Bilateral High Grade Papillary Serous Adenocarcinoma Ovary: A Case Report

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ABSTRACT
Ovarian cancer is the leading cause of death from gynaecological malignancies. Approximately 90% of malignant ovarian tumours in adult are epithelial tumours. Although incidence of serous adenocarcinoma is less (5%) but these tumours are aggressive tumours and metastasize in their early stage and have poor prognostic factors. We present a case of bilateral papillary serous adenocarcinoma ovary in a 50 year old female treated with bilateral salpingo-oophorectomy and debulking surgery followed by 6 cycles of combination chemotherapy with carboplatin and paclitaxel.

Keywords: papillary serous adenocarcinoma, malignant tumour, Risk of malignancy index, carboplatin, paclitaxel.

INTRODUCTION
Ovarian cancer is the leading cause of death from gynaecological malignancies. Ovarian cancer is rare before age of 40 and incidence steadily increases thereafter and peaks at the age 65 to 75 years. Approximately 90% of malignant ovarian tumours in adult are epithelial tumours. Although incidence of serous adenocarcinoma is less (5%) but these tumours are aggressive tumours and metastasize in their early stage and have poor prognostic factors. We are presenting a case of bilateral high grade papillary serous adenocarcinoma ovary.

Case Report
A 50 years old female presented in Gynae OPD with complaints of heavy and prolonged menstrual bleeding during menstrual phase since 2 months and backache since 1 year.

Her present menstrual cycles are -7-10/28-30 days with increase flow. Her past menstrual cycles were normal.

On her physical examination, she is obese with BMI 30 kg/m², normotensive. She had an abdominal lump of 18 weeks size of gravid uterus. The mass was firm in consistency with irregular surface, non tender had restricted mobility.

On per vaginal examination, cervix was pointing downwards, uterus was about 6-8 weeks size, a firm mass of about 10 x 7 cm, non tender felt in right and anterior fornix, it moved with movement of the uterus. In left fornix a separate mobile mass with variable consistency of about 7 x 7 cm felt.

A provisional diagnosis of bilateral ovarian tumours was made.
All routine blood investigations were within normal limit. S .CA 125 was 1380 U/ml, and CA 19-9 was 160 U/ML, Alfa fetoprotein, beta hCG, LDH were normal.

Abdominal USG showed uterus to be 10.1x3.7x6.6 cm in size with bilateral, multilocular cysts with solid areas, of size 12x8.9 cm in right adnexa and 9.7x7.9 cm in left adnexa. There was no ascites. No metastasis could be detected.

Risk of malignancy index 4 was calculated and was 11040, suggestive of malignant nature of the tumour.

CT abdomen showed a large lobulated multicystic lesion with enhancing septae noted in both adnexa suggesting ovarian in origin. Largest lesion was 13.4x12.7 cm in left adnexa and in right adnexa 7.2x5.4 cm ovarian mass. Mild free fluid in POD. Abdomen and chest normal. Fat planes are maintained and no lymadenopathy and ascites observed. The findings are suggestive of bilateral ovarian masses most likely neoplastic in origin.

Patient was planned for staging laparotomy.

Staging laparotomy was done under general anaesthesia. Uterus corresponds to 10 weeks size of gravid uterus. Bilateral adnexal masses present. 5x6 cm multilobulated cystic mass in right ovary with smooth surface, intact capsule, no surface excrescenses. On left side 7x8 cm solid cystic mass along with a 8x8 cm fleshy polypoidal mass with papillary appearance and no capsule. Samples for cytology taken after saline wash from pouch of douglas and paracolic gutters. Total abdominal hysterectomy with bilateral salpingo-oohorectomy, infracolic omentectomy with pelvic lymphadenectomy done. No metastatic deposits presents on adjacent organs, liver and under surface of diaphragm. Patient stood procedure well.

Surgical staging of the disease was Stage 1 c.

In post operative period IV antibiotics given for 48 hrs with symptomatic and supportive treatment. Thromboprophylaxis with enoxaparin was given for 5 days. Post operative period was uneventful. Patient was discharged on day 5 of surgery with advise to review with histo-pathological report.

