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Giant Ovarian Mucinous Cystadenoma in An Adolescent Girl: A Case Report

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Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

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Case Report

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ABSTRACT

Aims: Ovarian tumours are commonly seen in middle aged women and rare in adolescents. Cystadenoma is an epithelial tumour and occurs in 3rd to 6th decade of life. They are recognized as precursors of ovarian cancer. Here we present a case of a giant ovarian mucinous cystadenoma in 16 year old girl.

Case Presentation: A 16 year old girl presented with vague abdominal pain and abdominal distension. CECT abdomen and pelvis revealed a huge ovarian solid cystic tumour. She underwent exploratory laparotomy with right adnexectomy for complete excision of tumour. Histopathological examination confirmed the diagnosis of mucinous cystadenoma of ovary. On follow up patient is doing well.

Conclusion: Early diagnosis and accurate treatment are essential as these tumours can grow to giant sizes and be potentially lethal if left untreated. Giant ovarian tumours particularly if symptomatic, should be considered for surgery.

Keywords: Mucinous cystadenoma; adolescent; abdominal distension; adnexectomy.

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1. INTRODUCTION

Giant ovarian tumors are rare in adolescent patients. Ovarian tumors of diameters greater than 10 cm are referred to as giant ovarian tumors [1]. Ovarian tumors are commonly observed in adults but in young females (age below 16 years) less then 2% [2]. Epithelial tumors of ovary are classified as mucinous and serous, histologically. These accounts for 8-10% of ovarian tumors. Mucinous cystadenoma are benign ovarian tumors that occurs in 3rd-6th decade of life. At early stages these tumors are asymptomatic, become symptomatic after reaching large dimensions. Most frequently presenting clinical features are compressive symptoms or a visible abdominal mass [3]. Rapidly growing and symptomatic ovarian tumors are indication for surgery (ipsilateral adnexectomy).

We report a case of 16-year-old girl with giant mucinous cystadenoma who presented with visible abdominal mass and vague abdominal pain.).

2. CASE PRESENTATION

A 16-year-old female patient presented in our department with abdominal fullness and vague abdominal pain for 6 months. She noted that her abdomen was distended in the last 2 months. She had no associated symptoms of vomiting, constipation and urinary disturbance. She attained menarche at the age of 12 years.

Upon examination, abdominal mass extends from pelvis to the epigastrium. The Mass was intraperitoneal and firm in consistency. An abdominal ultrasonography revealed a giant heterogenous mass with multiple internal septations but origin of mass could not be identified. Contrast enhanced computed tomography (CECT) scan of the abdomen revealed a large multiloculated solid cystic mass measuring 24.3´21.5´20.2 cm. (Fig. 1A and 1B). No other masses and lymph nodes were detected. Routine blood investigations were within normal limits. Tumor markers including CA 125, CEA, HE4, alpha fetoprotein and beta HCG were within normal limits.

On exploratory laparotomy, a giant mass was found filling the entire abdominal cavity. (Fig. 2) It was attached to the right adnexa. There were no ascites, enlarged lymph nodes nor peritoneal implants. The right ovary and uterus were normal. She underwent a right adnexectomy. Pelvic peritoneal fluid was sent for cytology and no neoplastic cells were detected.

The cyst weighted 5.6 kg and 25´20´21 cm in dimension. (Fig. 3A). Upon opening the cyst, it was multiloculated with multiple solid components and 900 cc clear mucinous liquid was unveiled. (Fig. 3B). The histopathology report revealed an ovarian mucinous cystadenoma. The tumor was lined with mucin secreting, columnar epithelial cells without atypia and stromal invasion. (Fig. 4).

Her postoperative course was uneventful, oral feed allowed on third post-operative day. She was discharged on 5th post-operative day without complications. On follow up she was doing well.

