

**Conclusions:** Limited data exists about the histological type distribution, surgical treatment and overall survival of epithelial ovarian tumors in women aged below 35 years. Young patients have higher overall progression-free survival and a better clinical outcome than older patients. Any women presenting with pain and nonspecific symptoms should be investigated and evaluated properly.

## Ovary: Oral Abstract

### Association of organochlorine pesticides and risk of epithelial ovarian cancer: A case control study

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**Background:** Organochlorine pesticides (OCPs) belongs to the class of hydrocarbons characterized by its cyclic structure. Due to their persistent nature OCP gets accumulated in the food chain and cause possible adverse health effects specifically various hormone mediated disorders. Ovarian cancer is also one of the hormone dependant cancer and begins with the transformation of cells that comprises the ovaries including surface epithelial, germ cells, etc. It has been suggested that endocrine disruption, exposure to xenobiotic and subsequent oxidative stress may antedate ovarian cancer and contribute to its pathogenesis. However, no report regarding any association of OCP level with etiology of epithelial ovarian cancer is so far available among North Indian population.

**Methods:** A total of 120 subjects were included in this case control study, consisting of 60 histological proven cases of epithelial ovarian cancer and 60 controls subjects. Quantification of OCP levels was done by Perkin Elmer Gas Chromatograph (GC) equipped with 63Ni selective Electron Capture Detector. **Results:** Levels of b-HCH, endosulfan I, p'p'-DDT, p'p'-DDE and heptachlor were found significantly high in cases of epithelial ovarian cancer as compared to control. A significant association was also observed between higher levels of b-HCH and heptachlor and EOC with odds ratio of 2.76 and 2.97 respectively.

**Conclusion:** Results indicate the plausible role of OCPs with the pathogenesis of epithelial ovarian cancer among North Indian population. Moreover, it is one of the first report suggesting significant level of heptachlor among north Indian women population with epithelial ovarian cancer.

## Ovary: Oral Abstract

### Female adnexal tumour of probable wolffian origin: A rare case report

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**Introduction:** Female adnexal tumour of probable wolffian origin (FATWO), is a rare neoplasm arising within the leaves of a broad ligament or hanging from it or a fallopian tube. It is considered a tumour of low malignant potential which shares similar histological and immunochemical features with mesonephric remnants.

**Case:** Here we present a case report of a 40 years old, nulliparous female who presented with acute pain abdomen and fever since 2 days. Her LMP was 30.09.2015 and her past menstrual cycles were irregular. She was nulliparous with history of infertility. In past medical history revealed her to be a known diabetic for 5 years, with uncontrolled blood sugars. Patient was hemodynamically stable. On per abdominal examination there was generalized tenderness all over the abdomen with guarding and rigidity. On per speculum examination vaginal discharge was noted with unhealthy cervix. Per vaginal examination revealed a tender mass of approximately 8 cm × 6 cm was felt on left fornix. All her base line investigations were normal. The salient investigations like CA-125 35.60 IU/L, CEA 3.46, Beta-HCG 2.29 were normal. On imaging, MRI showed a well defined solid cum cystic space occupying lesion of 9 cm × 8 cm arising from left adnexa with evidence of right hemorrhagic adnexal cyst 6 cm × 7 cm and hydro/hemosalpinx noted. There was well defined space occupying lesion in the pelvis on the left of the uterus which is likely a broad ligament leiomyoma. Diagnosis of acute abdomen was made with adnexal mass probably infectious in origin. Injectable antibiotics were started. In view of acute pain abdomen decision for surgical intervention was taken. Laparoscopic findings revealed bilateral ovarian abscess with left sided broad ligament mass (solid consistency)

probably leiomyoma. Right tube and ovary were normal. Drainage of tubo-ovarian abscess with left salpingo-oophorectomy with right salpingectomy with adhesiolysis was done and sent for histopathology. HPE reported Female adnexal tumour of probable wolffian origin (FATWO) which was positive for vimentin and CD10, possibly arising from left sided broad ligament. Patient underwent radical hysterectomy with omentectomy with appendectomy was done in view of FATWO.

