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Meigs Syndrome

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Abstract
Meigs syndrome is a triad of benign ovarian neoplasia, ascites and pleural effusion (more commonly right side). Ascitis and pleural effusion may be predominating factors giving it a false impression of a malignant ovarian mass. Around 1% of all ovarian tumors are diagnosed as Meigs syndrome. There may be possibility of detecting raised CA-125 in such tumors. We report a case of Meigs syndrome in a 56 year old women from lower socioeconomic status with complaints of shortness of breath, cough, ascites and significant weight loss for 6 months duration.

INTRODUCTION

Meigs syndrome is defined by the presence of pleural effusion and ascites in association with an ovarian tumor[3]. Although Meigs syndrome mimics a malignant condition, it is a benign disease and has a very good prognosis. Postmenopausal women with clinical conditions of palpable pelvic masses, ascites, pleural effusion and elevated serum CA 125 levels probably gives an impression of malignant ovarian tumors. The clinical presentation of ovarian neoplasms can be acute or subacute[1]. The most frequent form of clinical presentation in ovarian malignancy is Gastrointestinal symptoms, ascites and palpable abomino-pelvic mass. Acute presentation like Breathlessness (pleural effusion) warrant urgent attention[2].

Case Report: We report here an interesting case of 56-year-old postmenopausal woman presented to us with history of dull aching pain for 10 months in hypogastrium region and mass per abdomen(10 x 15cm) gradually increase in size since 5 month with raised CA125: 721U/ml. On detailed history she had weight loss, decreased appetite, dry cough, distension of abdomen from last 5 months. She had attained menopause 4 years back with no postmenopausal symptoms. She was primipara, with marital life of 25yrs with no other significant comorbidity seen.

Upon clinical examination, she appeared pale. Vitals were normal. Respiratory system examination revealed decreased air entry on the right basal areas. Abdominal examination revealed a mass of 18-20 week's gravid uterine size occupying the lower abdomen extending upto the umbilicus. The mass was firm to hard in consistency with restricted mobility, nodularity was present. All borders of the mass were well made out except for the lower border suggesting pelvic origin. There was associated ascites. Shifting dullness present. Pelvic examination showed the mass to be separate from the uterus revealed a large irregular mass with a bosselated surface of about 18-20 gravid uterine size, firm in consistency occupying the quadrants of the abdomen. Detailed investigations revealed that patient CA125 is raised:721U/ml, CA19. 9 is normal:11U/ml, CEA is normal., 1.34ng/ml, HE4 is normal:53.10pmol/L

- **Ultrasonography** revealed a large heterogenous, solid, cystic mass is seen in the pelvis, mostly arising from right ovary, measuring 10 x 15cms, associated with moderate ascites suggestive of carcinoma ovary.
- **Chest radiography** confirmed pleural effusion. Pleural fluid and ascitic fluid cytology showed the presence of reactive mesothelial cells with no malignant cells.Pleural tapping done 3 times and then intercostal drain was inserted in right 5th intercostal space (Fig. 1)
- **Ascitic fluid** cytology was negative for malignancy.
- **CT abdomen (P+C)+HRCT chest** study reveals, Large soft tissue mass lesion in central lower abdomen and pelvis seen arising from left ovary with relations and extensions likely s/o neoplastic etiology. Gross ascites with mild omental thickening. Gross right sided pleural effusion with underlying collapse of right lung and mediastinal shift to left. Dilated common bile duct.
- Patient underwent **USG guided Trucut biopsy** (Abdominopelvic mass) for histopathological examination suggestive of spindle cell lesion likely Fibroma.
- **LBC PAP** smear findings were negative for intra-epithelial lesion or malignancy.
- **Chest HRCT** findings were large pleural effusion in posterolateral aspect of right hemithorax. Collapsed consolidation was seen in right lower lobe of lungs with areas of air bronchogram.

Differential Diagnosis Considered were:-

- Meigs syndrome.
- Tuberculosis Kochs abdomen.
- Neoplastic right ovarian lesion.
- Pedunculate broad ligament fibroid.

