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A Huge Benign Ovarian Cyst Removed from a High - Risk Postmenopausal Women: A Case Report and Review of Literature

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Abstract: ***Introduction*: Epithelial tumors of the ovary represent 65 - 75% (maximum percentage) of all ovarian tumors. Out of all the epithelial tumors, mucinous cystadenomas account for 15 - 20%. They are divided into three different categories: benign, borderline and malignant tumors. *Case Study*: Here, the case of 63 year old female post - menopausal P2L2 with Acute Kidney Injury and Hypokalemia is reported who presented with a complain of abdominal pain and increasing abdominal girth since last 5 months. An Ultrasonography and plain high resolution CT study of abdomen and pelvis showed a presence of left ovarian mass. Patient underwent laparotomy in view of left ovarian cystectomy and left salpingoophorectomy. Histopathological specimen revealed presence of left ovarian cyst of 5.7 kg weight, dimensions 24*16*6cm and cut surface showed multicystic with mucinous adenoma. *Discussion*: Mucinous cystadenomas mainly occurs in middle - aged women. Such huge mucinous ovarian tumors have become rare nowadays, as most of the cases are diagnosed early during routine medical or gynecological examinations or detected on the regular ultrasound examination of the pelvis and abdomen. [1]***

Keywords: Mucinous cystadenoma, Ovarian cystectomy, Acute kidney injury, Hypokalemia

1. Introduction

Ovarian tumors are categorized mainly into ***4 types***. They are epithelial, sex cord stromal tumors, germ cell tumors and metastatic tumors. [2]

Epithelial tumors of the ovary represent 65 - 75% (maximum percentage) of all ovarian tumors. **Mucinous cystadenomas** are benign epithelial tumors of ovary and accounts for 15% of all ovarian tumors [3].

Majority of mucinous cystadenomas (80%) are benign while only 10% of them are borderline and another 10% are malignant. [4] Bilateral presence of primary mucinous cystadenomas occurs in 10% of cases. Mucinous cystadenomas of the ovary occur mainly during the 30 to 60 years of age, but it may also occur in younger age. [5]

Most of the patients who have large tumors present mainly with the ***pressure symptoms*** over the genitourinary system leading to urinary complaints and pressure over respiratory system leading to dyspnea.

Management depends on age of the patient, the size, and histopathological nature of the cyst. Determination of ***cancer antigen (CA) - 125*** helps in identification of epithelial tumors of the ovary.

2. Case Study

A 63 - year - old female from Vadodara, Gujarat, India came to the hospital with complaints of abdominal pain and increasing abdominal girth for 5 months. The patient is postmenopausal for 20 years and there is no significant previous medical or surgical history. On Per abdomen examination, there was huge distension all over the abdomen and skin over the abdomen had thinned and was shiny. On palpation, the tumor was of **36 weeks uterine size**, firm to hard in consistency, mobility was restricted; arising from the lower pelvis, extending till xiphisternum and on both right and left iliac fossa.

Routine investigations of blood revealed **haemoglobin of 11.2 g/dl, potassium 2.8 mmol/lit, blood urea nitrogen 97 mg/dl, creatinine 4.0 mg/dl.** Routine investigations for urine were not significant for this case. Patient was non - reactive for HIV1 & 2, tested negative for AntiHCV and HBsAg. The chest X Ray was normal. CA - 125 level of this patient was in normal range. The value was **28 U/ml (Normal range – 0 to 35 U/ml).**

Ultrasound of whole abdomen showed adnexal cystic mass lesion likely a large ovarian cyst. ***A large well defined anechoic cystic lesion occupying entire pelvis and abdomen with internal free floating internal echoes were seen.*** Thin echogenic septae was noted within.

MSCT (multi slice computed tomography) Scan of abdomen with pelvis (Plain+ Contrast) showed ***well defined thin - walled fluid density cystic lesion in pelvis in left adnexa, approximately measuring 15*20*19 cm in size suggestive of benign looking left ovarian cystic lesion. (*Figure 1)**

