

**Conclusion:** CA 19-9 is elevated in several conditions but most likely to be raised in dermoid cysts and mucinous tumours. CA19-9 levels need to be interpreted along with clinical and radiological findings.

## Ovary: Oral Abstract

### Clinical outcomes of cytoreductive surgery and HIPEC in advanced and recurrent epithelial ovarian cancers with peritoneal carcinomatosis

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**Introduction:** The role of surgery for peritoneal carcinomatosis (PC) has slowly evolved from palliation to potential curative intent. Attempting to remove all visible tumor deposits, "surgical cytoreduction" (CRS) was reported in 1930s for ovarian cancer and eventually became an accepted therapy with proven survival benefit. The new approach of combining CRS and hyperthermic intraperitoneal chemotherapy (HIPEC) to treat peritoneal metastasis offer hope for long term survival in this group of patients. The risk and benefit of this approach continued to be debated. A prospective study was conducted to understand the perioperative outcomes of CRS and HIPEC. **Aim:** To evaluate the perioperative outcomes associated with CRS and HIPEC in Advanced and Recurrent Epithelial Ovarian Cancer with PC.

**Method:** Prospective analysis of patients undergoing CRS and HIPEC from November 2014 to July 2015 was done. Inclusion criteria included localized disease in peritoneal cavity, no distant metastasis and PS <2. Grade 3/4 complications from day of surgery until 30 days postoperatively were recorded.

**Results:** We performed CRS and HIPEC in 20 patients from November 2014 to June 2015. HIPEC Plus regimens included Cisplatin (50 mg/m<sup>2</sup>) and Lipodox (15 mg/m<sup>2</sup>) intraperitoneally and Ifosphamide (1300 mg/m<sup>2</sup>) and Mesna (260 mg/m<sup>2</sup>). Infusion time was 90 minutes with a temperature range of 41-43°C. Out of 20 patients 6 (30%) underwent primary debulking surgery and 14 (70%) underwent secondary debulking surgery. PCI score ranged from 2-26 (mean 13.65). Mean operating time was 6.42 hrs and average blood loss was 1046 ml. Average hospital stay was 8 days and SICU stay was 4.9 days (range 3-14 days). Total 26 adverse events were observed of which grade 1 were 11 (42%), grade 2 were 8 (30%), grade 3 (11.5%) and grade 4 were 2 (8%). Most common complication was hematological (8) followed by respiratory (6), sepsis (4) renal (2), GI (2). 4 patients (5 events) developed grade 3 or 4 complications in the form of septicemia, pulmonary embolism, GI fistula of which 2 patients expired and remaining recovered although required prolonged hospitalization. Increased morbidity were observed in cases with symptomatic relapse, higher PCI score and CA 125 level higher than 250 U/ml. Most of the adverse events were grade 1 and 2 and were managed by observation only or GCSF support, transfusions and other minor interventions. The combined grade 3-4 morbidity was 20% (4 out of 20) which consisted of neutropenia, infection and respiratory complications. One patient required relaparotomy and two patients expired attributed to pulmonary embolism and septicemia respectively.

**Conclusion:** Enthusiasm associated with improvement in survival is often dampened by increased perioperative mortality and morbidity figures and therefore CRS and HIPEC has not yet been considered standard of care by many centres. HIPEC after extensive cytoreductive surgery for ovarian cancer is a procedure with acceptable morbidity that patients can tolerate. More follow up is needed to determine the effect of HIPEC on survival. Till such time more data are obtained by way of larger randomised trials, this approach remains investigational.

## Ovary: Oral Abstract

### Audit on the role and efficacy of PET/CT in recurrent ovarian cancer settings in a tertiary care centre in India

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Ovarian cancers tend to recur in 15-70% cases. CA-125 - is a tumor marker used for monitoring therapeutic response, and in surveillance, for recurrent disease. However, it has a limited role as a persistent high level can signify either recurrence or persistence of residual tumor. Metastases from ovarian

cancer primarily involve the peritoneum rather than parenchymal sites; thus, the presence of small-volume recurrence or metastatic deposits on the visceral surfaces poses a challenge for interpretation of CT and MR images. PET/CT utilizes its property of higher accumulation in malignant cells to provide both anatomic and functional information for diagnosing malignant tumors.

