



An Elderly Postmenopausal Hormone Receptor Negative Breast Cancer Survivor Lady with a Giant Serous Cyst Adenoma of Ovary: A Case Report

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Authors' contributions

This work was carried out in collaboration among all authors. Author SSK designed the study, wrote the protocol and wrote the first draft of the manuscript. Authors BB and RK managed the analyses of the study. Author TK managed the literature searches. All authors read and approved the final manuscript.

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Case Study

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ABSTRACT

We are presenting a case of a 62-year old postmenopausal lady who had been treated for a triple negative left breast cancer at the age of 53 years and she was presented to our clinic with huge left adnexal mass at the age of 62 years. Cyst adenoma is a benign serous ovarian tumor. Huge size ovarian cystadenoma is a rare entity in elderly women. They account for about 58% of all ovarian serous tumors and about 25% of benign ovarian neoplasms. A 62-year old postmenopausal woman with Eastern Cooperative Oncology Group Performance Status 1 (ECOG) was referred from a community hospital to our clinic. There was no lymphadenopathy at neck, supraclavicular and inguinal region. Her general examination and systemic examination except abdominal examination was unremarkable. The clinical presentation of these tumors is variable. Sometimes there may be short term period to attend a giant size and sometimes it may take longer duration to attend such sizes. The common presentation of such tumors are abdominal distension, diffuse abdominal pain,

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anorexia, mechanical discomfort. The positive association with breast cancer and giant ovarian cyst has been reported in few case studies. Hormone receptor positive premenopausal breast cancer patients who are on tamoxifen and still having menstrual cycle are prone to develop giant ovarian cyst. It is a rare condition and it requires thorough clinical, radiological and biochemical evaluation with definitive planned management as when it becomes massive it would be lethal for the patient.

Keywords: Postmenopausal; hormone receptor; cancer therapy; giant ovarian cyst; cyst adenoma.

1. INTRODUCTION

Cyst adenoma is a benign serous ovarian tumor. Huge size ovarian cystadenoma is a rare entity in elderly women. They account for about 58% of all ovarian serous tumors and about 25% of benign ovarian neoplasms. The other benign serous ovarian neoplasms are adenofibroma and surface papilloma [1]. Nowadays it is not commonly found as advanced radiological imaging is available which helps in early detection of an adnexal tumor. Some of the old studies had defined to whom one should call a giant cyst. So a cyst which is measuring more than 10 cm in diameter in the radiological scan or those reaching up to or beyond the umbilicus is considered as giant cyst [2].

The chance of malignant transformation in these serous benign ovarian cysts is only about 7 - 13% in premenopausal women and the same is about 8 - 45% in postmenopausal women. These are most commonly found in the reproductive age group. The incidence of benign serous ovarian tumor after the age of 40 years is very rare but before 40 years of age is near about 50%. There were only few cases that have been reported where giant serous ovarian tumors were found in elderly women [3]. We are presenting a case of a 62-year old postmenopausal lady who had been treated for a triple negative left breast cancer at the age of 53 years and she was presented to our clinic with huge left adnexal mass at the age of 62 years.

2. CASE REPORT

A 62-year old postmenopausal lady with Eastern Cooperative Oncology Group Performance Status 1 (ECOG) was referred from a community hospital to our clinic. She has been diagnosed with left breast carcinoma at the age of 53 years. She underwent left Modified Radical Mastectomy (MRM) followed by adjuvant chemotherapy and radiation therapy. Her histopathology report was suggestive of Triple Negative Invasive Ductal Carcinoma (IDC) of left side (p T3 N2a M0). After completion of treatment, she was in regular follow up with the

treating cancer surgeon till the age of 58 years. After that she lost follow up with the same center. She presented to our clinic with history of lower abdominal discomfort on and off for the last 4 months. However, she was able to carry out her routine activities. She was married at the age of 22 years and attended menarche at 11 years and menopause at 49 years of age. She has two sons and both were full term normal deliveries. There was no significant family history. There was no past medical history or surgical history except MRM or hospitalization for any major illness. Her dietary habits and bowel-bladder habits were normal. She had no addiction.

