

# Pseudomeigs Syndrome Associated with Mucinous Cystadenoma at an Early Reproductive Age

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## 1. Introduction

Meigs syndrome is a rare condition, defined as the coexistence of benign ovarian fibroma, ascites and pleural effusion. While, pseudo-Meigs syndrome is characterized by the co-existence of ascites, pleural effusion and pelvic tumor other than ovarian fibroma (both benign and malignant) [1].

For both these syndromes, surgical resection of the tumor is the only therapeutic choice, resulting in resolution of fluid accumulations.

Here we present a case of mucinous cystadenoma ovary that presented as pseudomeig syndrome at a relatively young age of 23 years.

## 2. Case Report

A 23-year-old multiparous woman presented to our hospital with chief complains of gradually increasing abdominal girth accompanied with vague pain all over abdomen and difficulty in breathing since one year. She also complained of frequent and scanty menses. On admission, general examination revealed normal vital signs except for mild tachypnoea (respiratory rate 22 minute). On auscultation breath sounds were decreased in right lower lung zones.

On abdominal examination, gross distension with flank fullness and a 24 week size abdominal mass of heterogenous consistency with restricted mobility arising from pelvis was observed. Onper vaginal examination the mass was felt in cul-de-sac, pushing the uterus anteriorly. There was no nodularity in pouch of douglas. In addition there was no palpable lymphadenopathy or hepatomegaly or splenomegaly.

Ultrasound whole abdomen revealed large ovarian multiloculated cystic mass with moderate ascites with right moderate pleural effusion. Right sided pleural effusion was observed in chest X-ray too. CT scan showed a multiloculated cystic mass of 24x21x21 cm, originating from left adnexal region without any signs of infiltration.

Basic blood investigations (haematological and biochemical analysis) including tumor marker CA125, CE19-9 and CEA were within normal limits.

Further diagnostic evaluation including right thoracentesis and ascitic tap demonstrated thin straw colored fluid, negative for malignant cells, negative for any bacterial presence on gram stain, AFB stain and cultures.

She was taken up for exploratory laparotomy under general anesthesia after chest tube insertion (tube thoracostomy) and

pleural fluid drainage (Picture 1). Per operatively moderate ascites was present, left ovary was replaced by a smooth, large multilobulated tumor. The mass was not adherent to parieties. The right ovary and uterus appeared normal.

Peritoneal fluid was collected for cytological examination and left salpingo-oophorectomy was performed (Picture 2).

Exploration of abdominal cavity revealed no palpable lymphadenopathy or any other evidence of malignancy. Post- operative course remained uneventful, the chest tube was removed on 5<sup>th</sup> post-operative day and patient was discharged on 8<sup>th</sup> post-operative day.

Patient had last follow up after 1 year of surgery with no evidence tumor, ascites or pleural effusion recurrence.



Picture1: Pleural fluid being drained through chest tube



Picture 2: Mucinous cystadenoma gross specimen

## 3. Discussion

Ovarian tumors are the most common gynecological neoplasms, with a prevalence of 2.5–6.6% in a woman's lifetime [2, 3]. Ovarian neoplasms present in a variety of

subtypes and origin of tumor cells, with epithelial tumors being most frequent (65–70%) [4].

Among them, mucinous cystadenoma is a benign cystic ovarian tumor originating from the surface epithelium of the ovary, characterized by mucin production and classified into benign (80%), borderline or low malignant potential (10%), and invasive (10%) subtypes [4].

The benign mucinous secreting tumors account for 10–15% of all ovarian neoplasms [5] and occur most commonly between third and fifth decade of life, but rare cases in younger and older women have also been reported [4].

Mucinous cystadenomas are unilateral in 95% of cases and can present with vague symptoms like progressive abdominal distention, fullness, bloating, an adnexal mass, vague pelvic or abdominal pain, and gastrointestinal symptoms [5].