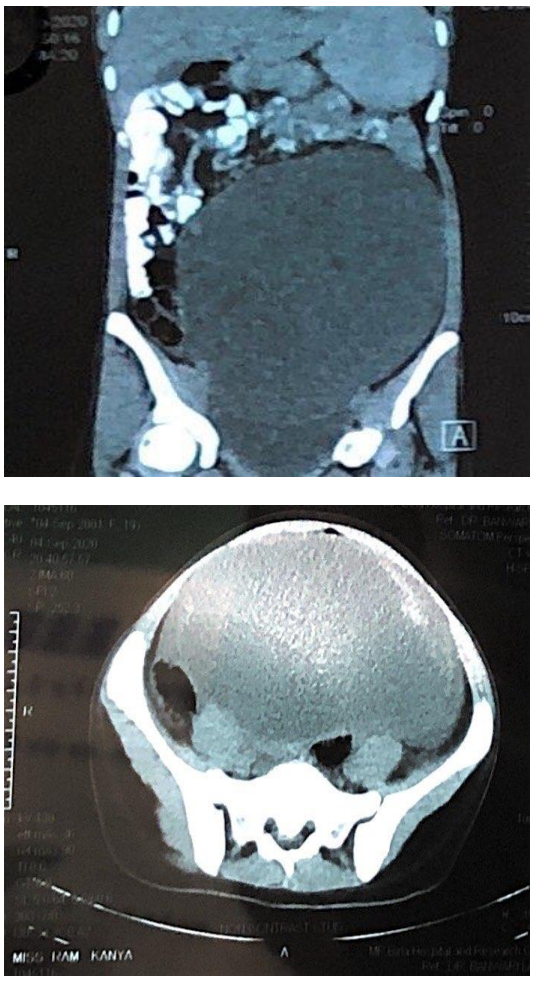

Fig. 1A and 1B. Abdominal and pelvic CECT showing multiloculated solid cystic mass occupying abdominal cavity

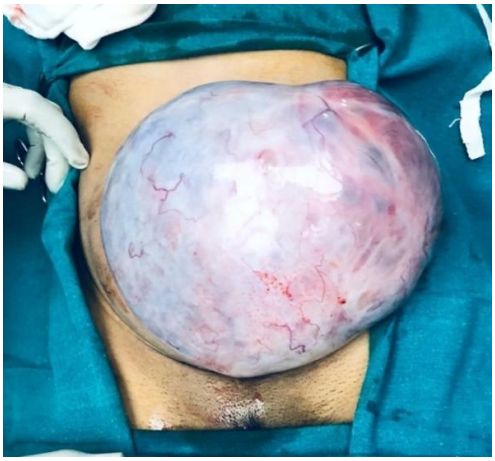

Fig. 2. Intra operative photograph showing giant mass filling the entire abdominal cavity.