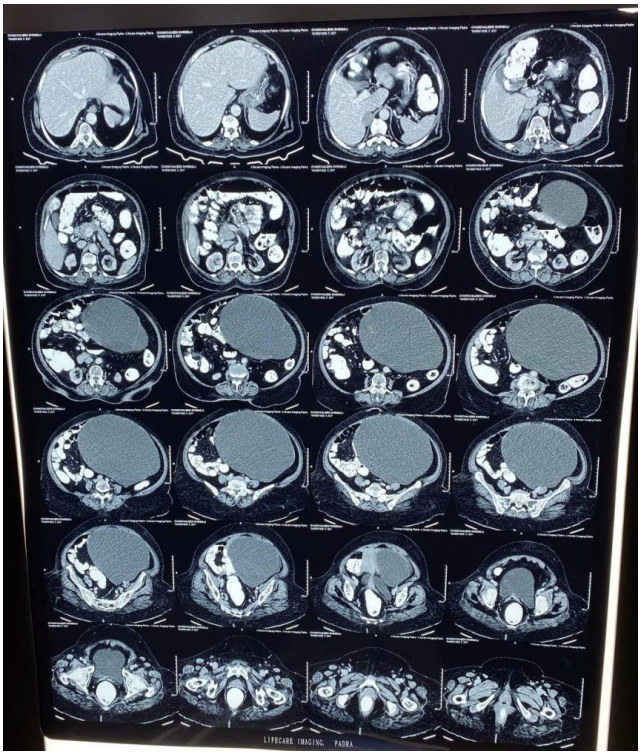

Figure 1

Echocardiography report showed ***diastolic dysfunction, mild pulmonary hypertension, left ventricular ejection fraction of 55% and normal LV systolic function. Multiple APCs*** were also noted.

The presence of high blood urea nitrogen, creatinine indicated ***Acute kidney injury (AKI).*** *Along with AKI presence of* ***hypokalemia*** *and* ***abnormal echocardiography*** *results made this case* ***high risk.***

Laprotomy with **Left ovarian cystectomy and left salpingoophorectomy was performed** ***(Figure 2*** *shows the intraoperative picture of mucinous cystadenoma of ovary).* A large cystic mass was seen in the abdominal cavity.

Outer wall was smooth and shiny with *no evidence of capsular invasion.* Carcinomatous changes were not evident. The patient withstood the surgery well with no intraoperative or postoperative complications.

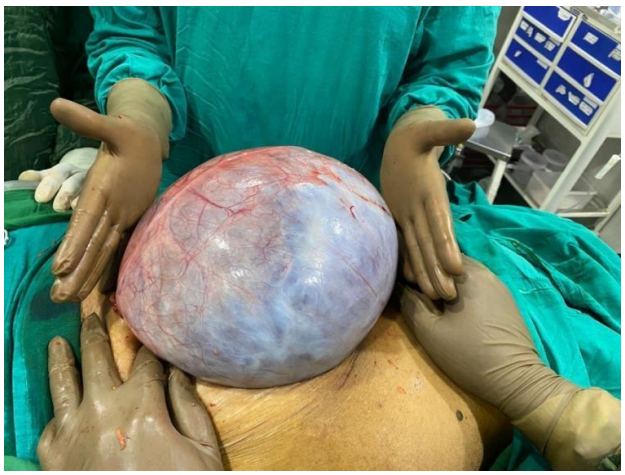

Figure 2

Histopathogical evaluation revealed ovarian cyst weighing **5.7 kg** and is **24*16*6 cm**. Cut surface was **multicystic** and **mucinous** in nature. No malignant features were noted.

Cytopathology report showed presence of **inflammatory cells with predominance of lymphocytes and cyst debris.**

Figure 3 shows the weight of ovarian cyst - 5.7 kg and **Figure 4** shows the gross specimen of large ovarian cyst.

Figure 3

Post operatively the patient recovered without any complications. On day 10 of surgery, complete suture removal was done, and wound was healthy.

Figure 4

3. Discussion

Mucinous cystadenomas are **benign** epithelial ovarian tumors commonly seen in middle aged women. The most common complications of benign ovarian cysts are **torsion, hemorrhage and rupture.** Rupture can cause **pseudomyxoma peritonei** if tumor spills its contents on the peritoneum [6]. Giant ovarian tumorshave become rare

nowadays, as most cases are discovered early during routine medical check - ups. Majority of ovarian cysts are benign.

On gross appearance, mucinous tumors are characterized by cysts of variable sizes without any surface or capsular invasion. **Histologically**, mucinous cystadenoma is lined by **tall columnar non - ciliated epithelial cells with presence of apical mucin and basal nuclei.**

4. Conclusion

Management of ovarian cysts depends on age of the patient, the size of the cyst, histopathological nature, medical and surgical history and menopausal state of the patient. Conservative surgery - **ovarian cystectomy with salpingooophorectomy**is adequate for benign lesions [7]. Recurrences may be seen in cases treated only with cystectomy [5]**.**

In this case, left ovarian cystectomy with left salpingo - oophorectomy was performed. Such a case should be treated under **multidisciplinary approach** as it can cause not only physical but also psychological effects on patients.

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