The case being discussed presented with the rare accompanying features of ascites and pleural effusion framing the case into Pseudo-Meigs syndrome.

No data are available regarding the incidence of Pseudo-Meigs syndrome, but it has been reported in the literature less than true Meigs syndrome and is considered quite rare. The syndromes are more commonly seen in older women with an average age of 50 years [6]. This case of mucinous cystadenoma with concurrent ascites and pleural effusion presented at a relatively early age of 23 years.

Pseudo-Meigs syndrome is clinically important as it may resemble metastatic pelvic cancer. It is important to understand that an ovarian mass combined with pleural and peritoneal effusion not always represents an advanced stage of malignancy.

Cytological examination of the body cavity effusions is essential to differentiate between reactive process and metastatic tumor spread.

The etiology of the fluid accumulation in Meigs syndrome and pseudo-Meigs syndrome remains unclear, although it appears to be related to lymphatic obstructions. Most likely it is due to filtration of interstitial fluid in the peritoneum through tumor capsule and diffusion to the pleural space through diaphragmatic lymphatic vessels and apertures. The effusion can be moderate or massive and is grossly transudative, but occasionally contains blood cells [7, 8]. It is usually observed with ovarian tumor larger than 6 cm and they completely regress after neoplasm removal.

CA125 values are also not reliable in distinguishing benign and metastatic etiologies, as some benign pelvic tumors causing pseudo-Meigs syndrome is associated with elevated levels of the tumor marker, like ovarian cystadenomas, struma ovarii, uterine and broad ligament leiomyomas.

However, in the index case, the radiological evaluation, the normal tumor markers, ascitic and pleural tap negative for malignancy pointed towards benign pathology even in preoperative period.

In literature, very few reports have been published on pseudo-meigs syndrome with mucinous cystadenoma. The rarity of the case lies in the fact that this patient presented at a relatively young age of 23 years with the pseudomeigs triad. Majority of the cases in literature with pseudo-Meigs syndrome in the setting of mucinous cystadenoma have been reported in older women with an average age of 50 years.

**Consent:** Written informed consent was obtained from the patient for publication of this case report

## References

- [1] Kazanov L, Ander DS, Enriquez E, Jaggi FM. Pseudo-Meigs' Syndrome. *Am J Emerg Med* 1998 Jul; 16(4):404–5.
- [2] Borgfeldt C, Andolf E. Transvaginal sonographic ovarian findings in a random sample of women 25–40 years old. *Ultrasound Obstet Gynecol.* 1999; 13(5):345–50. [[PubMed](#)] [[Google Scholar](#)]
- [3] Torre LA, Islami F, Siegel RL, et al. Global cancer in women: Burden and trends. *Cancer Epidemiol Biomarkers Prev.* 2017; 26(4):444–57. [[PubMed](#)] [[Google Scholar](#)]
- [4] Kumar V, Abbas AK, Aster JC. Robbins and Cotran pathologic basis of disease. Ninth edition. Philadelphia, PA: Elsevier/Saunders; 2015. pp. 696–98. [[Google Scholar](#)]
- [5] Brown J, Frumovitz M. Mucinous tumors of the ovary: Current thoughts on diagnosis and management. *Curr Oncol Rep.* 2014; 16(6):389. [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
- [6] Latta R J, Lee PDK: Meigs' syndrome in a young woman. *J Adolesc Health Care* 1981; 1:313-315.
- [7] Santopaolo O, Rotondo A, Alfè M, Canciello P, Rito Marcone G, Cusati B. Meigs syndrome with bilateral hydrothorax. [Article in Italian]. *Minerva Ginecol* 1993 May;45(5):263–6.
- [8] Amant F, Gabriel C, Timmerman D, Vergote I. PseudoMeigs' syndrome caused by a hydropic degenerating uterine leiomyoma with elevated CA 125. *Gynecol Oncol* 2001 Oct;83(1):153–7