Meigs syndrome - A case report

Datta Ray Chaitali, Sharma Partha Pratim, Choudhury Sarmishtha, Sarkar Shanti

Institute of Post Graduate Medical Education and Research Kolkata.

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Introduction
Meigs syndrome is characterized by presence of an ovarian benign solid tumor (usually a fibroma) ascites, and hydrothorax (normally right sided) \(^1,2\). Characteristically ascites and hydrothorax resolve spontaneously and permanently after removal of the tumor \(^2,3\).

Case report
Mrs. RJ, 30 years old, attended the Chest outpatient department of our institution on 28\(^{th}\) June, 2003 for respiratory distress at rest for the last 2 weeks. From there she was referred to us because of the swelling of the lower abdomen of 3 months duration along with a dull aching pain. She was immediately admitted. Her menstrual history was normal and last period was on 20\(^{th}\) June, 2003. Her only pregnancy had resulted in a live birth 6 years back. Past medical and surgical history were insignificant. On general examination she was of average build with mild pallor. Jaundice, cyanosis, clubbing and edema were absent. Her pulse rate was 88/ minute, blood pressure - 110/76 mm of Hg, respiratory rate 24/minute and temperature normal. Breast examination revealed no abnormalities. Respiratory system examination revealed a stony dullness over right chest wall from 2\(^{nd}\) intercostal space downwards. Breath sounds were diminished on the right side and also on the lower part of the left side. There were no crepitations or rhonchi. The cardiovascular system examination showed no adventitious sounds with S1 and S2 being normally audible. Abdominal inspection revealed fullness of lower abdomen without any prominent veins or distortion of the umbilicus. No mass could be palpated but there was tenderness in the left iliac fossa and part of the hypogastrium. Liver, spleen, and inguinal lymph nodes were not palpable. On percussion there was shifting dullness due to free fluid. Auscultation revealed normal intestinal peristaltic sounds. Vaginal examination showed a left sided solid mass of about 13 cm size separate from the normal sized uterus. Other systemic examinations revealed no abnormalities.

Routine investigations including complete hemogram, blood sugar, blood urea, creatinine, liver function tests and electrolytes were within normal limits.

Sonography showed left sided ovarian mass of 11.4 x 8.6 x 5.7cm with few cystic spaces, moderate ascites, pleural effusion on the right side and cholelithiasis. Due to her indigent condition other expensive investigations could not be carried out.

She underwent exploratory laparotomy under general anesthesia on 2\(^{nd}\) July, 2003. On opening the abdomen by right infraumbilical paramedian incision, plenty of deep straw colored fluid came out of the peritoneal cavity and was sent for cytological examination. A 14 x 12 sized hard, lobulated, greyish white tumor arising from the left ovary with 3 twists in the pedicle and adherent omentum was detected. Uterus was normal in size and the other ovary was slightly larger than normal. Due to the size and angry looking nature of the tumor, quick onset ascites, omental adhesions, and absence of frozen section biopsy facilities at our institute to rule out any
malignancy, a decision for total abdominal hysterectomy and bilateral salpingo oophorectomy was taken, for which prior consent had been taken from both the patient and her husband if the necessity arose. Exploration of the peritoneal cavity did not show any palpable lymph node or other metastasis. One unit of blood was transfused during surgery. Postoperatively, breath sounds reappeared up to the 4th intercostals space on the right side from the 2nd day and up to the base of both the lungs from the 8th postoperative day. Repeat chest x-ray after 2 weeks showed both lung fields to be totally clear (Figure 2). The patient was discharged on 22nd July, 2003 in a healthy condition. She came for follow up after 6 weeks with a repeat abdominal USG which showed complete disappearance of the ascites.

Histopathology report – 1) Left ovary showed features of fibroma (Figure 3). There were also follicular cysts adjacent to the tumor. No evidence of malignancy was seen. 2) The right ovary had a corpus luteal cyst. 3) Uterus showed secretary endometrium, cervix showed chronic cervicitis with papillary erosion and squamous hyperplasia. 4) Omental biopsy did not reveal any features of malignancy. 5) Ascitic fluid showed mainly lymphocytes and mesothelial cells and did not show any abnormal cells.

Discussion

Meigs syndrome, although named after Meig, was first described by Demons of France and Lawson Tait of England 2. It is characterized by an ovarian benign solid tumor which is usually a fibroma, ascites and hydrothorax (normally right sided). There may be associated pyrexia and characteristically the ascites, hydrothorax and pyrexia (if present), resolve spontaneously and permanently after removal of the tumor 2.

Fibromas are the most common tumors of ovarian stroma and constitute 3-5% of all ovarian neoplasms. They are nonfunctioning and rarely malignant 3, and of them 90%1,2,4 occur after the age of 30 4. Bilateralism is seen in 15% 4. On gross appearance they are solid and firm, while microscopically there are bundles of bland spindle cells with elongated nuclei, intersected by bands of collagenous fibrous tissue 1,4. Ascites occurs in 10-15% of these cases when the tumor size is more than 10 cm 4. Classical Meigs syndrome has an incidence of 1% of all ovarian fibromas 4. Etiology of ascites has been explained by following mechanisms –

a) Partial torsion of the ovarian vascular pedicle leading to venous engorgement and transudation (weeping of serous fluid from the tumor), which enters the pleural space through the diaphragmatic lymphatics 4
or through defects in the diaphragm which are more common on the right.

b) Exudation from the peritoneum because of mechanical irritation by the hard heavy mobile tumor (most likely).

c) Degeneration of the fibroma.

d) Changes in the capsular veins of the fibroma.

e) Probable active secretion by the tumor.

In our case, the patient presented with the classical triad of ovarian tumor, ascites, and hydrothorax. The tumor proved to be a fibroma. The ascites and hydrothorax resolved spontaneously on removal of the tumor. The point to note is that, if the family of such patients is incomplete, it is possible to conserve the uterus and ovary and still bring about a complete cure.

Reference


