



## Pseudo Meig's Syndrome: An Unusual Presentation

Yamuna Jayasree<sup>1\*</sup>, Rajeswaran Rangasami<sup>1</sup>, Prabhu Radhan<sup>1</sup> and Usha Rani<sup>2</sup>

<sup>1</sup>Department of Radiology and Imaging Sciences, Sri Ramachandra University, Porur, Chennai, Tamilnadu, India.

<sup>2</sup>Department of Obstetrics and Gynaecology, Sri Ramachandra University, Porur, Chennai, Tamilnadu, India.

### Authors' contributions

This work was carried out in collaboration between all authors. Author YJ designed the study, wrote the protocol and wrote the first draft of the manuscript. Author RR managed the literature searches and manuscript editing. Authors PR and UR did the manuscript review. All authors read and approved the final manuscript.

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Case Study

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## ABSTRACT

**Aim:** To describe the radiological findings in a case of pseudo Meig's syndrome with rare association of pericardial effusion.

**Presentation of Case:** We report a case of pseudo Meig's syndrome who also had pericardial effusion. The patient had sonography and MR imaging of the abdomen which showed uterine fibroid associated with bilateral pleural effusion, ascites and pericardial effusion. Subsequently, the patient underwent hysterectomy with bilateral salpingectomy following which ascites, pleural effusion and pericardial effusion resolved. Histopathological examination confirmed uterine leiomyoma with degenerative changes.

**Discussion:** Pseudo-Meig's syndrome is a condition which describes the association of any ovarian tumor (benign or malignant) other than ovarian fibroma or any pelvic tumor with pleural effusion and ascites. Association of pericardial effusion along with this condition has been rarely reported. Most common tumors associated with this entity described in previous literature include leiomyoma of uterus and broad ligament, germ cell tumors etc. It becomes highly important to

\*Corresponding author: E-mail: [yamkart86@gmail.com](mailto:yamkart86@gmail.com);

identify this condition as it is a curable condition mimicking malignancy and can avoid unnecessary interventions.

**Conclusion:** Pseudo-Meig's syndrome associated with pericardial effusion is a rarely reported entity which can mimic malignant condition and hence it is important to consider it as a possibility in patients who present with pericardial effusion of unknown cause.

*Keywords: Leiomyoma; Meig's syndrome; Pseudo-Meig's; uterine fibroid.*

## 1. INTRODUCTION

Meig's syndrome is the association of pleural effusion and ascites with ovarian fibroma. Pseudo-Meig's syndrome is a rare condition in which the patient has pelvic tumor other than ovarian fibroma along with ascites and pleural effusion [1,2]. To the best of our knowledge, association of pericardial effusion in Pseudo-Meig's syndrome have been reported in only three cases so far.

## 2. CASE PRESENTATION

A 44 year old female presented to our Gynecology department with complaints of continuous dull aching lower abdominal pain of four days duration. Previously she had three uneventful vaginal deliveries and had normal menstruating history. On clinical examination, her vital signs were stable and the pain score was 3/10 (Wong baker's scale). Per vaginal examination revealed a posterior cervix but uterus size could not be made out. There was no cervical or vaginal tenderness. There was fullness of bilateral fornices (free fluid). The baseline blood investigations, liver and thyroid function tests were unremarkable. Her pregnancy and Anti nuclear antibody tests were negative. There was no elevation of tumour markers.

Sonography of the abdomen showed a large subserosal degenerating uterine fibroid of size 10.1x7x7.6 cm (Fig. 1A). Subsequent MRI of the abdomen showed a degenerating pedunculated subserosal uterine fibroid (Figs. 1B and 1C), bilateral mild pleural effusion, pericardial effusion and mild ascites (Figs. 1D and 1E). Cardiologist opinion and Echocardiogram were obtained in the evaluation of pericardial effusion that excluded cardiac disease.

