

# A Case of Meig's Syndrome Mimicking Ovarian Malignancy: A Diagnostic Challenge

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Ovarian malignancies, especially in advanced stages, are typically presented by ascites and elevated serum Ca-125 levels. Rarely pleural effusion could be seen in these cases due to metastasis or diaphragmatic transportation. Meig's syndrome defines coexistence of a benign ovarian tumor (fibroma, thecoma or granulose cell tumor), ascites and hydrothorax. In this report, a case of postmenopausal adnexial mass with acute ascites and elevated serum Ca-125 level, that was suspicious for an adnexial malignancy preoperatively. Intraoperative frozen section analysis revealed ovarian thecoma. Meig's syndrome is a benign pathology that mimicks ovarian malignancy. Differential diagnosis of these two situations is a diagnostic challenge especially in postmenopausal women. Intraoperative frozen section is an important diagnostic method for accurate diagnosis and proper treatment.

**Key Words:** Meig's syndrome, Ovarian malignancy, Frozen section, Thecoma

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## Introduction

An adnexal mass, elevated level of CA-125 and accompanying ascites is the typical clinical presentation of an ovarian malignancy especially at advanced stages. Pleural effusion rarely associated in these cases and may be related to diaphragmatic fluid migration or metastatic reasons.<sup>1</sup> Meig's syndrome is a benign condition that mimicks ovarian malignancy and defines the situations that include ascites, hydrothorax and benign ovarian tumors (fibroma, thecoma, granulose cell tumors) all together. Differential diagnosis is especially challenging in post-menopausal women and intraoperative frozen section has great value in these patients for definitive diagnosis and proper treatment.

## Case Report

A 52 years old multiparous postmenopausal woman admitted to clinic for abdominal distension and dyspeptic complaints. Physical examination revealed adnexal fullness. A solid mass with borders undistinguished from the uterus and in the measurements of 8x7 cm at right adnexa was found by ultrasonographic scan. CA-125 level was high as 736 u/ml and

chest radiography did not show any pathology other than minimal hilar fullness. The positron emission tomography (PET) scan revealed an increased focal FDG-18 u uptake at the uterine fundus and bilateral adnexal areas as in the shape of a mass with a maximum SUV of 9.6. Patient operated with the initial diagnosis of ovarian malignancy. Approximately 3.000 cc of ascites fluid was observed intra-operatively. Frozen examination of right adnexal mass (right unilateral salpingoophorectomy tissue) was reported as thecoma (Figure 1). Whereupon



Figure 1: Macroscopic appearance of surgical specimen of a right ovarian thecoma

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the operation completed after performing total abdominal hysterectomy, left salpingoophorectomy, partial omentectomy, and obtaining sample for cytological investigation. The final pathological examination was reported as ovarian thecoma.

## Discussion

Meig's syndrome most commonly seen around 50 years of age in postmenopausal period. It is very rare amongst the women younger than 30 years of age. Many theories have been set for explaining the origin of ascites and pleural effusion in Meig's syndrome. Ascites formation is conceived as a result of transudation from tumor surface that exceeds the peritoneal resorption capacity.<sup>2</sup> Pleural effusion is a resultant of direct migration of ascites fluid through the developmental defects on diaphragm and it usually found on the right side. In respect of another explanation, vaso-endothelial and fibroblast growth factors were substantiated for the accumulation of fluid to the third space.<sup>3</sup> Dramatical recovery in ascites and hydrothorax was observed after surgical removal of benign ovarian lesions without any recurrence through the follow-up.<sup>4</sup>

Serum CA-125 levels usually increased in malign ovarian tumors however it can also be increased in endometriosis, pelvic inflammatory disease and following the situations that cause pleural or peritoneal inflammation or irritation. Previous case evaluations also frequently revealed increased CA-125 levels in benign conditions like fibromas, thecomas and granulose cell tumors. The presented case was considered as an ovarian malignancy owing to the increased CA-125 level, pelvic ascites and ovarian mass. During intraoperative observation ovarian mass resembling a benign lesion (smooth margins, no suspicious metastasis, etc) was excised to perform frozen section, the result was thecoma. This case illustrates the importance of appropriate surgery to obtain histopathological confirmation of Meigs' syndrome, as a small percentage of patients will have a benign etiology even in the presence of an elevated serum CA125 level, ascites and ovarian mass. So, the exact diagnosis and decision can be done during laparotomy by histopathological evaluation.<sup>5</sup>

The association of abdominal ascites, pleural effusion, and a pelvic mass with an elevated serum CA125 level remind us a poor prognosis. However, it is paramount to remember that this combination of findings does not always predict a malignancy. In conclusion, even if the preoperative evaluation sup-

ports malignancy in the cases like the presented one, diagnosis of intraoperatively observed solid cystic lesions with smooth margins have to be substantiated with frozen sections.

## Over Kanserini Taklit Eden Bir Meig's Sendromu Olgusu: Tanısal Zorluk

Ovaryen maligniteler, özellikle ileri evrelerde, tipik olarak assit ve serum Ca-125 yüksekliği ile prezente olurlar. Nadiren metastaz veya diyafragmatik transportasyona bağlı plevral efüzyon saptanabilmektedir. Meig's sendromu ise benign ovaryen tümör (fibrom, tekoma veya granüloza hücreli tümör), assit ve hidrotoraksın birlikte bulunması olarak tanımlanır. Bu makalede post-menopozal adneksiyal kitle, akut assit ve yüksek serum Ca-125 düzeyleri nedeniyle adneksiyal malignite düşünülen bir olgu sunulmuştur. İntraoperatif frozen section incelemesi ovaryen tekoma olarak saptanmıştır. Meig's sendromu ovaryen maligniteyi taklit eden benign bir patolojidir. Bu durum özellikle postmenopozal kadınlarda tanıyı güçleştirmektedir. Bu olgularda intraoperatif frozen section incelemesi tanıyı doğrulamak ve tedaviyi yönlendirmek açısından önem taşımaktadır.

**Anahtar Kelimeler:** Meig's sendromu, Ovaryen malignite, Frozen inceleme, Tekom

## References

1. Benjapibal M, Sangkarat S, Laiwejpithaya S, Viriyapak B, Chaopotong P, Jaishuen A. Meigs' Syndrome with Elevated Serum CA125: Case Report and Review of the Literature. *Case Rep Oncol* 2009;2:61-6.
2. Samanth KK, Black III WC. Benign ovarian stromal tumors associated with free peritoneal fluid. *Am J Obstet Gynecol* 1970;107:538-45.
3. Abramov Y, Anteby SO, Fasouliotis SJ, Barak V. Markedly elevated levels of vascular endothelial growth factor, fibroblast growth factor, and interleukin 6 in Meigs syndrome. *Am J Obstet Gynecol* 2001;184:354-5.
4. Shiau CS, Chang MY, Hsieh CC, Hsieh TT, Chiang CH. Meigs' syndrome in a young woman with a normal serum CA-125 level. *Chang Gung Med J* 2005;28:587-91.
5. Abad A, Cazorla E, Ruiz F, Aznar I, Asins E, Llixiona. J. Meigs' syndrome with elevated CA 125: case report and review of the literature. *Eur J Obstet Gynecol Reprod Biol* 1999;82:97-9.