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Ovarian endometroid carcinoma presenting as rupture of ovarian cyst with sepsis: A unique presentation

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Abstract
An ovarian cyst is the most common presentation in gynaecology. Most of the cysts are benign but few can be malignant too. A 44 yrs old female visited to the hospital with pain right side lower abdomen and features of sepsis. Imaging revealed right side hemorrhagic cyst with suspected torsion. She was prepared for surgery. Per-operatively a ruptured right-side ovarian mass around 8x7 cm was present which appeared necrotic and fragmented. Histopathological examination showed endometroid carcinoma of ovary. Patient received 3 cycles of neo adjuvant chemotherapy and then underwent debulking surgery followed by 3 cycles of post op chemotherapy. Epithelial ovarian cancers may grow rapidly. Rupture of the cystic tumor and features of sepsis due to infected tumor fragments are infrequent in case of ovarian cancer. We report a rare case of ruptured ovarian endometroid tumour with features of sepsis. Malignancy should be considered in the differential diagnosis in middle aged women with ovarian cyst.

Keywords: Ovarian carcinoma, endometroid carcinoma, acute abdomen, sepsis

Introduction
Ovarian carcinoma is the major cause of death due to gynaecological malignancies [1]. The lifetime risk of having ovarian carcinoma is about 1.3% [2]. Based on histopathology epithelial ovarian carcinomas are divided into 5 subtypes: high grade serous, endometroid, clear cell, mucinous and low-grade serous carcinomas [3]. Ovarian carcinomas usually present with vague symptoms like bloating or abdominal distension, difficulty in eating, nausea, anorexia, early satiety [4]. Acute abdomen is a rare presentation of ovarian cancer. A patient can present with acute abdomen in case of adnexal torsion, rupture of cyst and bleeding from the tumor. We report, to the best of our knowledge, the first ovarian endometroid carcinoma presenting with spontaneous rupture of tumor with features of sepsis.

Case Report
A 44 years old multiparous female presented to emergency with symptoms of pain right side lower abdomen for last 3-4 days. Her previous menstrual cycles were regular with no history of dysmenorrhea or pain abdomen in past. No history of associated symptoms like nausea, vomiting, weight loss and anorexia. There was no history of any gynaecological cancer in family. Patient had an ultrasound report 6 months back which was normal. She was referred from another private hospital i/v/o USG suggestive of torsion of right-side hemorrhagic cyst and unstable vitals. On examination, Patient was afebrile, Pulse rate was 110/min, Blood pressure 86/60 mmHg, pallor was absent. Per abdomen, tenderness was present on right side lower abdomen, no organomegaly, no free fluid. Per vaginum examination uterus anteverted, mobility restricted, cervix backwards, right side fornix an irregular mass felt around 6x6 cm which was tender, left fornix free no tenderness. On investigating, hemoglobin was 11g/dl, total leucocyte count was raised 20,500, INR 2, SGOT and SGPT 93 and 100 respectively. Ultrasound was done which showed heterogenous right adnexa measuring approximately
7.5x6.4 cm, with central cystic area measuring approximately 3.8x2.3 cm and mild free fluid in pouch of douglas suggesting partially ruptured right ovarian cyst [Figure (a)]. CECT showed 68x55mm thick-walled cystic lesion in right adnexa. Patient was taken up for exploratory laparotomy after resuscitation. Per operatively, a ruptured right-side ovarian mass around 8x7 cm was present which appeared necrotic and fragmented [Figure 1 (b)]. Hemoperitoneum was absent. The mass was adhered to small bowel. Adhesiolysis was done. Uterus and left side tubes and ovaries were of normal morphology. Right side salpingo-oopherectomy was done. 2 units

FFP was transfused in view of deranged INR intra-operatively. Post operatively, Patient was desaturating on room temperature therefore oxygen support was added. Also, TLC was in increasing trend so antibiotics were stepped up and patient responded well. She recovered and discharged on day 6th post surgery. Histopathological report was suggestive of grade 2/3 endometroid carcinoma of ovary [Figure 1 (c and d)]. Patient was not willing for a repeat surgery immediately after the primary surgery so, she was planned for 3 cycles of carboplatin paclitaxel based chemotherapy followed by debulking surgery in consult with medical oncologist. Pre- chemo CA 125 was 307 mmol/l. Patient received 3 cycles of chemotherapy and after that she underwent total abdominal hysterectomy with left salpingo-oophorectomy with pelvic lymph node dissection. Histopathology report did not show any evidence of malignancy.Sh underwent cycles of chemotherapy post operatively. She is on regular follow up and six months post surgery with no features of recurrence. Her recent CA-125 value is 15.4 mmol/L.

