

# Multilocular peritoneal inclusion cyst mimicking an ovarian tumor: A case report

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## ABSTRACT

Peritoneal inclusion cysts are uncommon abdominopelvic cysts seen in perimenopausal women. It is often misdiagnosed clinically as an ovarian tumor due to similar presentation and mimicking findings on radiology. We describe a perimenopausal woman presenting with pelvic mass. Her clinical finding on radiology suggested an ovarian tumor; however, biopsy revealed it as peritoneal inclusion cysts. We discuss the possible ways to avoid such mistakes.

**Key Words:** Mucinous cystadenoma of ovaries, perimenopausal women, peritoneal inclusion cysts

## INTRODUCTION

Peritoneal inclusion cysts (PIC) are uncommon mesothelium-lined abdominopelvic cysts seen in perimenopausal women. It presents as pelvic mass or with pelvic pain and may be misdiagnosed as an ovarian tumor. We report a case of PIC, which was diagnosed clinically as benign mucinous cystadenoma of ovary; however, it turned out to be PIC on histopathology.

## CASE REPORT

A multiparous premenopausal woman presented to our outpatient department with progressively increasing dull ache and abdominal swelling for 2 years, with no anorexia, weight loss, bowel, bladder or menstrual complaint. She had bilateral tubal ligation 20 years back and had mental illness for which she was taking some Ayurvedic medicine. Her abdominal and bimanual examination revealed a pelvic cystic mass extending up to umbilicus. Per speculum examination showed features of mixed vaginitis. Results of routine blood investigation and CA-125 were found within normal limits. Ultrasound (USG) abdomen showed enlarged uterus with multiple fibroids. A large multiseptated cystic lesion in pelvis extended into the pouch of Douglas and retroperitoneum with left ovary unidentified separately, suggesting an ovarian neoplasm. CT scan showed multiple fibroids in uterus and a large multiseptate cystic

mass in pelvis, separate from uterus and extending into retroperitoneum, with no solid area/calcification or, no free fluid in abdominal cavity suggesting benign ovarian neoplasm. Patient underwent staging laparotomy in view of the large ovarian mass. Intraoperative findings confirmed fibroids but healthy ovaries. Nearly 15-18 discrete uniloculated thin walled, smooth surfaced, clear fluid filled and variably sized cysts (2-10 cm) studded utero-vesical fold, broad ligament, pelvis and retroperitoneal spaces [Figure 1a]. Cut section confirmed absent papillae or solid areas. Patient underwent uneventful hysterectomy with bilateral salpingo-oophorectomy with omental biopsy.

Histopathology showed multiple cysts lined by flattened to indistinct mesothelium with interspersed loose fibrocollagenic tissue, scattered smooth muscle bundles and intervening stroma showing congested vessels diagnostic of PIC with chronic endometritis, chronic salpingitis and oophoritis [Figure 1b].

## DISCUSSION

PIC, also called benign (multi) cystic peritoneal mesothelioma, inflammatory cysts of the peritoneum, postoperative peritoneal cyst, benign papillary peritoneal

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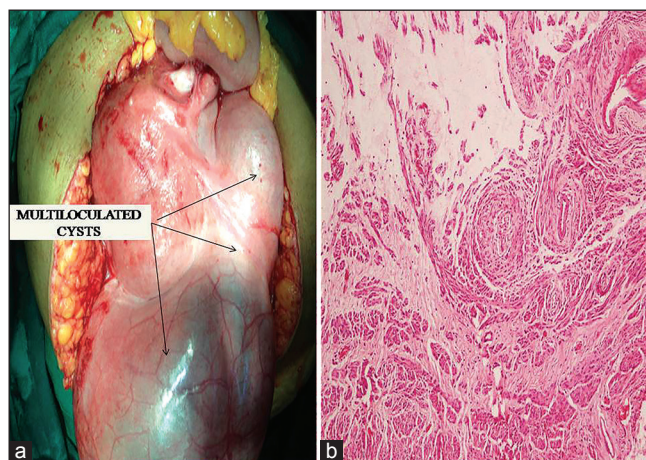
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**Figure 1:** (a) Intraoperative picture showing multiple cysts, (b) H × E × 20 ×, Photomicrograph showing cyst wall with smooth muscle bundles, thick walled blood vessels and stromal edema

cystosis, are mesothelium-lined cysts classically presenting in perimenopausal woman and are diagnostic dilemmas for gynecologists and radiologists.<sup>[1-5]</sup> Usual presentation is progressive abdominal or pelvic pain or palpable mass as present in our patient. Rarely there can be backache, dyspareunia, constipation, tenesmus, urinary frequency or incontinence, anorexia, dysfunctional uterine bleeding, or infertility. Pulmonary embolism and venous stasis may also occur secondary to compression. Risk factors include previous intraperitoneal surgeries performed 6 months to 20 years earlier by any route, intraperitoneal inflammation, pelvic inflammatory disease, peritoneal tuberculosis, leiomyoma, tubo-ovarian abscess, etc. Our patient had tubal ligation, leiomyoma and pelvic inflammatory disease.

PIC may be misdiagnosed as mucinous cystadenoma of ovaries for similar presentation and slightly raised CA125 derived from coelomic epithelium in both conditions. USG features are non-specific, with smooth thin walled multiseptate cysts containing liquid of different attenuation.<sup>[2]</sup> CT scan similarly give cobweb appearance of loculated fluid with septations within, conforming to the peritoneal space with ipsilateral ovary within it or in the wall. Intraoperative PIC typically presents as confluent mass or discontinuous cysts studded together. Unaware of the entity, we only entertained the differential diagnosis of

hydatid cyst. Postulated pathology for PIC includes inability to absorb physiological secretions of active ovaries by diseased, inflamed or fibrosed peritoneum forming cysts within peritoneal adhesions.<sup>[3]</sup> We missed the diagnosis of this uncommon entity possibly because of similar age, symptoms, signs and USG features mimicking benign mucinous cystadenoma of ovary.

Management varies from observation with serial imaging, hormones, image-guided aspiration with or without sclerotherapy, and surgical excision to complete resection.<sup>[3]</sup> Hormones include oral contraceptives, tamoxifen, leuprolide, etc. Aspiration with oral contraceptive combination gives good result. USG /fluoroscopy-guided sclerotherapy with 10% iodine or absolute ethanol reported 90% success rate. The gold standard treatment is complete resection laparoscopically or by laparotomy. However, recurrence may occur in up to 50% of cases.

## CONCLUSION

PIC consciousness particularly in patients with predisposing condition may help suspect and diagnose this uncommon entity. This may permit conservative management in selected case with close follow-up for possible recurrence.

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