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Case Report

Giant follicular cyst of ovary in an adolescent girl

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ABSTRACT

Ovarian cystadenomas are rare neoplastic tumors arising from the ovarian surface epithelium. While commonly observed in adult women, their occurrence in adolescents is extremely uncommon. Now, those lesions diagnosed more frequently due to availability of better imaging modalities. Presentations as huge cysts have become rare as most of them are diagnosed and treated early. Adolescent girls presenting with huge benign abdominal cysts are uncommon, most of them due to serous cystadenomas of the ovary, but large follicular cysts are rare. We present a 13year old girl who presented with a large abdominal mass which was subsequently diagnosed as juvenile follicular cyst of the ovary. Urgent surgical intervention led to left salpingo-oophorectomy, confirming the benign nature of the tumor. This report highlights the importance of comprehensive approach to diagnosing and managing rare ovarian neoplasms in adolescents.

Keywords: Serous cystadenoma, Follicular cyst, Abdominal mass

INTRODUCTION

Cyst arising from either ovary or fallopian tube are considered as an adnexal-cysts. Cysts arising from the mesothelium in the large ligament between ovary and the tube is para-ovarian cyst and it accounts for about 10% of all adnexal masses. Ovarian tumors are the most common reproductive organ tumors in adolescents.[1] Giant intra-abdominal cysts in children and adolescents may arise from different sources including most commonly ovarian, gastro-intestinal, urological and lymphatic processes. Ovarian cysts are labelled as giant or voluminous when they are over 15 cm; a better designation for ovarian cysts may however relate the size of the cyst to the size of the peritoneal cavity in these growing young patients.[2] Clinical manifestations, pathological types and treatment principles of disease differ between adolescent and adult women. The body of adolescents is in a stage of growth and development; therefore, the ovaries actively grow and are prone to mutation. In adolescents who have masses, treatment should not only address these masses but also preserve fertility.[3]

Cystic abdominal lesions are very common in adolescent girls and are now diagnosed more frequently due to the availability of better imaging modalities. Presentation of huge cysts have become rare as most of them are diagnosed and treated early.[4] Ovarian cysts extending to the umbilicus are termed giant ovarian cysts. These cysts are very rarely observed and are often benign. Because the ovaries are located deep in the pelvic cavity, detecting early lesions is challenging. Additionally, adolescents poorly appreciate the importance of regular physical examinations and ovarian mass related symptoms are not paid enough attention. Therefore, by the time adolescents seek healthcare, the mass is already large.[5] Differential diagnosis of ovarian masses in adolescents includes benign lesions such as ovarian cysts, cystadenomas and teratomas as well as malignant tumors like ovarian germ cell tumors and sex cord stromal tumors. Other conditions such as ectopic pregnancy and tubo-ovarian abscess, were also considered.[6] Patients with ovarian cysts can present with no symptoms or a variety of them as a result of cyst rupture, hemorrhage or torsion.

Adnexal torsion is a gynaecological emergency that indicates immediate surgical intervention.[7] For diagnosis, ovarian cyst aspiration usually avoided because of possible intraperitoneal seeding by early stage ovarian cancer. If cysts found to be benign, cyst may beexcised or the whole ovary may be removed. The decision for one surgical technique in preference over the other is influenced by lesion size, patient's age, and intraoperative findings.[8] Here, we present a case of an adolescent girl with a huge ovarian cyst, which led to an emergency presentation and immediate surgical intervention.

CASE REPORT

A 13-year-old girl presented to gynaecology OPD with abdominal distension for 1-month, abdominal pain for two days which was associated with vomiting. The pain was localized in right iliac fossa, colicky in nature and she reported having few similar episodes in the past 3-months, which resolved spontaneously. She had not sought any medical attention for the painbecause she believed it was normal, probably related to menstruation. The patient not had any complaints of menorrhagia, abnormal vaginal discharge or any other gynaecological symptoms. The patient not had any urinary or bowel symptoms.

The patient not had any history of abdominal trauma. Her menarche occurred at the ageof 12-years and her menstrual cycles were regular, every 28days with 7days flow. She had never taken any hormonal contraceptives. She had no significant past medical, surgical or drug history nor any relevant family history. She was generally fit and well.