Her general examination and systemic examination except abdominal examination was unremarkable. There was no lymphadenopathy at neck, supraclavicular and inguinal region. On abdominal examination, a huge abdomino-pelvic mass of size around 28 x 20 cm was palpable, which was extended beyond umbilicus with distension of abdomen. Mass was not movable and get it below the mass was not possible as its lower end had gone below the pubic symphysis. Other organs were not enlarged. Per vaginal and per rectal examination was normal except same mass was palpable. On chest, left side scar mark of MRM was present and right breast was normal. There was no bilateral axillary lymphadenopathy. We considered it as an adnexal mass, which may be arising from ovary and possibility of ovarian metastasis from a breast cancer. So we evaluated her with Contrast Enhanced Tomography (CECT) of chest, abdomen and pelvis. We had also asked for other markers such as FSH, LH and CA 125. All reports were within normal limits and CA 125 reported as 44 U/ml. CECT had shown a left adnexal mass of size 26.5cm x 18cm x 11cm not separately seen from left ovary with normal uterus, right ovary and fallopian tube. The mass was heterogeneous with multiple loculations with thick septations with intact capsule. There was no other lesion in the peritoneal cavity, no distant metastasis and no encasement of surrounding structures except displacement and compression.

After discussing this case in our multidisciplinary tumor board it was planned to go ahead with exploratory laparotomy with removal of mass followed by frozen section control and further procedure according to the report. After getting medical fitness, she had been planned for surgery. She underwent exploratory laparotomy and we found that the mass was arising from left ovary, with chronic adhesions at some places in the pelvis with cranial extension upto supraduodenal region. [Fig. 1]. Contralateral ovary, fallopian tube and uterus was normal with no peritoneal, pelvic, serosal, subdiaphragmatic and mesenteric deposits. Therefore, we completed left salpingo-oophorectomy with enblock removal of left ovarian cyst. The capsule of the cyst was intact [Fig. 2]. Frozen section reported it as a benign ovarian tumor possibility of cystadenoma. So we abandoned the further procedure and closed the abdomen in layers. Postoperative course was uneventful and she was started on feeding after 12 hours of surgery. She was discharged on 4th postoperative day. Final histopathology report was suggestive of benign serous cystadenoma of ovary. On pathological examination, grossly it was a large ovarian cyst measuring 27x18x12 cm with intact capsule with serous fluid inside. On cut section, there was a thick cyst wall with small papillary excrescences at some places with multiple loculations inside containing clear straw colored fluid. Microscopically under high magnification (Fig. 3) ovarian parenchyma is seen at the lower portion and cystic space is seen at upper portion and under low magnification (Fig. 4) cyst is lined by a single layer of columnar or cuboidal epithelium with bland nuclear features without cilia and there was no atypia. We have kept her on periodic follow up and she is still disease free after 1 year of completion of surgery.

3. DISCUSSION

Giant ovarian cysts secrete most commonly two types of secretions which includes either serous or mucinous fluid. According to that they have been named Giant serous ovarian tumor or giant mucinous ovarian tumor [3].

Serous tumors are multilocular and secrete serous fluids. About 70 % of serous tumors are found as benign tumors and giant cystadenoma of these serous tumors is a rare finding. Only few cases of giant serous cystadenomas are found in elderly postmenopausal women. The percentage of borderline serous tumors, malignant serous

tumors and bilateral serous tumors are as follows 5-10 %, 20-25 % and 10 %, respectively [4].



Fig . 1. Large ovarian cyst extracted out from the vertical midline incision



Fig. 2. Clamping at left uterine cornue (Arrow)

The clinical presentation of these tumors is variable. Sometimes there may be short-term period to attend a giant size and sometimes it may take longer duration to attend such sizes. The common presentation of such tumors are

abdominal distension, diffuse abdominal pain, anorexia, mechanical discomfort. The patient had only lower abdominal discomfort without affecting her routine activities. In one reported case by Madhu et al, [5] the patient had giant pelvic mass with abdominal distension for the last 13 years and she consulted a physician when her routine activity gets disturbed due to overdistension of abdomen. In other case reported by Yeika, et al., [6] the patient presented with over distension of the abdomen which was clinically diagnosed as massive ascites and after evaluation it was found to have a giant ovarian cyst. How these patients can have varied presentations is explained in one more case study reported by Albers et al., [7] where patient presented with vague gastrointestinal symptoms which was completely unrelated to actual diagnosis and after complete evaluation patient was diagnosed to have a giant ovarian cyst. Therefore the differential diagnosis of giant ovarian mass includes both gynecological and non-gynecological diagnosis like benign and malignant ovarian masses, accentuated obesity, distended bladder, hydronephrosis, ascites, intraabdominal and adnexal masses [8]. It makes a difficult job for treating clinician in evaluating such cases to reach the final diagnosis.