**Conclusion:** Female adnexal tumour of probable wolffian origin (FATWO), is a rare neoplasm which is usually considered as benign, although in some cases metastasis on recurrences have been reported even after a long interval following the initial diagnosis. Pre-operative diagnosis of FATWO is very difficult because of the rarity of the disease and paucity of the literature available.

## Ovary: Oral Abstract

### Role of human epididymis protein 4 for detection of ovarian carcinoma in adnexal masses: A pilot study

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**Introduction:** HE4 is a novel tumour biomarker used for early diagnosis of ovarian cancer. This study evaluated the diagnostic accuracy of HE4 alone and in combination with CA125, risk of malignancy index (RMI), risk of malignancy algorithm (ROMA).

**Methods:** It was a cross sectional study conducted recruiting 88 women with adnexal masses who were planned for surgery. After baseline work up and ultrasound examination, serum samples were collected for estimation of CA 125 and HE4 levels. Serum HE4 levels were estimated using ELISA kit. RMI and ROMA score were calculated and diagnostic accuracy of HE4, CA 125, RMI, ROMA and their combination were compared. Cut off for HE4 and ROMA score were calculated using ROC curve.

**Results:** Of 88 subjects, 66 were analyzed with 19 malignant (including 5 LMP) and 47 benign cases. The median value of HE4 among malignant cases was found to be significantly higher than among the benign cases. PPV and NPV of HE4 at a cut off 130.8 pMol/ml was 85.7% and 77.9% respectively. Highest PPV (88.9%) with acceptable NPV (80.7%) was found with ROMA followed by HE4 (PPV 85.7%; NPV 77.97%), RMI (PPV 76.92%; NPV 83%) and CA125 (PPV 52%; NPV 80.85%).

**Conclusion:** HE4 levels were lower in Indian population both in malignant and benign tumours as compared to other studies. HE4 is a good discriminator and gives best accuracy when it is combined with CA125 in a logistic algorithm, ROMA.

## Ovary: Oral Abstract

### Gestational trophoblastic neoplasia: Retrospective analysis of clinical profile, treatment pattern and outcome

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**Background:** Gestational trophoblastic disease is a spectrum of cellular proliferation arising from the placental villous trophoblast. Gestational trophoblastic neoplasia (GTN) is a collective term for GTD that invade locally or metastasize. GTD includes hydatidiform mole (complete and partial) and GTN include invasive mole, choriocarcinoma, placental site trophoblastic tumor and epitheliod trophoblastic tumor.

**Aim:** To evaluate clinicopathological profile, treatment pattern and clinical outcome in patients with gestational trophoblastic neoplasia (GTN).

**Materials and Methods:** Twelve cases of gestational trophoblastic neoplasia treated between 2012 to November 2015 in Department of Radiotherapy – II, PGIMS, Rohtak were evaluated in this retrospective study. Data was analyzed on the basis of age, histopathology, stage, type of treatment received and treatment related toxicities. Disease free survival was estimated.

**Result:** Out of 12 women 7 (58 %) had hydatidiform mole, 4 (33%) invasive mole and 1 (8%) had choriocarcinoma. All the cases were given chemotherapy. Two patients had low risk disease. Among high risk group seven patients

had score of less than 7 and five patients had risk score of 7 or higher. Five patients were given single agent methotrexate, seven patients received multidrug regimens. All patients are on regular follow up. One patient (high risk group) expired as she did not receive treatment.

**Conclusion:** GTN are rare and proliferative disorders with proper diagnosis and treatment most of the cases are amenable to treatment with favorable outcome.

