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Case Report

Massive ovarian mucinous cystadenoma with torsion: A surgical wonder

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ABSTRACT

Mucinous cystadenomas are some of the commonly encountered ovarian tumors, having huge size which causes pain, pressure, distension, genito urinary symptoms etc. Eventually, these tumors are prone to life threatening complications, like hemorrhage or torsion. These cases may remain asymptomatic for a long period of time. For further diagnosis of symptomatic patients clinical examinations and radiological investigations can be used and help the surgeon in deciding management. We hereby report a case involving a very large mucinous cystadenoma, measuring 25 × 24 centimeter with torsion. The data presented here contains details post admission of this patient in casualty to discharge of the patient, such as (a) clinical history (b) physical examination, (c) laboratory reports, (d) radiological investigations, (e) surgical evaluation, (f) histo pathology reports. These Mucinous cystadenomas constitute a comparatively smaller percentage of cases that can present with pain in abdomen due to an ovarian cause. Here, a huge mucinous ovarian cystadenoma had been found pressing on the abdominal contents leading to a variety of symptoms. The aim is to establish the value of detailed diagnosis and timely surgical treatment of these ovarian tumors as well as to signify the potential fatal outcomes.

1. Introduction

Ovarian tumors are mostly benign in nature and can be just an incidental finding on USG. Ovarian cysts or adnexal massses are some of the frequently encountered amongst women of reproductive age group[1] and it is common that they remain asymptomatic in the most of the cases. In all these tumors, mucinous cystadenomas are observed in 15%-20% of cases.[2] Such ovarian tumors originate in the surface epithelium of ovary. They often has smooth inner wall while thin outer wall.

To be more specific, 80% of all ovarian tumors are mucinous cystadenomas in which 10% of these tumors turn out to be malignant and the remaining 10% are borderline.[3]

As the cysts start growing, they invade into surrounding structures,and the patient starts to develope various symptoms which may present as simple as pain and/or pressure to more serious as genitourinary symptoms to severe fatal complication/s, like (a) torsion of ovary, (b) rupture of the cyst, and (c) hemorrhage.[4]

Massive size is a peculiar feature of these benign mucinous cystadenomas. They can be huge measuring from 5 to 28 cm, where as the size increases the risk of malignancy also increases.[5] The most frequent complications of benign ovarian cysts, are torsion of ovary, haemorrhage and cystic rupture.

As it contains mucinous fluid, its rupture leads to peritoneal deposits of mucinous material (pseudo-myxoma peritonei).[6]

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2. Case Presentation

Here is one of the example of our patient who is a 66-year-old female presented in EM with following symptoms main 7 symptoms like (a) severe pain in abdomen, (b) increased abdominal girth, (c) constipation, (d)burning micturation, (e) vomiting, (f) fever and (g) discomfort.

Her obstetric score was parity 6, living 6, postmenopausal woman who came to us after being referred for presenting compaints of pain in abdomen,distention of abdomen since one week, and worsening of pain in abdomen for over one week. Patient's symptoms were associated with (a) abdominal distension, (b) constipation with excessive straining, (c) burning micturation, (d) urinary frequency, and (e) urgency.

She had 2 episodes of vomiting on the day of admission. However, she was observed with no history of nausea, dizziness, or diarrhea. Also, no any complain of liver conition in her medical history or similar complaints in her past.

Her past history was of having hypertension and diabetes which she was carrying since last 5 years and was on medication for the same. She was not taking any hormone replacement therapies. There was no family history of the malignancy of breast, ovary, uretus or bowel.

Physical examination was done and it showed distension of abdomen along with a big mass of 33 Cm from the pubic symphysis almost reaching till xiphisternum. There was no fluid thrill, no tenderness, rebound, or abdominal guarding during examination. Cervix was normal with vaginal atrophy was noted. Patient's blood count was normal but PT INR was raised sifnificantly. A transabdominal ultrasonogram (USG) showed a multiloculated cyst without any solid component and minimal free intraperitoneal fluid.