**Objectives:** The objectives of the study were to find the correlation between PET/CT findings and final histopathological diagnosis after a secondary cytoreductive surgery in suspected ovarian cancer recurrences.

**Materials and Methods:** PET/CT was done in cases with rising or above normal CA-125 and no radiological findings. These patients with abnormal PET/CT findings were taken up for a secondary cytoreductive surgery and histopathological proven were taken as the standard against which PET/CT positive findings was compared.

**Results:** The mean age in our group of patients with suspected recurrence was 53 years (Range 39-74 years). Of the 52 patients with suspected recurrence, 40 patients with a PET-CT scan with findings suggestive of an avid uptake underwent surgery. 22 patients had serous histology, 12 mucinous and 8 had clear cell carcinoma. Stage-wise distribution at the time of primary surgery is as follows stage I-3, stage II-7, stage III-26, stage IV-4. Of the 40 patients who underwent a second look surgery 32 had histopathologically confirmed recurrence. PET-CT detected a total of 86 lesions in the 40 patients who underwent surgery. Of these, 38 were in the lymph nodes 28 in para-aortic and 10 in pelvic, 32 were peritoneal lesions and 14 were pelvic, 2 were metastatic in the parenchyma of liver. Detection of the lesion on PET-CT was size dependant, of the 9 lesions were missed on PET-CT, 7 were less than 0.5 cm. The mean diameter of the lesions detected was 2.2 cm (range 0.3-6.2 cm). PET-CT accurately identified 62 of 70 histopathologically proven lesions. The overall lesion-based sensitivity of PET-CT is 88.6%, specificity 56.2%, Positive predictive value being 72.1%, negative predictive value of 69.2%. Accuracy of detecting lesions greater than 1 cm is 78.6% (44 of 56 lesions).

**Conclusions:** Correlation between PET/CT and histopathological disease: k (cohen value) = 0.81 which suggests excellent correlation. For selected patients with ovarian cancer recurrence may benefit from a comprehensive radiographic imaging survey (PET-CT) at the time of even no or minimal CA-125 elevation in early detection and successful cytoreductive surgical resection and an increase in overall survival.

## Ovary: Oral Abstract

### Clinicopathological review of epithelial ovarian tumors in young females and reproductive and survival outcome: Ten years experience from a tertiary center

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**Objective:** To find out the prevalence of epithelial ovarian tumors in young females and correlation with reproductive and survival outcome.

**Design:** Retrospective study.

**Setting:** Tertiary referral hospital.

**Methods:** A retrospective analysis of females from 9-35 year of age group treated for ovarian tumors between January 2003 to July 2013 was performed. Variables studied included age, presenting symptoms, imaging, tumor markers, surgical findings, type of surgery, histopathology reports and follow-up.

**Main Outcome Measures:** Histopathological variant, FIGO stage, reproductive and survival outcome.

**Results:** A total of 155 patients were found to have ovarian tumors. Mean age at time of diagnosis was 24.9 ± 1.8 years (range 9-35). Clinical presentation in majority of the cases was abdominal pain in 68 (43.8%), ascites in 13 (8.3%) mass in abdomen in 25 (16%), followed by irregular menstrual cycles in 15 (9.6%), infertility in 18 (11.6%) 12 (7.7%) were found to be incidental on ultrasound examination while 4 women were found to have virilising symptoms. There were 76 (49.1%) cases of epithelial ovarian tumors, 6 (0.03%) of borderline tumors and 30 (19.3%) were of malignant ovarian tumors while 40 (25.8%) were benign. Stage IA (N = 80), Stage I 8 (N = 2), Stage III (N = 6) and Stage IV (N = 12). Females were further subdivided into three age groups 9-15 years, 15-25 years and 25 to 35 years for determining outcome of epithelial tumors. Reproductive and survival outcome were studied in each stage.