Initially the patient was diagnosed with severe pallor and tachycardia PR-114/min, temperature 37.7 C, BP-108/72 mmHg, physical examination findings- abdomen was diffusely enlarged with cystic mass up to xiphisternum, flanks full, with right iliac fossa tenderness, restricted mobility with no guarding. No pelvic examination was performed. An abdominal ultrasound was performed-large abdominopelvic cystic mass lesion from pelvis to xiphisternum with multiple septations causing mass effect over internal organs with bilateral hydroureteronephrosis. Uterus and ovaries not visualized due to mass lesion. Initial work-up included routine blood tests, which revealed moderate anaemia (Hg 5.6 gm), BG AB positive and other parameters within normal range. Serum levels of tumor markers were done found to be normal. To further evaluate the large ovarian mass and assess its characteristics, a contrastenhanced computed tomography scan of the abdomen and pelvis was performed urgently. It revealed a large complex abdominopelvic lesion (28×20×15 cm) with enhancing walls, septa and solid components- ovarian origin, bilateral moderate hydroureteronephrosis. Uterus and right adnexa were normal (Figure 1).

Given the patient acute presentation, the size of the ovarian mass and potential for complications such as ovarian torsion and rupture urgent surgical intervention was planned immediately as suggested by surgical oncologist. The patient and parents were counselled and informed consent was obtained. She underwent exploratory laparotomy proceeded to left salpingo-oophorectomy was performed.

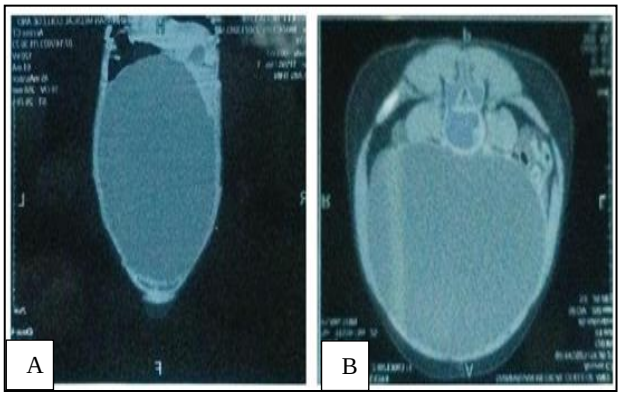

Figure 1 (A and B): CT Image of abdomen and pelvis showing a large ovarian cyst occupying the whole abdomen.

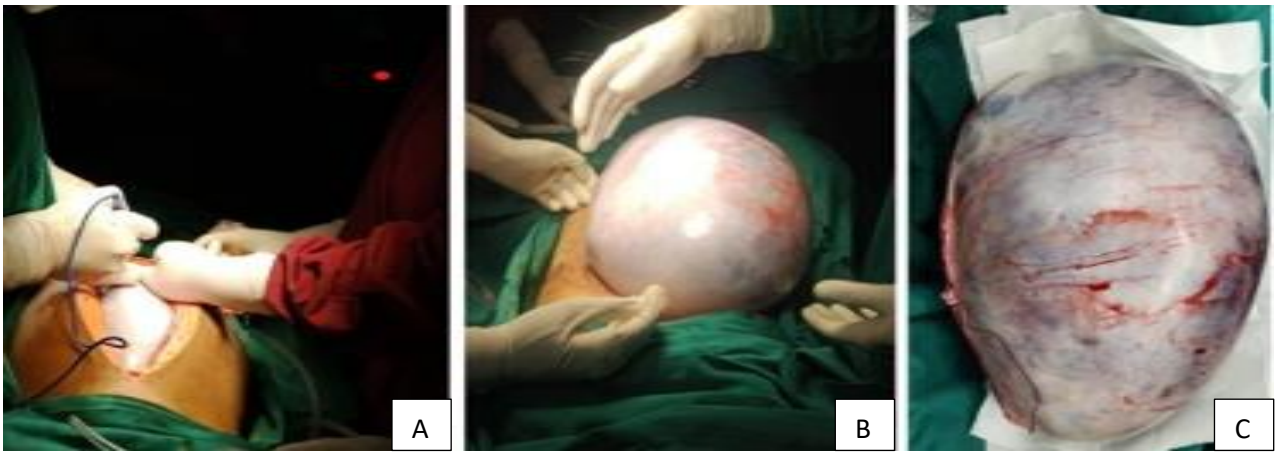

Figure 2 (A-C): Intra-operative findings of huge ovarian cyst.

