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Ovarian Mucinous Cystadenoma Presenting as Pseudo-Meigs Syndrome

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Abstract:

Meigs syndrome is defined as the co-existence of benign ovarian tumor with ascites and hydrothorax that resolves after resection of tumor. The ovarian tumor in Meigs syndrome is fibroma. On the contrary, Pseudo- Meigs syndrome is characterized by the co-existence of hydrothorax, ascites and ovarian tumor either benign or malignant other than ovarian fibroma. The case herein concerns a 70 year old postmenopausal woman presented with the complaints of progressive shortness of breath on exertion and progressive swelling of lower abdomen. Her clinical and radiological examination revealed a massive right sided pleural effusion, mild ascites and a large heterogeneous pelvic mass with solid and cystic components, suggestive of left ovarian tumor. The patient underwent an exploratory laparotomy with excision of tumor, right ovary and whole of the uterus. The tumor was diagnosed histologically as an ovarian mucinous ystadenoma. Postoperative resolution of hydrothorax and ascites confirmed the diagnosis of Pseudo-Meigs syndrome.

***Keyword**: Pseudo Meigs syndrome*

Introduction:

The co-existence of pelvic tumor, hydrothorax and ascites has been known since the late 19th century. The features of the disease were described by Meigs and Cass in 1973.[1] In the same year Roads named it "Meigs syndrome". Today, Meigs syndrome is defined as the co-existence of benign ovarian fibroma, hydrothorax and ascites. On the contrary, Pseudo-Meigs syndrome is characterized by the co-existence of hydrothorax, ascites and other ovarian- usually malignant or pelvic tumors. Both these syndrome should be considered in otherwise healthy postmenopausal women, who present with either new or recurrent hydrothorax or ascites. The preoperative differential diagnosis between them is useless, since the surgical resection of the tumor is the only therapeutic choice, resulting to the resolution of fluid accumulations in both the situations.[2]

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Case Report:

Mrs. Rabeya a 70 year old postmenopausal woman admitted in Medicine unit-IV in December 2010 because of progressive shortness of breath on exertion and progressive swelling of lower abdomen for the last 6 months. She was afebrile and did not give any history of chest tightness, cough, wheezing or night sweats. The lower abdomen was not associated with pain, per-vaginal discharge, bowel and bladder disturbance. There was no history of itching of the body, pain in bones or joints or significant weight loss during the course of the illness.

Physical examination revealed right sided massive pleural effusion, mild to moderate ascites and a large irregular mass arising from pelvis. P/V examination revealed a rounded pelvic mass separated from the uterus and there was also 2^0 uterine prolapse with 2^0 old tear with cystocele and rectocele. A massive right pleural effusion was found at chest x-ray (Fig.-1). Ultrasonogram of abdomen demonstrated mild ascites and a large heterogeneous, with solid and cystic components, pelvic tumor measured (20cmX15cm) suggestive of left ovarian mass.

These findings were combined with mild anaemia (Hb. Conc: 10.5 gm/dl), high ESR (50 mm in 1st hour), serum CA-125 (32.08 U/ml, NR: <29.60 U/ml).

A preoperative paracentesis and drainage of pleural effusion was necessary to relieve the patient's dyspenic symptomatology. The fluid was exudative (protein: 5.1 gm/dl) and cytological examination of fluid was negative for malignant cells. Ascitic fluid was also drawn out for study