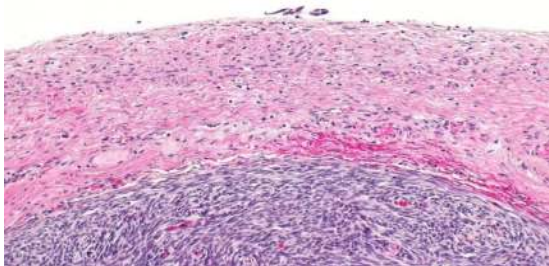


Fig. 3. Low magnification view of serous cystadenoma ovary

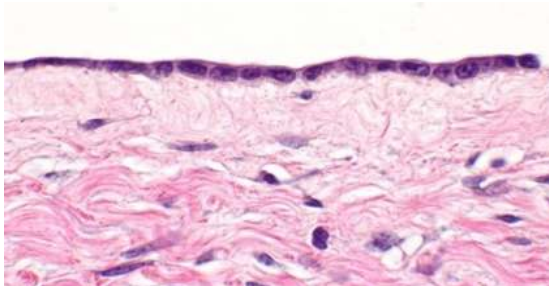


Fig. 4. High magnification view of serous cystadenoma ovary

Tumor marker associated with these tumors i.e. CA 125 is mostly within normal range or sometimes marginally raised. In our case also CA 125 was marginally raised (44 u/ml). There are various diagnostic imaging modalities are available for these tumors like CECT, PET, MRI, which also helps in finding out the character of the cysts along with detection of metastatic foci.

The treatment of benign giant serous ovarian tumors is surgical intervention because of associated mechanical compression effects due to its enlarged size. The traditional way to manage these tumors is by laparotomy and the other way is by laparoscopic approach [9]. Laparoscopic excision of these giant tumors becomes easier if decompression or aspiration of the cyst is done intra operatively. There are technical difficulties with laparoscopic excision like risk of rupture of cyst with spillage of fluid in the peritoneal cavity, implantation of tumor cells along laparoscopic port track and restricted movements of instruments in the pelvis [10]. In a literature review described by Bellati et al., [11] who have proposed and concluded that Laparoscopically Guided Mini Laparotomy (LGML) is a better option in comparison to sole laparoscopic excision in case of large benign ovarian tumors provided there should not be any other risk factors for malignancy other than size. Still there is no randomized controlled trial for laparoscopic management of giant ovarian tumor with size > 20 cm, so laparotomy is the gold standard. In case of malignant ovarian cyst the standard surgical staging procedure is total abdominal hysterectomy with bilateral salpingo-oophorectomy with pelvic and retroperitoneal lymph node dissection or sampling with omentectomy with or without multiple peritoneal biopsies or peritonectomy [12].

There are chances of immediate intraoperative complications during surgery of these giant tumors like venous pooling due to sudden removal of tumor, hypotension due to decreased venous return resulting because of obstructed inferior vena cava and sometimes pulmonary edema due to sudden expansion of collapsed lung which may occur due to compression of lung because of large tumor.

There are conflicting evidences for post cystectomy fertility results due to damage of ovarian reserve. One study has proposed that bilateral cystectomies may result in more damage of ovarian reserve as compared to

unilateral cystectomy but there will be recovery in ovarian reserve. In other study, they did not find any statistical difference in terms of long-term postoperative fertility when unilateral cystectomy or ovariectomy is compared with abdominal or pelvic surgeries [13,14].

The positive association with breast cancer and giant ovarian cyst has been reported in few case studies. Hormone receptor positive premenopausal breast cancer patients who are on tamoxifen and still having menstrual cycle are prone to develop giant ovarian cyst [15]. But our patient is triple negative and didn't receive any drugs so drug induced cause is also ruled out. Finally it concludes that the risk factors for the development of giant ovarian cyst in postmenopausal woman are still unclear. They need to be studied in the future and each case needs attention to avoid the unexpected complications. Hence, multidisciplinary approach should be there for the management of giant ovarian tumors with proper clinical, radiological evaluation, careful intraoperative monitoring and postoperative care.

4. CONCLUSION

Giant Ovarian Cyst is a rare condition that requires thorough clinical, radiological and biochemical evaluation with definitive planned management, as when it becomes massive it would be lethal for the patient.

CONSENT

It is not applicable.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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