Cystic mesothelioma mimicking as ascites

A. Y. Kshirsagar, S. R. Desai, V. A. Pareek

Department of Surgery, Krishna Institute of Medical Sciences, Malkapur, Karad- 415 110, Dist. Satara, Maharashtra, India.

ABSTRACT

Cystic mesothelioma is a rare neoplasm of the peritoneum, the mesothelial origin of which has been suggested by recent ultra-structural studies. Till 1999, 130 cases have been reported in the literature. Unlike its malignant counterpart, cystic mesothelioma is not related to prior asbestos exposure. Even though it does not metastasise or turn malignant it may recur locally. Cystic mesothelioma of the peritoneum has non-specific, multilocular cystic appearance on images obtained with several modalities (USG, CT). Adequate therapy of cystic mesothelioma of the peritoneum requires complete resection at the first opportunity. Because of this rarity the case has been reported here.

Key words: Mesothelioma, Cystic, Peritoneum, Ascites

INTRODUCTION

Cystic mesothelioma is a rare neoplasm of the peritoneum. Till 1999, 130 cases have been reported in the literature. The most common presenting complaints are: pelvic/low abdominal pain (75%), and abdominal lump (46%). Even though it does not metastasise or turn malignant it may recur locally. We report a case of cystic mesothelioma mimicking as ascites in a 13-year-old male and discuss the management of the condition.

CASE REPORT

A 13-year-old male came with complaints of gradual distension of the abdomen since 4 years, which was initially restricted to the lower abdomen and now involving the whole of the abdomen. There was no history of pain or any bowel and bladder complaints. On examination, he was poorly nourished. The abdomen was massively distended, and the umbilicus was everted with dull note all over the abdomen. There was no organomegaly. The clinical impression was massive ascites.

His serological investigations were within normal limits. X-ray Chest showed upward pushed and flattened domes of the diaphragm and X-ray Abdomen showed ground glass appearance with bowel loops pushed laterally. His ultrasound was done, which was suggestive of a large intraperitoneal cyst with scalloping of the undersurface of the liver suggestive of Pseudomyxoma peritonei.

On exploration, there was a huge cystic mass of 30 x 15 x 10 cm occupying the whole of the peritoneal cavity [Figure 1] and arising from the transverse mesocolon with bowel loops pushed laterally and in the pelvis. The cyst contained 4-5 litres of yellowish, but clear fluid [Figure 2]. Other viscera were normal. The cyst was excised and the mesocolic defect closed. The postoperative period was uneventful and the patient recovered well.

Histopathologically, it was a 30 x 18 x 8 cm globular cystic mass weighing 2850 g. On cut opening it was a unilocular cyst having a smooth surface and clear straw-coloured fluid. On microscopy it was a cyst lined by flattened mesothelial cells and a wall composed of fibrous tissue showing mild mononuclear cell infiltration suggestive of cystic benign mesothelioma of intraperitoneal cyst.
DISCUSSION

Cystic mesothelioma of the peritoneum is a well-recognized but rare tumour described first in 1979.\(^2\) It is a diffuse tumour of the peritoneum, which shows a marked predilection for the surface of the pelvic viscera.

However, unlike its malignant counterpart cystic mesothelioma is not related to prior asbestos exposure. Also, in contrast to malignant mesothelioma, which is seen predominantly in males, benign cystic mesothelioma is seen in females of the age group 17-61 years.\(^2\) This tumour has been considered benign but the clinical behaviour of the lesion has not been defined. Even though it does not metastasise or turn malignant it may recur locally.\(^3^\)-\(^4^\) The most common presenting complaints are pelvic / low abdominal pain (75%), and abdominal lump (46%). On examination, the mass is virtually palpable in all cases except those occurring during pregnancy.\(^2\)

Cystic mesothelioma of the peritoneum has a non-specific, multilocular cystic appearance on images obtained with several modalities (USG, CT). Although cystic mesothelioma as such has no characteristic diagnostic features, the discovery of a multicystic abdominal mass in a woman of childbearing age may alert the radiologist to consider the diagnosis of cystic mesothelioma of the peritoneum.\(^4\)

The aetiology of cystic mesothelioma remains unclear. It has been suggested that they are really multiple inclusion cysts that result from a proliferative reaction within the peritoneal tissue; their continued proliferation might be caused by the continued persistence of an inciting factor.\(^5\)

Unilocular peritoneal cyst, a rare variant of cystic mesothelioma can be either developmental, which is due to imperfect fusion of the leaves of the posterior parietal peritoneum after derotation of gut or inclusion cyst which is found exclusively after abdominal or pelvic operations.\(^4\)

Adequate therapy of cystic mesothelioma of the peritoneum requires complete resection at the first opportunity. An aggressive approach with complete disease eradication is the correct goal of treatment. Cytoreductive surgery to remove all visible tumour and intraperitoneal chemotherapy to control microscopic residual will help the patients with peritoneal cystic mesothelioma to remain symptom and disease-free over time period with a single surgical intervention.\(^6\)

The recurrence rate for cystic mesothelioma after surgical excision is approximately 45 % with an interval ranging from 4 months to 12 years.\(^7\) Re-exploration with complete surgical excision is the gold standard treatment for recurrence.

The roles of radiotherapy and chemotherapy have been defined, but are expected to be minimum because of the benign appearance of the lesion. The focal presence of oestrogen receptors and progesterone receptors in some lesions of benign cystic mesothelioma does provide weak biological support for the use of hormonal manipulations as a therapeutic option.\(^8\)

REFERENCES

ANNOUNCEMENT

TRAUMA CARE WORKSHOP

Indian Association of Traumatology and Critical Care (A Section of Association of Surgeons of India) along with the Trauma Services of the Department of Surgery of L. T. M. G. Hospital, Sion, Mumbai will be conducting the Basic and Advanced Trauma Care Workshop from October 4th - 8th, 2005 at the Department of Surgery, L. T. M. G. Hospital, Sion, Mumbai 400 022.

The Basic Course will cover resuscitation techniques for a critically injured patient. It is meant for all clinicians irrespective of specialty and will be particularly useful for interns and young doctors. The methodology used will include lectures, video films, hands-on training on mannequins and computer based interactive learning. Maximum number of participants shall be 80. This course shall extend over two days October 4th and 5th, 2005.

The Advanced Course is meant only for general surgeons – practising surgeons and post graduate students and residents. It will cover surgical decision making and surgical techniques for the management of chest, abdomen, head and vascular trauma. The methodology used will include lectures, video films and cadaver dissection. The number of participants shall be limited to 50. The course will extend over three days October 6th, 7th and 8th, 2005.

Course fees:

Basic Course: Rs. 1500/- (Rs. 1000/- for Interns and Post-graduate students *)
Advanced Course: Rs. 2000/- (Rs. 1500/- for Post-graduate students *)
Both Basic and Advanced: Rs. 3000/- (Rs. 2500/- for Post-graduate students*)

(*: Certificate from the head of the department to be attached)

Mode of payment: By Cash/Local cheques/Demand drafts. Outstation cheques will not be accepted. Cheques/Demand draft should be made in favour of "Trauma Care Workshop", payable at Mumbai.

For further information please contact: Dr. S. B. Dharap,
Organising Secretary, Trauma Care Workshop, Department of Surgery,
L. T. M. Medical College, Sion, Mumbai - 400 022.
Telephone/Fax: 022- 24042095. E-mail: drdharap@hotmail.com