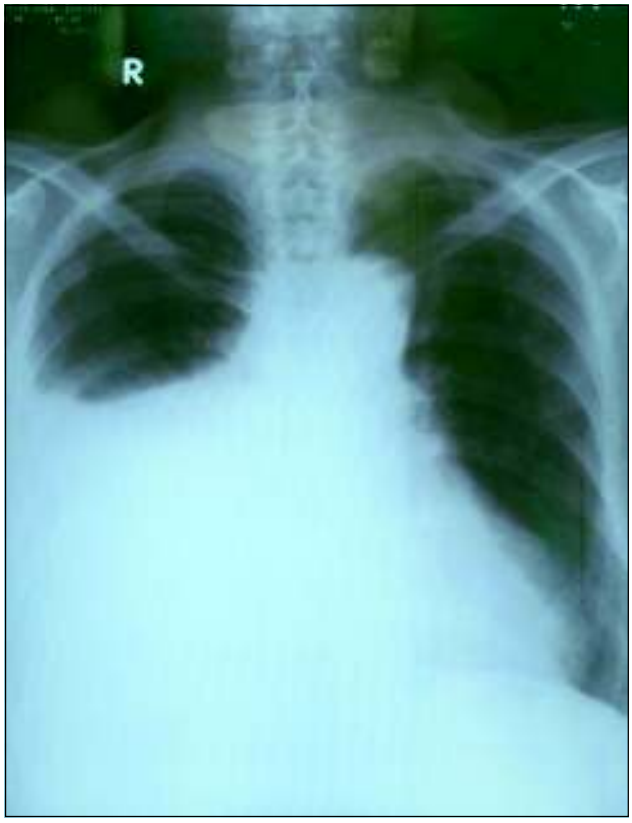

Fig.-1: *X-ray chest showing massive right sided pleural effusion.*

and it was also exudative (protein 3.8 gm. /dl) and cytological examination of the fluid was negative for malignant cells.

The patient underwent an exploratory laparotomy with excision of tumor, right ovary and whole of the uterus. Macroscopic picture of resected tumor is shown in Fig.-2. The tumor was diagnosed histologically as an ovarian mucinous cystadenoma.

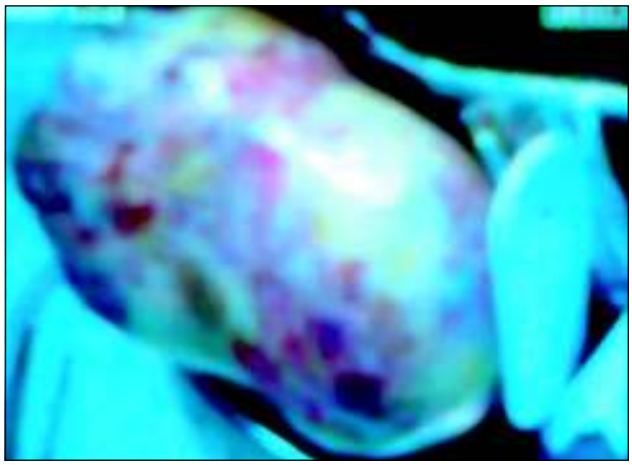

Fig.-2: *Macroscopic picture of large left ovarian tumor (25cmX15cm).*

Three months later a follow up chest x-ray and ultrasonogram showed resolution of hydrothorax and ascites confirmed the diagnosis of Pseudo-Meigs syndrome (Fig.-2).