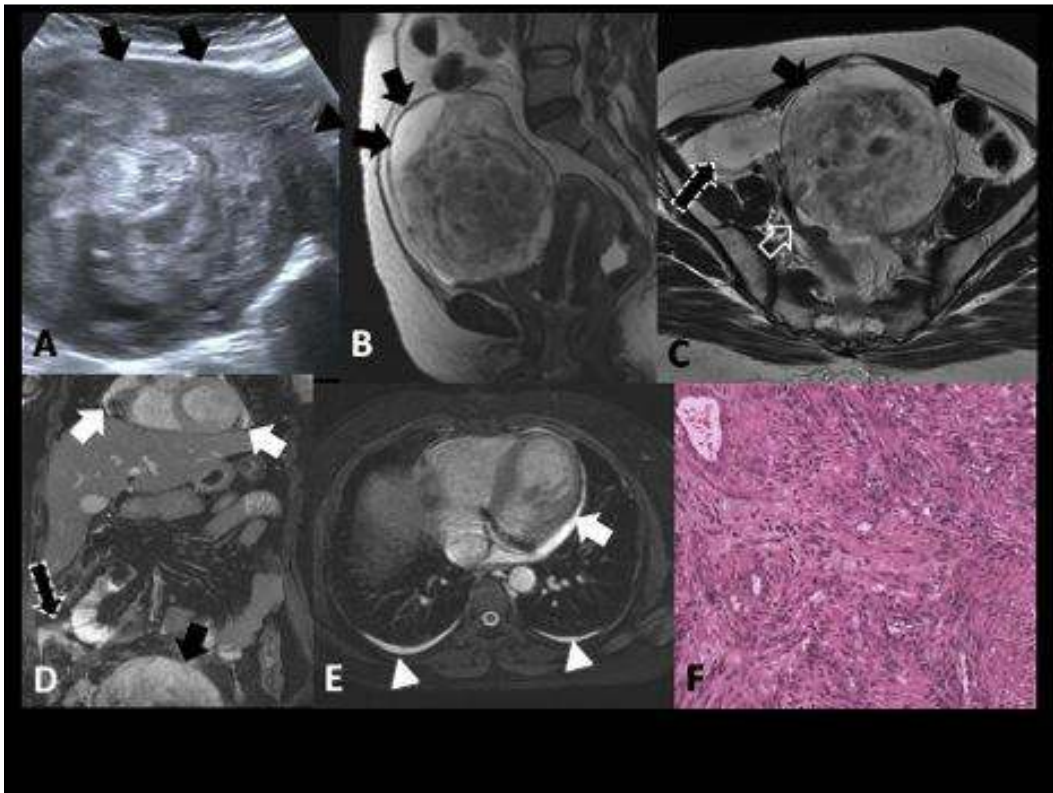
Exploratory laparotomy was done which revealed a normal sized uterus with a subserosal pedunculated degenerating fibroid arising from anterior wall of uterus. Bilateral tubes and ovaries showed no abnormalities. Total

abdominal hysterectomy with bilateral salpingectomy was performed. Ascitic fluid was aspirated and sent for cytology which was negative for malignancy. Bilateral tubes along with uterus and mass were sent for histopathological examination which confirmed the radiological diagnosis of uterine leiomyoma with degenerative changes (Fig. 1F). The patient had an uncomplicated post operative course with resolution of ascites, pleural effusion and pericardial effusion on the follow up sonography.

## 3. DISCUSSION

Meig's syndrome refers to coexistence of pleural effusion and ascites with ovarian fibroma. Pseudo-Meig's syndrome is defined by association of any pelvic tumors other than ovarian fibroma with pleural effusion and ascites [1]. Leiomyoma of uterus or broad ligament are the most common tumors described [2]. Other cases reported are germ cell tumors, mucinous or serous cystadenoma and struma ovarii tumors [3]. Amylase producing serous papillary ovarian neoplasm with elevated pleural fluid amylase, paraovarian fibroma are some of the rare conditions which presented with pseudo-Meig's syndrome [1]. Of the two rare clinico pathologic entities Meig's and Pseudo-Meig's syndrome, the former is a commonly reported variant. As these conditions mimic metastatic pelvic tumors, they are clinically important.

The previous case report which described association of pseudo-Meig's syndrome with pericardial effusion, originating from a leiomyoma of the uterus also had associated elevated cancer antigen 125 and inflammatory parameters that resolved with the excision of the tumour [4]. Some benign pelvic masses have also been reported as pseudo-Meig's syndrome with associated elevated tumor markers like CA 125 thereby mimicking metastatic conditions. But in all these cases, tumor markers declined to normal level following removal of the tumor [5,6].



**Fig. 1. (A)- Sonography longitudinal section shows a heterogeneous fibroid (black arrow) superior to the uterus (black arrow head). (B, C) - Sagittal and axial T2 weighted MR images show a pedunculated (open arrow) fibroid (black arrow) anterosuperior to the uterus. Mild ascites is seen (broken arrow). (D, E)- Coronal and axial fat suppressed T2 weighted MR images show ascites (broken arrow) pericardial effusion (white arrow), bilateral pleural effusion (white arrow head) and fibroid (black arrow). (F) - HPE section showing features of fibroid**

The pathogenesis of pleural effusion and ascites in pseudo-Meig's syndrome is inadequately explained. Etiology of fluid accumulation is possibly related to lymphatic obstruction [1]. Possible hypothesis of ascites is peritoneal irritation and leakage of intratumoral fluid through the tumor capsule of the degenerated fibroid to form ascites [7]. Transport of fluid through the diaphragmatic defects of lymphatic channels from the peritoneal cavities is the cause of pleural effusion which is usually exudative and right sided [1,7,8]. Some recent studies suggest proteins like vascular endothelial growth factor, which raises capillary permeability might cause fluid accumulation [9].

Our patient who had leiomyoma of uterus, associated with pleural effusion, ascites and pericardial effusion had an uneventful post operative course with a favorable outcome.

There was complete resolution of symptoms thereby favouring our diagnosis of pseudo-Meig's syndrome.

#### 4. CONCLUSION

In cases of patients presenting with pericardial effusion of unknown cause, Pseudo Meig's syndrome should be considered as a differential diagnosis. As these pelvic tumors with ascites and pleural effusion can mimic malignant conditions, it is important to identify this condition and avoid unnecessary interventions and patient anxiety.

#### CONSENT

All authors declare that written informed consent was obtained from the patient (or other approved parties) for publication of this case report and accompanying images.

## ETHICAL APPROVAL

All authors hereby declare that all experiments have been examined and approved by the appropriate ethics committee and have therefore been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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