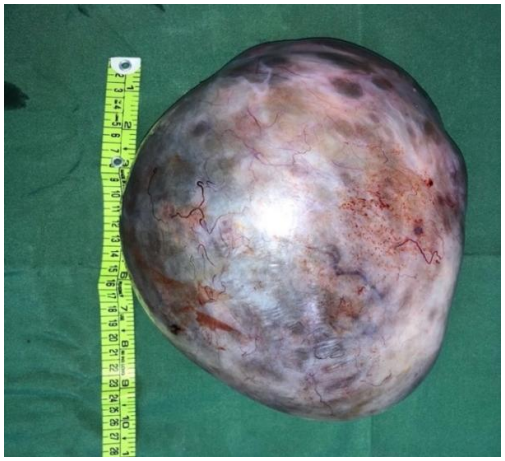

Fig. 3A. Photograph showing specimens of excised giant right ovarian tumor

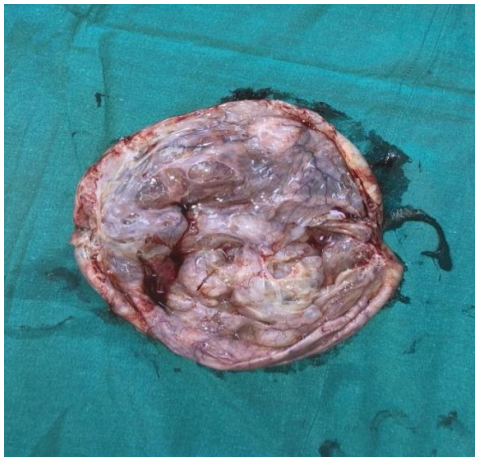

Fig. 3B. Photograph showing macroscopy of opened specimen

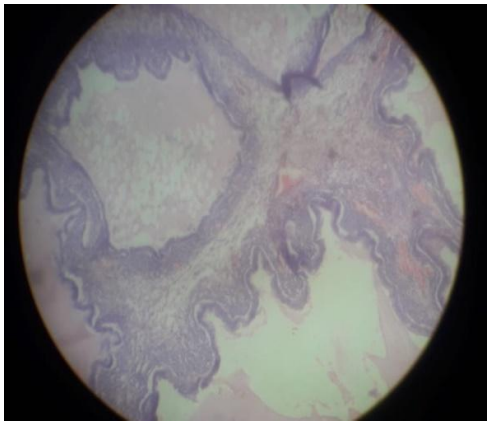

Fig. 4. Microscopic photograph showing mucinous cystadenoma without atypia.

3. DISCUSION

In young females, ovarian cysts are common, and most of them are benign and functional. Stromal tumors, germ cell tumors and epithelial tumors are different variants of ovarian tumors [4]. Cystadenomas of ovaries are epithelial tumors (benign, borderline, and malignant). Benign cystadenoma is a most common type of epithelial ovarian tumor, serous type (75%) and mucinous type (25%). 15% of mucinous cystadenomas are malignant [5].

Mucinous cystadenoma is more commonly reported in middle aged women. It is rare among adolescents [6]. Cystadenomas have been recognized as precursors of ovarian malignancies and may slowly transform into borderline and invasive ovarian tumors [1,4]. Usual presentation of these tumors is vague abdominal pain, distension, visible abdominal mass with discomfort.

It is a diagnostic challenge to identify the site of origin of such giant ovarian tumors. Ultrasonography (US) of abdomen and pelvis is the first modality of investigation. CECT and magnetic resonance imaging (MRI) can be used to differentiate tumor characteristics [4,7]. CECT is more sensitive than ultrasonography in detection of ovarian tumors, as it allows assessment of intraperitoneal and retroperitoneal structures. Leite c et al. [8] stated that neither US nor CECT were able to define the origin of cyst. MRI could have been a good option in such cases of giant ovarian tumors.

Tumor markers, including CA 125, CEA, HE4, alpha fetoprotein and beta HCG can be useful tools for differentiating ovarian cancers. Although these tumor markers can be elevated in some benign tumors. CA 125 is a high molecular weight glycoprotein expressed on the cell membrane of normal ovarian tissue and ovarian malignancies. CA 125 raised in 85% of patients with epithelial ovarian malignancies. HE4 is highly expressed in ovarian malignancy but not expressed on normal ovarian cells [8].

Surgery is the gold standard treatment for symptomatic patients, cysts over 10 cm or suspected ovarian mass. It includes ipsilateral or bilateral adnexectomy with intraoperative pathological evaluation, total hysterectomy and staging procedure, including lymphadenectomy [9]. Ipsilateral adnexectomy is sufficient in cases of benign mucinous cystadenoma.

Risk factors for recurrence are intraoperative cyst rupture, cystectomy instead of adnexectomy and incomplete excision of tumor [10]. Hence the tumor must be removed carefully and completely.

4. CONCLUSION

Progressive abdominal distension in adolescent females should raise suspicion of an ovarian tumor, such as mucinous cystadenoma. Early diagnosis and treatment are necessary as these tumors can grow to giant sizes and recognized as precursors of ovarian malignancy. Surgery (adnexectomy) is the treatment of choice.

CONSENT

Author declare that 'written informed consent was obtained from the patient for publication of this case report and accompanying images.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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