

Benign Mesothelioma of Peritoneum Presenting as a Pelvic Mass

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ABSTRACT

A large solitary multiloculated pelvic cyst in a 40-year-old woman with chronic pelvic pain was diagnosed to be a Multicystic Benign Mesothelioma (MBM) of peritoneum at laparotomy. Operative findings showed dense adhesions between uterus and bladder anteriorly, small intestines and pouch of Douglas posteriorly, a right ovarian cyst cm containing clear serous fluid and two nodular deposits were seen in the pouch of Douglas, small multiple deposits was found over the mesentery of small intestine and parietal peritoneum. Total abdominal hysterectomy with bilateral oophorectomy and infracolic omentectomy was done. During surgery, there was injury to the small intestine hence, resection of 10 inches of small intestine with re-anastomosis was carried out. Postoperative recovery was satisfactory. At 3 years follow-up, patient is symptom-free.

Key words: *Multicystic benign mesothelioma. Reactive mesothelial hyperplasia. Peritoneal mesothelioma.*

INTRODUCTION

A thin membrane of mesothelial cells envelops has many organs in abdomen. Mesothelioma is the neoplasia of these cells. Incidence of mesothelioma is 2 – 2.6 per million approximately.¹ Benign mesothelioma has a male preponderance.^{1,2} Mesothelioma may be benign or malignant. The term mesothelioma is usually used for malignant lesion, which is due to asbestos exposure.¹⁻³ Benign mesothelioma due to chronic irradiation/injury is known as reactive mesothelial hyperplan. This report describes one such case.

CASE REPORT

A 40-year-old woman para 11 presented with chronic pelvic pain and ovarian mass for 5 years. She was admitted 5 years back in the same hospital with incomplete miscarriage at 11 weeks. Therapeutic evacuation and curettage was done at that time. During the procedure, there was accidental perforation of the fundus of uterus, which was immediately recognized. The perforation was followed by laparotomy and a small 2-3 cm hole in the fundus of uterus was repaired. Both tubes and ovaries were normal looking at that time and there was no additional injury to the surrounding structures. Patient was discharged on the eighth postoperative day in a satisfactory condition. Five

months later, the patient presented again with symptoms of acute abdomen pain. Ultrasound showed a complex right ovarian mass measuring 7.6 x 5.3 cm with thick septae. There was minimal fluid in the pouch of Douglas. On color Doppler, there was no increased vascularity and the impression was of an inflammatory mass. The patient was treated with intravenous antibiotics and anti-inflammatory drugs. She was discharged after 10 days with advice of follow-up scan after 3 weeks. She returned for follow-up, although she visited other consultants.

Five years later, she presented with chronic pelvic pain and right ovarian mass. On evaluation, there was tenderness in right lower abdomen but no abdominal mass was palpable. On speculum examination, cervix was normal looking with no discharge. Bimanual examination of uterus was normal with a tender cyst measuring 8 x 6 cm in the right fornix. Her investigations were within normal limits except transvaginal scan and color Doppler showing a complex multiloculated right adenexal mass measuring 7.6 x 5.6 cm with multiple septae and some of these septae showed increased blood flow. R I was < 0.8., CA-125 was 6.5 U/ml (normal < 35 U/ml). Patient was counselled for laparotomy with consent of hysterectomy. Operative findings showed dense adhesions between uterus and bladder anteriorly, small intestines and pouch of Douglas posteriorly. A right ovarian cyst 9 x 8 cm containing clear serous fluid was found. Two nodular deposits, white in color, 2 cm in size, were seen in the pouch of Douglas. Small 1-2 cm multiple deposits was found over the mesentery of small intestine and parietal peritoneum. Surgery was done by surgeon. We did total abdominal hysterectomy with bilateral oophorectomy, infracolic omentectomy as our pre-operative diagnosis was malignant ovarian cyst with peritoneal metastasis. During surgery, there was injury to the small intestine hence, resection of 10 inches of

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small intestine with re-anastomosis was carried out. Postoperative recovery was satisfactory.

Histopathology report showed chronic cervicitis. Endometrium showed hormonal imbalance. Both fallopian tubes had features of chronic salpingitis. Right ovary showed a cystic mass 10 cm in diameter with multiple cysts, largest measuring 5 cms in diameter. Omentum contained a single focus of BM and the small gut showed features of chronic inflammation. The cyst wall was lined by benign mesothelial cells. The ultra structural, and morphological findings were consistent with reactive mesothelial changes, no features of malignancy was seen. Findings were suggestive of multicystic benign mesothelioma. Left ovary showed normal histology. The masses in pouch of Douglas and mesentery were also reactive hyperplasia of mesothelium.