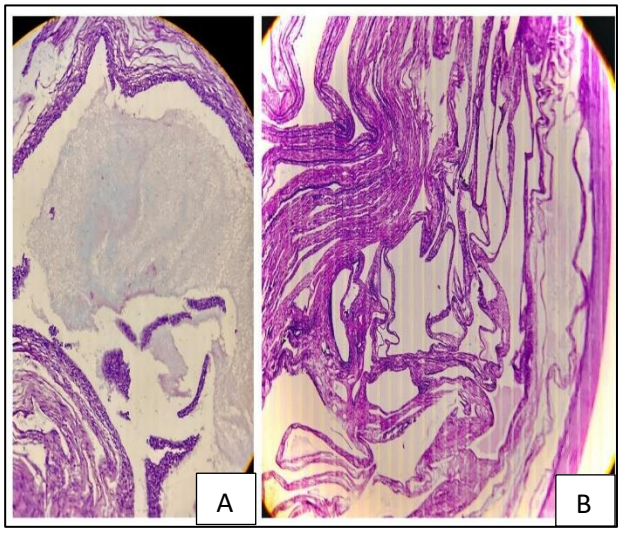

Figure 3 (A and B): Histopathology.

Intraoperative findings

Left ovarian mass of size-30×25×20 cm (6.5 kg), uterus-normal, Right tube and ovary-normal, other organs-normal, no ascites, no enlarged lymph nodes and the large abdominal mass which was resected intact, was not adherent to any other abdominal viscera and was arising from the left ovary. Patient not had any intra and postoperative complications, recovery was uneventful (Figure 2).

Histopathology report

Juvenile giant follicular cyst: No solid lesion, no evidence of malignancy, fallopian tube-normal histology, cytology of the fluid-no malignant cells and at follow-up a month later, the child was doing well (Figure 3).

DISCUSSION

Ovarian cysts are very common in adolescents. Of these follicular cysts are most common and occur due to dysfunctional ovulation with persistence of remaining follicles. These cysts are usually 2-3 cm in diameter and resolve during the second half of the menstrualcycle. Most girls with follicular cysts present with abdominal pain and irregular cycles. If ovulation does not occur, these follicular cysts can continue to grow under hormonal stimulation.[4] The findings of ovarian mass associated with tenderness and tachycardia suggest torsion.

There are several lessons to be drawn from the present case report. First, in a child or awoman who has a combination of abdominal pain, nausea and vomiting, an urgent gynaecological evaluation is required. Second, a thorough abdominal examination by an experienced clinician and imaging-preferably bedside ultrasound by a sonographer are the best ways to detect a pelvic mass. Third, the presence of painful ovarian or adnexal mass or cyst should raise the possibility of ovarian torsion, which is gynaecological emergency. It is essential to note that in the presence of complex lesion, MRI or CT scans are recommended todifferentiate an ovarian malignancy from a benign lesion.[7]

The aim of the treatment are resolution of symptoms and preservation of ovarian tissuefor future fertility. Surgery is indicated in persistent or symptomatic cysts.[4] The emergent nature of the presentation and potential for complications necessitated urgent surgical intervention in this case. The evidence for left salpingo-oophorectomy was made due to the evidence of ovarian torsion necessitating urgent removal to prevent further complications. If there had been no ovarian torsion, alternative surgical approaches, such as ovarian cystectomymay be considered. It depends on the specific characteristics of the ovarian cyst and the patient's individual health and fertility considerations.[6]

CONCLUSION

The surgical approach aimed to achieve complete excision of the ovarian mass while preserving the viability of the surrounding tissues. A multidisciplinary approach involving gynaecologists, surgical oncologist, radiologists and pathologists was crucial in achieving a favorable outcome for the patient. Timely recognition of acute presentation, appropriate imaging studies, surgical intervention and histopathological evaluation are vital in achieving successful outcomes and minimizing potential complications.

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