Management: The patient was then taken up for exploratory laparotomy in view of ovarian tumour. On laparotomy, a Right sided whitish colour mass of about 10*12 cm was noted along with adhesions with bowel. Torsion of tumour pedicle present. Total abdominal hysterectomy with Bilateral salpingo-oophorectomy with infracolic omentectomy with excision of tumour was done. Uterus was normal. Right sided ovary appeared hard in consistency. Ascitic fluid was drained and sent for cytology. All other intraabdominal organs appeared normal.The postoperative period was uneventful and patient was discharged on 8th postoperative day. On her follow up visit on 15th day, the patient was healthy with no recurrence of ascitis. Histopathology report was suggestive of ovarian tumor of cellular fibroma. Left fallopian tube was normal histomorphology with paramesonephric (mullerian) cyst. Right fallopian tube had normal histomorphology. Right ovary had normal histomorphology

RESULTS AND DISCUSSIONS

In 1937, Joe Vincent Meigs and John W Cass reported a series of 7 cases of ovarian fibroma associated with ascites and hydrothorax. It was later termed Meigs syndrome by Rhodes and Terrell. Even though the association of benign ovarian tumors and pleural effusion was reported before, it was Meigs and

Cass who reported the resolution of ascites and pleural effusion after removing the tumor. Eventually, several authors reported similar cases and Meigs syndrome became a distinct entity.

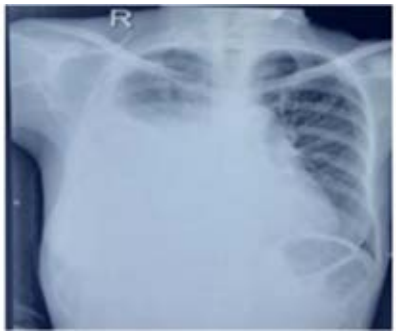

Fig. 1: Ultrasonography revealed a large heterogenous

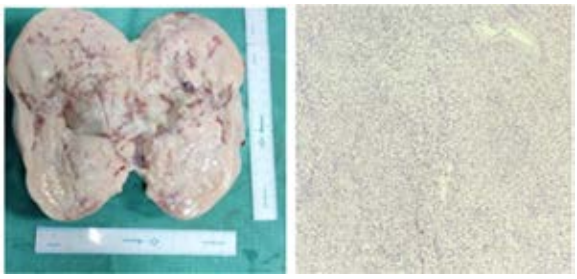

Fig. 2: Histopathology

Meigs eventually redefined the syndrome in 1954. The following criteria are to be met for the diagnosis of Meigs syndrome-a) Presence of the benign tumor of the ovary-Fibroma, thecoma, granulosa cell tumor or Brenner tumor b) ascites c)pleural effusion and d) a resolution of ascites and pleural effusion after removal of the tumor. This syndrome is sometimes called Demons-Meigs syndrome after another author who described a similar presentation before Meigs.

Meigs syndrome is a rare but well known syndrome defined as the association of ascites, pleural effusion and a benign solid ovarian tumor usually a fibroma in which tumor removal leads to complete resolution of pleural and peritoneal effusions[3]. Fibromas account for 4% of ovarian neoplasms. They present during the fifth and sixth decade of life.10-15% of all fibromas are associated with ascites while only 1% have pleural effusion in addition to ascites[4].

Pseudomeig syndrome consists of pleural effusion, ascites and benign tumours of the ovary other than fibromas like benign ovarian teratoma, mucinous cystadenoma, pelvic hemangioma, uterus leiomyoma and papilloma of fallopian tube are referred to as pseudo-Meigs' syndrome[5].

Pseudo-Pseudo Meigs Syndrome: Also called Tjalma syndrome, is a condition where there is a combination of ascites, pleural effusion and elevated serum levels of CA 125 in a patient with systemic lupus erythematosus.

Etiology of ascites can be explained by transudation through the tumor surface which exceeds the peritoneal resorptive capacity, direct pressure on the surrounding lymphatics, tumor torsion and that of hydrothorax is transfer of ascitic fluid via trans diaphragmatic lymphatic channels and the right sided hydrothorax may be explained because of the defects in the diaphragm are more common on the right.

Among the differential diagnoses of Meigs syndrome are malignant ovarian tumors, lung or intestinal cancer, nephrotic syndrome, congestive heart failure, liver cirrhosis and tuberculosis. Patients with Meigs' syndrome and elevated serum CA-125 are not frequently reported. Khanduja D reported a case of a 50-year-old women who presented with shortness of breath, cough, weight loss of one and half month duration with serum level of CA-125 was 534 U/ml. In present case, CA 125 levels were 721.4 U/ml (normal level <35 U/ml).

CONCLUSIONS

Although Meig's syndrome mimics a malignant condition, it is a benign disease and has a very good prognosis if properly managed. Life expectancy after surgical removal of the tumor mirrors that of the general population. The treatment of choice for the tumor is exploratory laparotomy with unilateral oophorectomy in premenopausal women or bilateral oophorectomy in cases of menopausal or perimenopausal women.

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