DISCUSSION

Mesothelium is a protective sac that covers most of the body's internal organs. Mesothelioma is a rare form of mesenchymal neoplasm that is most often found in the pleura; however, it has recently been described in a number of extrapleural sites including pericardium and peritoneum. The most common cause of mesothelioma is asbestos exposure. Most people who develop mesothelioma inhaled asbestos particles in their working environment.³

Peritoneal mesotheliomas are rare in women compared to serous epithelial ovarian tumour. The term mesothelioma is usually used for malignant variant. Benign mesothelioma are due to reactive mesothelial hyperplasia as in this case. Symptoms of peritoneal mesothelioma include weight loss, abdominal pain and swelling due to a build-up of effusion in the abdomen. Other symptoms may include bowel obstruction, blood clotting abnormalities, anaemia and fever.

Diagnosis of mesothelioma is often difficult because the symptoms are similar to a number of other conditions. The diagnosis begins with a review of patient's medical history, including any history of asbestos exposure. A complete physical examination must be performed, including X-ray of the chest and abdomen. A CT scan or an MRI may also be useful. A biopsy is needed to confirm the diagnosis of mesothelioma. The mesothelial lining surface has a great capacity to undergo florid hyperplastic changes when irritated. This hyperplasia can occur in a diffuse fashion throughout the peritoneal cavity as in cases of liver cirrhosis, chronic vascular disease such as SLE and viral infections. The hyperplasia may be localized as a response to injury to hernial sac, serosa of acutely inflamed appendix,^{5,6} fallopian tube, following rupture of ectopic pregnancy

simulating implants from a serous papillary tumour of the ovary. The danger of misinterpreting these reactive mesothelial changes as neoplastic is even greater when they develop in association with ovarian neoplasm, sometimes in intimate closeness to them.⁷ Biopsy is confirmatory.⁸ On naked eye, these lesions appear as papillary projections, solid nests or tubular structures.⁹ They may project on the surface or interact in a complex fashion with the underlying stroma; simulating invasion.

These benign lesions are usually symptom less and incidental finding at laparotomy where they may be confused with peritoneal metastasis. Sometimes, they may cause abdominal pain due to pressure on nerves, cause bowel obstruction and distention due to adhesion formation.¹⁰ There may be weight loss due to reduced appetite. Ascites is almost always present.¹¹

The size of mesothelioma varies from 2-25 cm.¹² The differential diagnosis lies between metastatic carcinoma of ovary. The tumour spreads locally and may cause complete obliteration of peritoneal cavity due to adhesion formation.⁷

Treatment of mesothelioma depends on the location of the cancer, the stage of the disease, patients' age and general health. Standard treatment options include surgery, radiation therapy and chemotherapy. Sometimes these treatments are combined. There is lack of consensus on the treatment and follow-up of benign mesothelioma. Most authorities consider curative treatment of BM is achievable through complete cytoreduction. At 3 years of follow-up, our patient had no recurrence of lesion.

REFERENCES

1. Attanoos RL, Gibbs AR. Pathology of malignant mesothelioma. *Histopathology* 1997; **30**:403-18 .
2. Lopes C, Scotto-Mayor R, Teixeira E, Almeida A. Malignant mesothelioma: a ten years experience. *Rev Port Pneumol* 2005; **11**:16-8.
3. Hosny G, Akel M. Assessment of asbestos in drinking water in Alexandria, Egypt. *J Egypt Public Health Assoc* 2006; **81**:181-98.
4. Patriiti A, Rondelli F, Gulla N, Donini A. Laparoscopic treatment of a solitary fibrous tumour of the greater omentum presenting as spontaneous haemoperitoneum. *Ann Ital Chir* 2006; **77**:351-3.
5. Palumbo P, Veronesi S, Girolami M, Guglielmi R, Crispino M, Bellucci A, *et al.* Cystic mesothelioma of the peritoneum: a clinical case report. *G Chir* 1992; **13**:37-9.
6. Suh YL, Choi WJ. Benign cystic mesothelioma of the peritoneum; a case report. *J Korean Med Sci* 1989; **4**:111-5.
7. Komorowski RA, Bobert DH. Peritoneal mesothelioma. *South Med J* 1975; **68**:83-5.
8. Mennemeyer R, Smith M. Multicystic, peritoneal mesothelioma: a report with electron microscopy of a case mimicking intra-abdominal cystic hygroma (lymphangioma). *Cancer* 1979; **44**:692-8.

9. O'Neil JD, Ros PR, Storm BL, Buck JL, Wilkinson EJ. Cystic mesothelioma of the peritoneum. *Radiology* 1989; **170**: 333-7.
10. Jovovic M, Savjak D, Lazovic R, Vujadinovic O. Multicystic mesothelioma of the peritoneum. *Vojnosanit Pregl* (Serbian) 1999; **56**:217-20.
11. Hidvegi J, Schneider F, Rohonyi B, Flautner L, Szlavik L. Benign cystic mesothelioma of the peritoneum. *Orv Hetil* (Hungarian) 1990; **131**:249-51.
12. McCullagh M, Keen C, Dykes E. Cystic mesothelioma of the peritoneum: a rare cause of 'ascites' in children. *J Pediatr Surg* 1994; **29**:1205-7.

