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An Interesting Case of an Undiagnosed Ovarian Tumour weighing 4.2 kg – a Case Report

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Abstract

Ovarian cancer is the 7th cause of death and morbidity in females worldwide. (1a,b) Numerous studies propounded that ovarian germinal epithelium or postovulatory epidermoid cysts formed after follicular rupture and repair were responsible for the genesis of the majority of ovarian carcinomas. (2-4) The highest cancer incidence was registered in 2012 – accounting for 81.80% of all cases in America and 11.33% of all cases in India. (5) Worldwide, the number of deaths from ovarian cancer was 4.4% in 2018. (6) WHO stated that 65% of these were Epithelial surface tumours; 15% were Germ cell tumours; 10% were Sex cord tumours; 5% metastatic tumours and miscellaneous ovarian tumours also accounted for another 5%. (1-8) Up to 25% of ovarian cancers are a part of familial cancer syndromes. The risk of ovarian cancer has been shown to increase with age. It is therefore rare in women younger than 40 years of age and notably, is the worst in women after menopause. Women who have a first full-term pregnancy after 35 years also hold a higher risk of developing ovarian cancer. (9)

Likewise, results show that CA 125 was raised in over 80% of advanced epithelial ovarian cancers (EOC). It was lower at about 50% for Stage 1 and the lowest in mucinous EOC. However, CA 125 is not only specific to EOC but can be seen in pelvic inflammatory disease, endometriosis or pancreatic endometrial cancer.(10,11,12) Two parallel European randomised controlled trials (RCT) were conducted along with data analysis from an international collaborative ovarian neoplasm study and adjuvant chemotherapy. From this, a subgroup examination found the effects of chemotherapy in cases not optimally treated (13) and the clinical relevance of early ovarian cancer surgical staging.

Keywords *Ovarian Cancer, Epithelial ovarian cancer, CA 125, Familial cancer*

Abbreviations

EOC – Epithelial Ovarian Carcinoma

RCT – Randomised Controlled Trials

CA-125 – Cancer Antigen 125

CECT – Contrast Enhanced Computed Tomography

Case Report

Background In rural areas of India, diagnosing ovarian cancers can be challenging. In August 2022 a 46-year-old patient with a past medical history of hypertension and hyperthyroidism was admitted with the chief complaints of abdominal pain lasting for a week. Physical examination showed abdominal swelling and indigestion was also present, though the general condition was fair and she remained afebrile.

Materials and Methods

Abdominal cavity was bloated and per abdominal examination revealed a large solid cystic mass reaching up to the epigastric region. Per vaginum, fullness was seen in both the fornices. Hemodynamically, the patient was stable. CBC done was normal, eGFR: 132.83, TSH: 13.4, CA-125:47.7, IgE: 1864.6

CECT of the whole abdomen revealed a large solid cystic mass with a large cystic component superiorly and a solid septated component inferiorly abutting the uterus and left adnexa on CT report. Cytoreductive surgery was performed with staging laparotomy, total abdominal hysterectomy, bilateral salpingo-oophorectomy, retroperitoneal dissection and supracolic omentectomy.

Operative findings showed a left-sided 23cm solid/cystic mass with a variegated appearance weighing 4.2kg, samples of which were sent for histopathological examination. Operative findings also included mild peritoneal fluid and a bulky uterus. However liver/subdiaphragmatic peritoneum was normal, right ovary and fallopian tube were normal with no ascites.

The histopathological examination of the solid cystic mass from the left ovary was found to be a mucinous adenocarcinoma. The FIGO stage assigned was 1AG2 (a moderately differentiated mucinous adenocarcinoma), as the tumour was limited to one ovary or fallopian tube; capsule intact and no tumour present on the ovarian surface or fallopian tube, no malignant cells in ascites or peritoneal washings.

Additional findings showed intramural leiomyomata, non-secretory endometrium, adenomyosis uteri, severe chronic cervicitis and a benign haemorrhagic cyst in the right ovary.

Discussion

According to recent research published in 2020, data revealed that around 80% of mucinous ovarian cancers developed from different primary sites. 45% metastasised from the gastrointestinal tract, 20% began in the pancreas, 18% in the cervix and endometrium and 8% in the breast. However, mucinous cancer may also develop as a primary tumour in the ovary. About 80% of these primary tumours are diagnosed at stage 1.14

Conclusion

Ovarian cancer is one of the world's leading causes of death in women. The key imperative aspects are lifestyle, genetics and environment. Breastfeeding, oral pills and childbirth minimise the risk.

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