CASE REPORT

Meig’s or Pseudomeig’s Syndrome?

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Abstract

The triad of ascites, hydrothorax in association with a benign ovarian tumor is defined as Meig’s syndrome. It is a rare clinical entity. A case of a 62 year-old woman with dyspnoe, abdominal discomfort and ascites is presented. Clinical and ultrasonographic findings revealed extended palpable pelvic mass originating from the ovaries and ascites as well as hydrothorax of the left lung by chest radiography. The treatment method was surgical intervention. Cytomorphologic studies were positive for malignancy and adenocarcinoma cells were confirmed. The pathogenesis of the pleural and ascites fluids and the importance of CA-125 are discussed (Fig. 2, Ref. 21). Full Text (Free, PDF) www bmj sk.

Key words: ascites, hydrothorax, pelvic tumor.

Ovarian cancer has the highest mortality figures of all gynecologic malignancies. The constellation of findings consisting of solid ovarian mass, ascites and hydrothorax should be considered a malignant process until proven otherwise. However, the triad of ascites, hydrothorax and benign ovarian tumor is associated with Meigs’ syndrome. This condition disappears after removal of the pelvic tumor.

Case

Medical history. V.M. a white female patient, aged 62, was admitted in our clinic on 6-12-05 due to dyspnoe, severe abdominal discomfort, feaces and gas retention for the last few days.

On clinical examination the patient was found to suffer from ascites and significant hypoventilation with possible pleural effusion (mainly left sided). Per rectum and per vagina examination confirmed an extended pelvic palpable mass.

Laboratory results. Anaemia was diagnosed on F.B.C., and elevated (>100 mg/ml) serum Ca-125.

Chest X-ray: Confirmed left sided pleural effusion with interstitial oedema of the lung.

CT scan: Extended ascites of the abdominal cavity. Multifocal abdominal masses infiltrating major omentum and abdominal peritoneum were visualized (Figs 1 and 2).

Large neoplastic mass, located in the lower abdomen, was revealed, possibly originating from the ovaries. Liver and pancreas were without any significant tissue damage.

Colonoscopy: Adenocarcinoma of the sigmoid with inflammatory swelling of the mucosa, extending from 30 to 60 cm from the anus confirmed by multiple Biopsies.

Intravenous pyelography: confirmed intact urinary system.

Chest drain was used to evacuate pleural effusion and relief dyspnoe. The fluid examined for malignancy was found to be positive. Adenocarcinoma cells were confirmed.

On exploratory laparotomy, ascites fluid was found, also containing malignant cells – confirmed by cytology. Major omentum was inoculated with secondary masses. Dissemination was apparent on the abdominal peritoneum and small intestine. Huge neoplastic tumor was revealed in the pelvic region, originating mainly from the right ovary, infiltrating uterus, left ovary and extended part of the sigmoid. Infiltration of both internal iliac veins was obvious.

Excision of the omentum was performed in order to control the ascites.

Sigmoid colon was mobilized centrally to the tumor, part of the transverse and descending colon was resected, and the proximal part was exteriorized through abdominal wall to a permanent colostomy leaving peripheral part as a mucosal sinus.

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In an effort to minimize the tumor mass (debulking), left ovary was excised and part of the tumor was successfully removed.

Pathology examination of the excised specimens resulted in papillary Adenocarcinoma of the ovaries, stage IV.

The patient was hospitalized in I.C.U. for two days after the operation, and another fourteen days in the surgical ward. No postoperative complications occurred.

The patient was discharged, in relatively good condition, after inserting a chemotherapy subclavian port catheter. She was advised to an oncologist.

**Discussion**

The triad of ascites, hydrothorax in association with a benign ovarian tumor is defined as Meig’s syndrome. It occurs mainly in elderly women, but it is also reported in young women (1). Pseudo-Meig’s syndrome (a term given by Meigs himself) is the same as true Meig’s syndrome except that in the pseudo-Meig’s syndrome the tumor may be in the ovary, tubes, uterus, round ligament or colon (2-7). Otto Spiegelberg in 1866 first described a patient with fibroma, ascites and hydrothorax (8). Further descriptions were made by Cillingworth, A.J.O. Demons, R.L. Tait, P. Pascale and L.F. Terrier in the 19th century. Joe Vincent Meigs (1892–1963), a professor of the Harvard Medical School of Gynecology, described the condition in 1934 as a syndrome comprising ovarian fibroma, ascites and hydrothorax. J.E. Rhoads and A.W. Terrell in 1937 termed the condition Meigs’ syndrome (9). In 1954, Meigs proposed limiting true Meigs’ syndrome to benign and solid ovarian tumors such as fibromas, thecomas, cystadenomas or granulosa cell tumors with the condition that removal of the tumor cures the patient.

