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Case Report

Multiloculated peritoneal inclusion cyst: a case report

Sunita Prakash Jain[1]*, Arum C. M.[1], Doreswamy K.[2], Amasa Vishwanath Reddy[3]

[1]Department of Surgery, [2]Department of Urology, [3]Department of Medicine, District hospital, Chickaballapura, Karnataka, India

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***Correspondence:**
Dr. Sunita Prakash Jain,
E-mail: drsunitaprakash@gmail.com

ABSTRACT

Multiloculated peritoneal inclusion cysts (MPIC) are uncommon abdominopelvic cysts seen in perimenopausal women. We describe a perimenopausal woman presenting with pelvic mass. This patient presented to us with all signs and symptoms involving abdomen and the pelvis. On emergency laparotomy, it was seen that multioculated cyst occupied the whole of abdomen arising from the peritoneum. The condition was successfully treated with surgery. Histopathological examination (HPE) report proved it to be multi loculated peritoneal inclusion cyst. This case is presented for its rarity in itself, presenting as intestinal obstruction, in a healthy female, that too without previous history of any surgery.

Keywords: Multiloculated peritoneal inclusion cyst, Recurrence, Surgery, Management

INTRODUCTION

Multiloculated peritoneal inclusion cysts (MPIC) or benign cystic mesotheliomas were first described by Plaut in 1928.[1] These cysts are commonly reported in women of reproductive years with pelvic and low abdominal pain being the most common presenting complaints.[2] Although benign, these lesions tend to recur, often requiring repeated surgeries.[3-5] The lesions usually arise from peritoneal mesothelium covering the serous cavity and are often found on imaging or incidentally at surgery.[6] It is advised to confirm the diagnosis by radiology, histology and immunohistochemistry. Herein, we report a case of MPIC that involved whole of abdomen and the pelvis that was successfully treated with surgery.

CASE REPORT

A 27-year-old woman, with normal delivery of two children presented with history of gradual distension of abdomen since 6 months. Pain was dull aching without any radiation or referred pain. History of amenorrhea for 5 months, no episodes of nausea, vomiting, urinary disturbances or diarrhoea was reported. Pre-operative haemoglobin concentration was 4 gm%, renal and liver function tests were normal, erythrocyte sedimentation rate (ESR) being 100 mm/h. There was no history of previous surgeries, co-morbidities or significant medical history. On examination, the patient's vital signs were stable, uniform distention of abdomen superiorly up to xisternum laterally both iliac fossa. No tenderness or shifting dullness was observed. Ultrasound scan revealed massive fluid collection in right and left iliac fossa along with bigger cyst in right ovary measuring 19 mm. Further CECT of abdomen and pelvis revealed a large 22.7×9.4×25.0 cm cystic lesion occupying the abdominal cavity with a single enhancing septa within. The large bowel and the mesentry were displaced to the left and posteriorly. Her uterus was of normal size with no evidence of adnexal mass or calcifications. Minimal fluid was noted in the pouch of Douglas. The lesion was of undetermined origin and a further surgico-pathologial correlation was suggested. Working diagnosis was a mesentric cyst/peritoneal cyst. After correction of anaemia, the patient underwent exploratory laparotomy. The multiloculated thin walled cyst was freed from adhesions to anterior abdominal wall

and surrounding tissue. It was seen that multioculated cyst occupied the whole of abdomen arising from the peritoneum and with flimsy adhesions to the uterine fundus. Both the ovaries were normal about 3.5-4 litres of mainly straw coloured fluid drained some smaller cysts had haemorrhagic fluid in the cavity (Figure 1).

Figure 1: Drained fluids during the surgery.

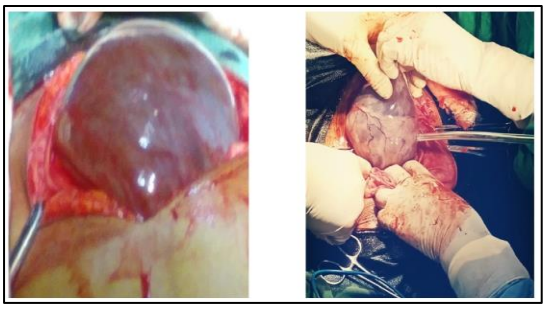

Figure 2: Surgical resection of the MPIC via laparotomy.

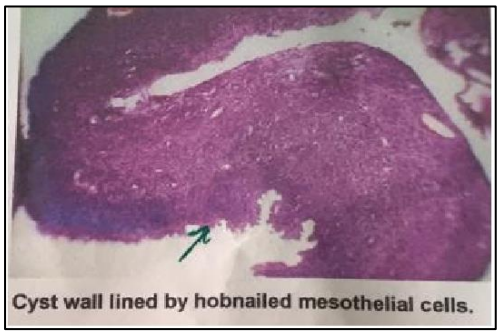

Figure 3: Histopathological examination.

Cyst sac was separated from adhesions and was removed (Figure 2).

Microscopically, the cysts were lined with a single layer of cuboidal to flattened cells, with many showing hobnailed mesothelioma cells (Figure 3).

The postoperative course was uneventful and the patient was discharged on the seventh postoperative day (Figure 4). Patient was doing well during four-week, six-month and 1 year follow-ups. No recurrence was noted.

Figure 4: Pre- and post-operative presentation of abdomen.

DISCUSSION

A MPIC is defined as cystic mesothelial proliferations that may extensively involve the pelvis, upper abdomen and retroperitoneum.[5] The exact pathogenesis of the disease remains less understood. Most experts agree that a MPIC represents an inflammatory reaction and does not represent cystic neoplasms.[2,7]

In contrast with previous reports, where most cases of MPIC had previous surgery, history of pelvic inflammatory disease (PID) or endometriosis, this case had neither previous surgery nor history of PID nor endometriosis.[5,7] The reported symptom in the present case was mild pelvic pain and distension of abdomen. This was also similar to previous reports where the patients usually presented with chronic abdominal or pelvic pain.[2] However, sometimes the lesions have been incidental, found during a laparotomy. Laparoscopic resection differed as patient was not fit for general anaesthesia. The operative finding is a cluster of cysts throughout serosa-covered structures, or free-floating.[5] Accurate diagnosis required histologic review. Smears from the peritoneal fluid shows proteinaceous material amid which are reactive mesothelial cells and lymphocytes. In some cases, areas of papillary projections, nests or tubules with some cytologic atypia are not uncommon.[9] The gross and histopathological findings in the present case were similar to those described in literature (Figure 3). Conditions from which MPIC originate may (rarely) require differentiation which include reactive mesothelial proliferation, malignant mesothelioma with cystic change, pseudomyxoma peritonei, endometriosis, and ovarian carcinoma.[3-5,12]

The recommended treatment is resection of as many symptomatic cysts as possible. Sometimes this requires removal of attached organs such as ovaries, uterus or spleen, however it was not the case with the present report.[2] Recurrences of MPIC after resection have been well documented.[5,9-11] Recent medical therapies for the treatment of recurrences MPIC include the use of tamoxifen, and a long-acting GnRH agonist.[10,11] However,

the role of medical treatment in cases of symptomatic recurrent MPIC is yet to be determined.

CONCLUSION

Thus, to conclude, MPIC is a very rare benign cystic tumour. This lesion has a nonspecific appearance on imaging and thus, will always requires careful histological evaluation. Despite a high recurrence rate, the prognosis is good after complete surgical resection. A systematic follow-up of these patients is essential to detect recurrence and further management.

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