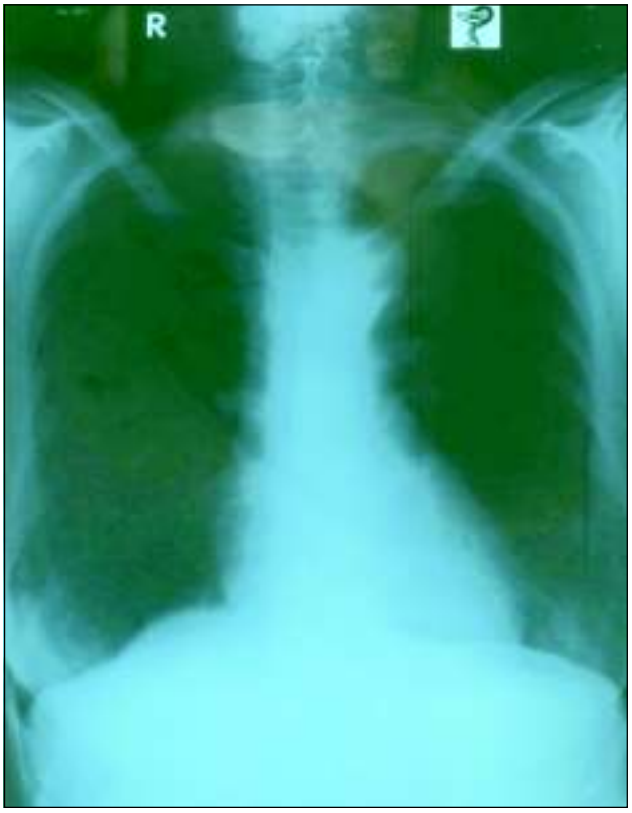

Fig.-3: *X-ray showing complete resolution of pleural effusion after tumour removal.*

Discussion:

The Pseudo-Meigs syndrome can be combined with either benign or malignant tumors (Table-1).

Table-I

Common tumors associated with Pseudo-Meigs syndrome.

Benign Tumors
• Ovarian tumors, other than fibromas
- Stromal tumor
- Struma ovarii
- Teratomas
- Cystadenomas
• Paraovarian fibromas
• Uterine leiomyoma
• Leiomyomas of broad ligament
Malignant Tumors
• Primary ovarian tomors
- Adenocarcinomas
- Endometrioid carcinomas
• Secondary metastatic ovarian tomors, from primary gastrointestinal cancers

Etiology of fluid accumulations remains unclear, although it appears to be related to lymphatic obstruction. The most likely pathogenesis of peritoneal and pleural effusions ascribes filtration of interstitial fluid into peritoneum through the tumor capsule, and diffusion to the pleural space, usually at the right side, through diaphragmatic lymphatic vessels and apertures as well as through intercellular gaps and small areas where muscular tissue of diaphragm is replaced by areolar tissues.[3,4]

The majority of ovarian tumors, associated with hydrothorax and ascites, have a diameter more than 6 cm. The entity of effusions can be moderate or massive. The effusions generally derive from a transudative process but occasionally may be exudative. Their connection with pelvic tumor is demonstrated by their regression after neoplasm removal.

Pseudo-Meigs syndrome is clinically important because it resembles metastatic pelvic cancer. Especially in patients with malignant ovarian tumors, cytological examination of body cavity effusion is essential to differentiate between reactive process and metastatic tumor spread.[5] While detection of malignant cells is a marker of metastatic disease and a sign of bad prognosis, benign effusions of Pseudo-Meigs syndrome affects neither disease nor the patient's prognosis. Determination of the presence or absence of tumor spread is primarily on cellular morphology study, but if distinction between reactive mesothelium and cancer cells is difficult, immunocytochemistry may be necessary.

At this point, must be underlined that an ovarian mass combined with pleural and peritoneal effusions not always represents an advanced malignancy, even with elevation of CA-125 value.[6,7] There are some benign pelvic lesions causing pseudo-Meigs syndrome, which are associated with elevated levels of this tumor marker, such as struma ovarii, ovarian cystadenomas, uterine leiomyomas and broad ligament leiomyomas.[4,8-14] CA-125 levels decline to the normal range after tumor resection.

There also reported 6 cases of Pseudo-Meigs syndrome caused by secondary ovarian tumors from gastrointestinal cancers.[15] The primary site was the colon or rectum in 5 and stomach in 1. Two cases were due to Krukenberg tumors. Three patients with documented outcomes were alive 108, 52 and 12 months after resections, demonstrating that in these cases resection provide long term palliation.

Conclusion:

Pseudo-Meigs syndrome should be considered as a rare differential diagnosis for pleural effusion and ascites when a patient is admitted in medicine word. Patients with pseudo-Meigs syndrome may present a diagnostic problem as they mimic as carcinoma with malignant effusions. Thus they should always undergone exploratory laparotomy. Surgical therapy has a very important role for the complete remission of the disease in cases of benign tumors, and for the remission of pleural and ascites effusions in cases of malignant tumors.

Conflict of Interest : None

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