Pathological findings: Sections from bilateral ovaries showed an invasive tumour composed of predominantly papillae, along with a few nests and glands. The tumour cells are moderately pleomorphic with moderate amounts of eosinophilic cytoplasm and hyperchromatic nuclei with 0-1 nucleoli. Calcifications, including psammoma bodies, are seen. Lymphovascular invasion is identified. Capsular invasion is noted on the left side. Bilateral fallopian tubes, bilateral parametria, cervix and endomyometrium are free of tumour. A left paratubal cyst is seen. Omentum shows microscopic tumour deposits. High grade papillary serous carcinoma of bilateral ovaries. Three of eight lymph nodes show tumour deposits (3/8) with extranodal spread seen. Right pelvic lymph nodes - Two of eleven lymph nodes show tumour deposits (2/11) with extranodal spread seen.

Final Diagnosis: Bilateral Papillary serous adenocarcinoma ovary Stage III A2.

After reviewing histopathological report, patient was given 6 cycles of combination chemotherapy with carboplatin and paclitaxel. Patient was under regular follow up till 1 year then she was lost to follow up.

Discussion:

Ovarian carcinomas are the second most common gynaecological cancer and leading cause of death from gynaecological malignancy. Papillary serous cystadenocarcinoma of the ovary is the most common ovarian carcinoma comprising nearly 50% of all malignant tumours of ovary and is also well known for its bi-laterality.

Low grade serous tumors have been documented to be associated with their precursors borderline tumors and harbour BRAF/K-ras mutations while genetic abnormalities of high grade tumors include p53 MUTATION, p16 expression and loss of BRCA1 expression .(2)

Most patients with ovarian cancer present with clinical features such as abdominal swelling, bloating, difficulty in eating or feeling full. Gastrointestinal symptoms such as nausea, vomiting, constipation or diarrhoea are associated with late stage disease. Menstrual abnormalities such as dysmenorrhoea and /or heavy menstrual bleeding may be the presenting symptoms. In early stages, they are usually asymptomatic.(1,3-6) In developing country patient usually report to hospital late this is because of the vague and nonspecific symptoms. (7)
Malignant serous tumours are soft, multiloculated, partially cystic, partially solid tumours with friable papillae. Capsule may be smooth or irregular with papillary projections. Histologically there is significant stromal invasion. Calcifications (Psammoma bodies) are present in one-third of patients. Characteristic microscopic features include finger like papillae with fibrovascular core, covered by multilayered cuboidal or columnar epithelium, hyperchromatic nuclei, prominent nucleoli, frequent mitosis, Psammoma bodies and desmoplastia.

Treatment modality for high grade papillary serous cyst adenocarcinoma is cytoreductive surgery. Staging laparotomy requires a thorough inspection of the peritoneal cavity, including the paracolic gutters, pelvis, and domes of the diaphragm; total abdominal hysterectomy (TAH) and bilateral salpingo-oophorectomy (BSO); liver palpation and biopsy (if indicated); lymph node sampling; omentectomy; and peritoneal washings.

Patients with stage IA or IB disease (limited to one or both ovaries with no ascites and negative peritoneal washings) and with well- or moderately differentiated histology should be treated with surgery alone. These patients do not require adjuvant chemotherapy. Patients with stage IA or IB poorly differentiated disease, stage IC, or stage II disease should receive adjuvant chemotherapy.

Patients with stage III or IV disease should be treated with neoadjuvant chemotherapy for three cycles followed by debulking surgery. After surgery, all women should receive at least 6 cycles of platinum-based therapy with either cisplatin or carboplatin in combination with a taxane, usually paclitaxel.

The prognosis of invasive epithelial ovarian cancer is poor, and related to stage, tumour grade and residual disease after surgery. 10,11 The prognosis for early-stage ovarian invasive cancers and borderline tumours of all stages is significantly better. 5-year survival rates for patients with stage 1 disease are more than 90%, but less than 25% for advanced stage cancers.

Conclusion: Epithelial ovarian cancer presents as a wide variety of vague and nonspecific symptoms. Routine bimanual pelvic examination should be done as a baseline screening method. Ca 125 and transvaginal ultrasonography should be performed in women if per vaginal examination shows adnexal mass.

References:
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Figure 1: Gross appearance of the specimen showing bilateral ovarian tumours