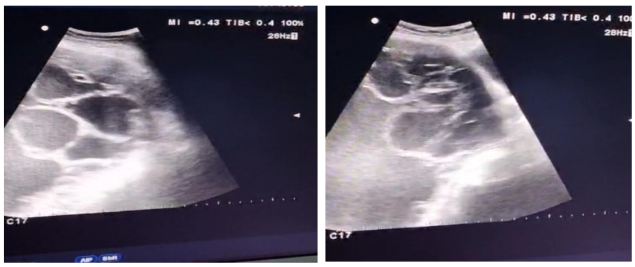

Figure 1: Transabdominal ultrasonography - multiple loculated cystic appearance

A large cystic mass, measuring of 25 × 24 x 18 centimeters with multiple enhancing septae within was confirmed on CT abdomen, causing compression on the surrounding structures.

It is observed that patient was vitally stable and did not show any signs of shock. However, she was having a toxic look and having continuous pain even after giving analgesics round the clock, a decision was made to take the patient to OT with suspicion of chronic torsion.

In OT the abdomen was explored via a vertical incision which disclosed a Left ovarian cyst of massive size, smooth in appearance and grayish in color, residing in almost entire pelvis and abdominal cavity up till the Xiphoid process. Intraoperatively, involvement of pelvic or para-aortic nodules was not observed. Some of the fluid from peritoneal cavity was collected in a sterile syringe and sent for fluid cytology.

Total abdominal hysterectomy was performed alongwith bilateral salpingo-oophorectomy and Left ovarian cystectomy (Figure 2). Pathological evaluation of the resected tissue was done and found to be a mucinous cystadenoma mostly benign/borderline. Right ovary was atrophic.

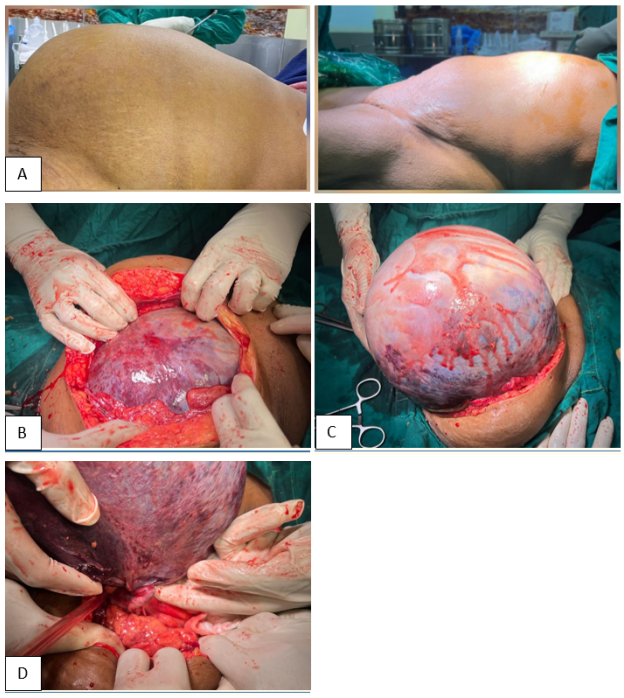

Figure 2: Abdominal distension of the patient before surgery; (**A**): Cystadenoma (**B, C**), Left ovariancyst with torsion 24× 25 cm (**D**)

2.1. Post operative period

2.1.1. On POD 3

More than 600 mL of serosanguinous fluid collection was seen in abdominal drain. To rule out any possibility of fistula or injury to bladder, CT scan was done. CT scan indicates that, there was no fistula or injury to bladder but there was collection of fluid over bladder.

2.1.2. On POD 6

It is observed that patient was drowsy and electrolytes were imbalanced and patient had severe hypoproteinemia. After

critical examining the patient, it was decided that patient will be shifted to ICU for observation.

Patient had episodes of fever and patient was not responding to higher antibiotics. Blood culture and Drain fluid culture came out to be negative for any microbial growth. However, urine culture showed yeast growth >100000/mL.

Electrolyte correction and protein correction was started in ICU and values were monitored at fixed intervals. Additionally a repeat blood culture sent 4 days later which showed growth of enterococcus foecium resistant to aminoglycosides, clindamycin, cotrimaxazole and cephalosporines.

USG of abdomen and pelvis showed no significant collection. Later the patient developed signs of sepsis and was started on higher antibiotics. Tab. Evabradin was also added as the patinet had heart rate more than 120bpm.

2.1.3. POD 11

One PCV was transfused. Patient was talking irrelevant and had rogue behavior so psychiatry reference was done and the diagnosis was ICU Psychosis. Inj. Haloperidol 2.5mg IM sos was started. So later patient was shifted to ward as her PT INR, electrolyte and Sr. Protein values were improved.