Meigs suggested that irritation of the peritoneal surfaces by the ovarian tumor stimulates the production of peritoneal fluid. Ascites may be caused by transudation of interstitial oedema fluid or by cyst formation within the tumor secondary to injury or necrosis. A discrepancy between arterial supply to a large mass and its venous and lymphatic drainage may lead to stromal oedema and transudation. Other proposed pathophysiologic mechanisms are direct pressure on surrounding lymphatics or vessels, hormonal stimulation and tumor torsion. Release of mediators from the tumor may also lead to increased capillary permeability and ascites. It is also proposed that ascitic fluid is transferred via transdiaphragmatic lymphatic channels resulting in hydrothorax. Others believe that the liquid moves from the peritoneal to the pleural cavity through diaphragmatic defects. It is usually located on the right (70%), 15% on the left and 15% bilaterally. In Meigs’ syndrome ascitic or pleural fluid might be either exudative or transudative, but both are always of similar nature (10, 11).

The important factor in the formation of ascites and hydrothorax seems to be the tumor size rather than the histologic type. The worldwide prevalence of the syndrome is unknown but is found to be more frequent in elderly women. We should not forget that it is a benign condition with a very good prognosis if properly managed. Life expectancy after surgical treatment is the same as in general population. Family history of ovarian cancer may be present in such patients. Usually, the patient presents with fatigue, shortness of breath, non-productive cough, bloating, weight loss, ascites and amenorrhea or menstrual irregularity in premenopausal women. Physical examination usually reveals tachypnea, tachycardia, dullness to percussion in the lungs, decreased tactile and vocal fremitus, decreased breath sounds because of the pleural effusion which is usually observed on the right side. Examination of the abdomen may or may not reveal a small or large pelvic mass but there is always ascites. Pelvic examination shows a pelvic mass. From the lab studies anemia in such patients is frequent due to iron deficiency. Electrolytical changes and prolonged prothrombin time are also frequent (12, 13). Elevation of CA-125 could also be found in Meigs’ syndrome.

The CA-125 tumor marker is generally elevated (above 35 mIU/mL) in patients with malignant ovarian tumors. However, it might be elevated in benign disorders such as endometriosis,
pelvic inflammatory disease and uterine leiomyomas. It can also be increased in pericardial, pleural and peritoneal irritation or inflammation (14–16). Chest radiography confirms pleural effusion. Ultrasound or CT of the abdomen and pelvis confirms ascites and ovarian, uterine, fallopian tube or broad ligament mass but with no signs of distant metastasis. Ascitic or pleural fluid are usually transudative. After paracentesis the findings can be negative for malignant cells but can be positive for reactive mesothelial cells. After thoracentesis the fluid might also be exudative and negative for malignancy (17). Histologic findings usually reveal coelomic epithelial tumors (e.g. serous cystadenoma and mucinous cystadenoma, endometrioid type and clear cell, Brenner tumor) in 80–85 %, germ cell tumors (e.g. teratoma, dysgerminoma, gonadoblastoma, endodermal sinus, embryonal carcinoma) in 10–15 % and finally gonadal-stromal cell tumors (granulosa cell, fibroma, thecoma Sertoli-Leydig cell) in 3–5 % (18–20). Symptomatic relief of ascites and hydrothorax via paro- or thoraco-centesis is not a curative treatment.

The treatment of choice is exploratory laparotomy which includes biopsy of the ovarian mass, lymph node biopsies, biopsy of omentum and pelvic washings which are usually negative for malignancy. Unilateral salpingo-oophorectomy is performed in women of reproductive age while total hysterectomy is preferred in postmenopausal women. Ascites and hydrothorax resolve within a few weeks after surgery without any recurrence (21).

References


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