

Exploratory laparotomy in huge mucinous cystadenoma- a Single Case Study

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Abstract:

Ovarian cyst is most common problems in women due to changing life style, food habits. Ovarian cyst are closed, sac like structure within the ovary that are fills with a liquid or semi-solid substance. This case study deals with post- menopausal 55 years lady having chief complaints with a large cystic swelling at all over abdomen with nausea since 1 year. After local examination, USG and CT scan reports, provisional diagnosis was made as hydatid cyst and decided to do exploratory laparotomy. During intra-operative procedure large cyst was noted arising from left ovary with multiple cysts filled with clear fluid in one section and haemorrhagic fluid in other section inside. The cyst of 3.5kg was excised by laparotomy. Histopathology of the excised mass reported as mucinous cystadenoma.

Keywords: Hydatid cyst, exploratory laparotomy, ovarian cyst, mucinous cystadenoma.

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Introduction:

In women's life, ovarian tumors can present at any stage. Ovarian cyst is most common problems in females due to various types of hormonal changes. Ovarian cyst are closed, sac like structure within the ovary that are fills with a liquid or semi-solid substances.

^[1]Ovarian cysts are much more common in young patients of child bearing age- as noted in current series and are rare before puberty or after menopause. ^[2] Small ovarian cyst may not cause signs and symptoms. Large cysts are more likely to cause signs and symptoms while huge cyst causes symptoms of other systems. ^[3] Diagnosis is established by clinical findings like palpable lower abdominal swelling/lump and pain in abdomen especially in large cyst. Diagnosis is confirmed by USG and CT or MRI abdomen which reveal the size, site and contents in the cyst. ^[4]

The management of ovarian cyst depends upon age of the patients as well as size of cyst. ^[5] The huge size of ovarian cyst causes pressure on pelvic anatomy which causes pressure symptoms of gastro-intestinal and urinary tract. ^[5] For management of such tumor laparotomy is best choice. ^[6] Laparoscopy is considered the gold standard approach to accomplish benign ovarian cysts. The benefits of laparoscopy include reduced postoperative analgesic requirement, earlier mobilization, cosmetic advantages, earlier discharge from the hospital, and return to normal activity. A major factor that will make to perform laparotomy is the size of the ovarian mass. ^[7]

Case History:

A thin built 55 years female, married since 30years with menopause since 8years came to our institute on July 2018. The patient was having chief complaints of gradually increasing abdominal size since 1 year. The abdominal swelling accompanied with dull pain all over abdomen. She also complained with nausea and giddiness. She had sensation of fullness of abdomen since one year with loss of appetite. The patient had no any history of previous medication and surgery.

Previous USG report suggested that large cystic mass in anterior abdomen suspected mesenteric cyst. Due to her socio-economic status, she couldn't get operated. When she started pain in all over abdomen, increasing abdominal swelling and loss of appetite her relatives brought her to our hospital for further management. No specific drug history was noted by patient.

Local examination revealed abdominal distension with 90cm abdominal girth. On palpation huge cystic mass extending from lower abdomen to Xiphi-sternum was palpable. The cystic mass was mobile perpendicular to the long axis of mesentery and its consistency was soft with presence of fluid thrill [Fig-1]. On general examination, she was thin built and undernourished. She weighed 55 kilograms. Pallor was present and physical examination revealed vital functions were stable and lab investigations were normal except Hb% (Table-1).

Table-1: Lab investigations:

Investigations	Observed value	Normal value
Hb%-	10 gm%	13.5 -17.5 gm%
RBS	98 mg/dl	70-140 mg/dl
Bleeding Time	1 min 55 sec	4-10 minutes
Clotting Time	4 min 50 sec	2-7 minutes
HIV I & II	Negative	Negative
HbsAg	Non- reactive	Non- reactive
HCV	Non- reactive	Non- reactive

USG Abdomen - Second USG report suggested that large cystic mass in anterior abdomen? Mesenteric cyst. CT scan - CT scan report suggested large fluid density multi-nodular cyst lesions with enhancing hyper dense septation within seen to be almost entirely filling the abdominal cavity and extending in to pelvis without any enhancing solid component within the lesions which on USG corrections shows presence fine moving internal echoes within (snow-storm appearance) and few small cystic lesions within the above mentioned cystic lesions (possibly daughter cyst). Findings are in favour of encysted hydatid peritonitis likely.

Operative procedure:-

Under general anaesthesia midline incision was taken from xiphi-sternum to 4cm above pubic-symphysis. A large cystic mass

extending from splenic flexor of colon to pelvis covering almost all the abdominal cavity was seen. All intestines were shifted to Morrison pouch. Tumour bound to be adherent with fimbriae and broad ligament of uterus with non visible ovary. It was diagnosed as left ovarian cyst [Fig-2]. Cyst excised with ligation of broad ligament, fimbriae and fallopian tube. Cyst was multi-loculated with clear fluid in one section and haemorrhagic fluid in other section. There were multiple small cysts inside the haemorrhagic part which might be confused as daughter cysts in CT scan. Abdominal cavity checked for any other pathology and abdomen closed in layers [Fig- 4].



Fig-1: Abdominal mass



Fig-2: During surgery



Fig-3: Excised cyst



Fig-4: post-operative closer

Discussion:

The definition of large ovarian cyst varies from those measuring more than 10 cm in diameter in preoperative scan to those reaching up to umbilicus. [6, 8] Ovarian neoplasms may be divided according to original cell types into three main groups: epithelial, stromal, and germ cell. Out of these groups, the epithelial tumors are most common type. The most common benign ovarian neoplasm is the benign cystic teratoma; however, according to some studies, it is serous cystadenoma. The most common types of epithelial neoplasms encountered were benign cystadenoma, of which 75% were serous cystadenomas and 25% were mucinous cystadenomas. [8-9] Ovarian mucinous cystadenoma is a benign tumor that arises from the totipotent surface epithelium of the ovary. It is associated with Brenner tumour suggests its origin as mucinous metaplasia of the epithelioid cell. [10] It is a multi-locular cyst with smooth outer and inner surfaces. It tends to be huge in size. On cut section, the content inside is thick, viscid, mucin-a glycoprotein with high content of neutral polysaccharides. [11]

In Many cases, cysts are treated by surgery *via* laparoscopy or laparotomy cyst excision or cystectomy with Oophorectomy. [12] The choice between laparoscopy and laparotomy, conservative or radical treatments may be difficult and depends on the patient's age, the size of the cyst. A major factor that makes the surgeon decide to perform laparotomy is

definitely the size of the ovarian cyst. Some authors have limited laparoscopic surgery with cyst size less than 10 cm. [13,14] In this patient, laparoscopy excision was not performed due to huge size of the cyst and tumour was tensed adjacent to the anterior abdominal wall, so port insertion was not possible. In this case cyst size was 30cm×15cm, Weight was 3500grams containing 3litres fluid [Fig-3]. Report of Histopathology revealed benign mucinous cystadenoma of ovary. Report of cytology revealed ovarian cyst fluid negative for malignancy cells.

Conclusion:

Differential diagnosis of large mucinous cystadenoma can be mesenteric cyst or hydatid cyst. Conservative management of cystadenoma is well indicated for young patients; however, radical treatment is indicated for perimenopausal and menopausal women. Hence, exploratory laparotomy is choice of surgery among all surgical advancements for huge mucinous cystoadenoma.

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