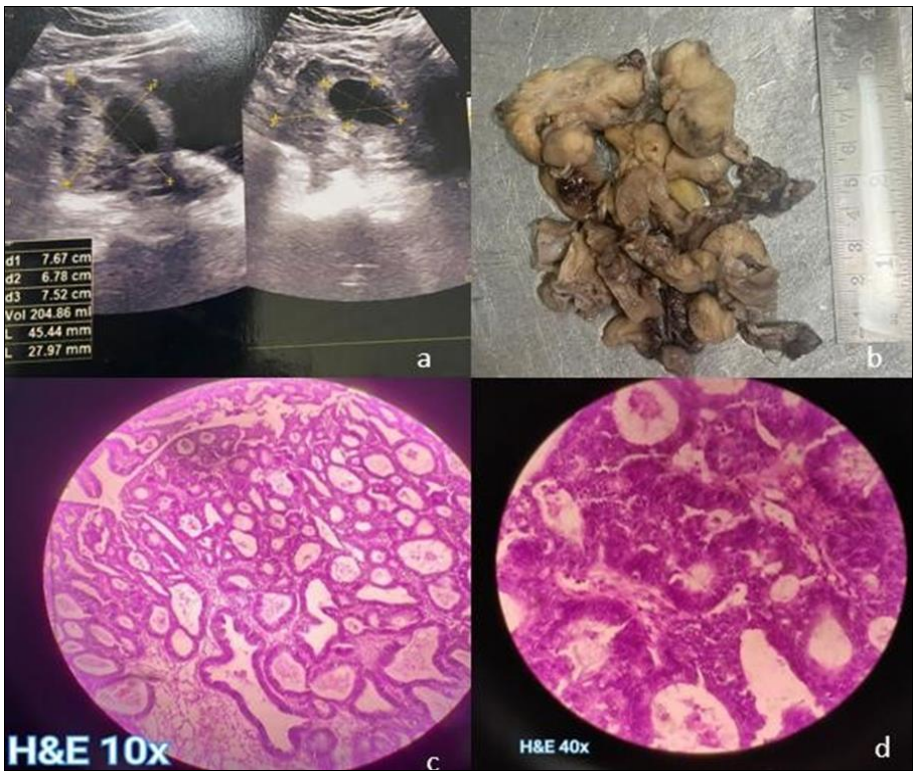

Fig 1: (a) Ultrasound showing right adnexal cystic lesion; (b) Formalin fixed gross specimen showing a solid irregular and fragmented ovarian mass; (c and d) histopathological findings (H and E stained) showing variable size, back to back arranged glands lined with atypical epithelium cells exhibiting moderate nuclear atypia with features of stromal invasion.

Discussions

Ovarian carcinoma is the seventh most common cancer and eighth most common cause of cancer death among females [5]. Malignant ovarian tumors are the most lethal of all gynaecological cancers. The incidence varies according to ethnicity and countries. There is no screening program for early detection of this cancer. Methods like serum marker CA 125, transvaginal ultrasound, bimanual examination are not that much effective for screening purpose [6]. Ovarian carcinoma is histologically divided into different subtypes, out of them epithelial ovarian cancer is the most common. Mostly they are sporadic in nature but one fourth are associated with germline mutations like BRCA 1 and BRCA 2.

Among epithelial OC, endometroid type is around 10% prevalent. There are studies showing that endometroid tumors arise in areas of endometriosis [7]. Although this was not found in our case as patient did not have any symptoms suggestive of endometriosis, moreover she had an ultrasound scan 6 months back which was absolutely normal.

Ovarian cancer is the silent killer because symptoms are vague and non-specific that do not suggest origin from ovary. The symptoms may range from lower abdominal heaviness, distension or pain, irregular menses or heavy bleeding if the cancer is estrogen producing. If the mass is compressing bladder or rectum then there may be pressure symptoms like urinary frequency or constipation. Thus, clinically gastrointestinal and genitourinary pathologies mimic ovarian pathologies. Rarely, ovarian cancer may present as acute abdomen which can occur due to adnexal torsion, rupture of the cyst or bleeding from tumor.

Ashitha S *et al* reported a case of spontaneously ruptured serous borderline tumor in young female [8]. Hiroyuki Takahashi *et al* also reported ovarian endometroid adenocarcinoma presenting as acute abdomen with hemorrhagic shock due to tumor disintegration [9]. In our case patient presented with acute abdomen with features of sepsis which in itself is a rare presentation for a malignancy.

To our knowledge, this is the first case report where endometroid carcinoma of ovary presented with features of sepsis with rupture of tumour. So, malignancy should be considered as an important differential diagnosis in middle aged women even if the presenting features are atypical as in this case.

Conclusion

Ovarian malignancies usually present with vague symptoms like bloating, abdominal distension, difficulty in eating, anorexia, early satiety. Presentation with acute abdomen is rare. So,

malignancy should be considered and important differential diagnosis in middle aged women even if presenting features are atypical as in this case.

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