2.1.4. POD 14

Sutures were removed and wound gape was noted below umbilicus measuring 4-4.5 cm in length and about 2 cm in depth. Later it healed by secondary healing process.

2.1.5. POD 24

Patient discharged on POD 24 with significant improvement in symptoms.

3. Discussion

As an incidental founding in USG Ovarian cysts are very commonly found. The three main groups in Ovarian neoplasms are : epithelial, stromal, and germ cell tumors.[7] In addition to this Ovarian neoplasms have different sub-types and tumor cell origin. These include germ cell, surface epithelium, or sex cord-stromal tissues.[8] Mostly, these neoplasms are benign. Amongst all these ovarian epithelial cell cystor tumors, 80% Ovarian Mucinous Cystadenomas are benign and 5%-10% present bilaterally.[9] The most common types of epithelial neoplasms encountered- benign cystadenoma, of which 75% were serous and 25% were mucinous.[7]

In determination of the origin of tumor The size and laterality has an important role to play ; whether it is primary or metastatic. Unlike metastatic tumor, the primary tumor is usually large in size and presents unilaterally.[5] The larger ovarian cysts are more likely suggestive of mucinous histology. As seen in this case, the patient's Abdominal CT showed a huge cystic mass measuring 24 x 20 x 18 cm. Such a massive size of cystic mass occupies the entire abdominal as well as Pelvic cavity, resulting in compressive symptoms. As patient came with intense distention of abdomen with vague symptoms, including genito-urinary symptoms, lower backache, vomiting and abdominal pain.

The basic identification and Diagnosis of an adnexal mass is always done with help of the ultrasound of pelvis. The trans-abdominal USG and the trans-vaginal USG in perticular become important for evaluating such ovarian masses.[1] For better visualization of detailed features of the cyst, CT scan & MRI can assist further for better understanding. Ideally the tumor marker CA-125 and the transvaginal USG should be done for early screening of high-risk women who has family history of ovarian carcinoma which can help in early detection of this benign Adenoma;[9] and timely treatment. Cancer Antigen 125 (CA-125) is a very helpful tumor marker that can tell us the difference between malignant and benign ovarian masses.[1]

Despite advances in imaging studies, the establishment of a definitive diagnosis of cystadenomas is primarily by histopathological examination of the surgical specimen.[10]

For the plan of management of cystadenomas, various factors are included. If the mucinous cyst ruptures,it can potentially cause the mucinous deposits to spill in the entire peritoneal cavity and cause complications like - commonly called pseudomyxoma peritonei which can prove fatal.[9] The most recommended treatment is unilateral salpingo-oophorectomy or ovarian cystectomy with the removal of the adnexal mass.[1] Performing surgical interventions for large masses, as in our patient, can also cause fatal consequences, such as sepsis, pulmonary embolism, and cardiac failure.[2] Hence, appropriate monitoring and follow-up are highly recommended in the postoperative period. It comes to the surgeon to compare pros and cons of the surgical intervention and how to proceed accordingly.

As seen in our case, pre operative condition of patient, age and delay in diagnosis can adversely affect the outcome.

4. Conclusion

An adnexal mass is a condition we commonly come across in women of all ages but the diagnosis differs from case to case, person to person and also in age groups. It can be managed conservatively or surgicaly. We managed it through surgical resection of the mass along with total abdominal hysterectomy and intraoperative assistance of pathological evaluation by frozen section. After histopathological examination it turned out to be mucinous cystadenoma of benign nature. Hence, it is better to perform imaging and routine check-ups for early detection of these tumors to prevent negative outcomes. The importance of patients reporting mild to moderate symptoms can prevent future fatal complications such as rupture or as seen in our case, Torsion. Although the

condition is rare, it can be potentially dangerous in its massive form if not diagnosed and treated timely and properly. With the increasing awareness of such conditions, more and more cases could be detected and reported early.[11] Although benign in nature in most of the cases, mucinous cystadenoma can also cause deadly complications. Also, it has malignant potential.

Early diagnosis and prompt treatment is very significant.

5. Human Ethics

Consent was obtained by all participants in this study.

6. Source of Funding

None.

7. Conflict of Interest

None.

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