## Ovary: Oral Abstract

### Study of efficacy and safety of adjuvant intraperitoneal chemotherapy in carcinoma ovary

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**Background:** The benefit of administering chemotherapy directly into the peritoneal cavity is supported by preclinical, clinical and pharmacokinetic data. In view of paucity of data from the Indian subcontinent, we decided to study the response and tolerability of intraperitoneal (I/P) chemotherapy in carcinoma ovary in Indian population.

**Methods:** In this observational study, from March 2013 to June 2015, the efficacy and tolerability of adjuvant I/P chemotherapy in optimally cytoreduced stage III epithelial ovarian cancer patients were assessed. Treatment consisted of 135 mg/m<sup>2</sup> of i.v. paclitaxel over a 3-hours period on day 1 followed by AUC 5 carboplatin i.v. on day 2 and 60 mg/m<sup>2</sup> of i.p. paclitaxel on day 8 every 3 weekly for six cycles.

**Results:** Total 50 patients were enrolled. The median age of patients was 53 yrs (32 yrs – 67 yrs). Out of a total of 240 I/P cycles, 225 cycles (93%) were completed. 30 patients (75%) received all the 6 cycles by IP route, 6 patients completed 5, 3 patients completed 4 cycles and 1 completed 3 I/P cycles. 4 Out of 30 patients who completed all 6 cycles of I/P chemotherapy, had one or more adjustment including delay while in 3 patients (7.5%) dose had to be reduced. after median follow up of 14 months, 8 patients (12.5%) had local or systemic recurrence, 2 patients (5%) had progression during treatment and died due to disease. median progression free survival not reached yet. One patients had vaginal leak. Catheter block was seen in five cases. Two cases had needle displacement and extravasations of drug around the port chamber. 6 patients had severe abdominal pain and cramp (grade 3) after infusion of saline. Hematologic toxicity was evaluated in all patients and in all cycles. Grade 3 or 4 Leucopenia was experienced by 25 patients (50%) but Febrile Neutropenia occurred in only 5 (10%) patients. Grade 3 or 4 anemia occurred in 17 (42.5%) and grade 3 or 4 thrombocytopenia was experienced by 6 patients (15%). Renal complication present in 3 patients (7.5%) and transient transfusion reaction developed in 5 patients. mucositis present in 21 patients.

**Conclusions:** Adjuvant I/P chemotherapy in optimally cytoreduced epithelial ovarian cancer is active and well tolerated in Indian patients.

## Ovary: Oral Abstract

### To assess the role of addition of bevacizumab therapy to carboplatin and paclitaxel as frontline treatment of epithelial ovarian cancer

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**Introduction:** Efforts are going on for development of new drugs for epithelial ovarian cancer (EOC). We assessed safety profile of bevacizumab, a VEGF receptor blocking antibody in treatment of EOC.

**Methods:** We assigned women with EOC to carboplatin (area under curve, 5 or 6) and paclitaxel (175 mg/square meter of body-surface area), given every 3 weeks for 6 cycles, or to this regimen plus bevacizumab (15 mg/kilogram body weight), given concurrently every 3 weeks for 5 or 6 cycles and continued for 30 additional cycles. Primary outcome measures was safety profile of bevacizumab and secondary outcome was to see progression free survival (PFS).

**Results:** Out of 30 patients, 10 were in Bevacizuma arm (Arm A) and 20 in conventional chemotherapy arm (Arm B). Haematological toxicity, GI perforation and proteinuria was similar in both. Other toxicities e.g. bleeding

complication (p = 0.002) and hypertension (p = 0.04) was more in Arm A. PFS was similar in both arms; 24 months in Arm A and 22 months in Arm B (p = 0.565). 4 (40%) patients in arm A discontinued treatment, two (20%) because of disease progression after PFS of 9 and 6 months, two because of development of toxicity considered to be due to bevacizumab; of which one developed jejunal perforation and disease progression after PFS of 6 months and 1 because of development of persistent proteinuria of grade 3 after 18 months.

**Conclusion:** Bevacizumab therapy does not improve PFS in EOC but increases toxicity spectrum of chemotherapy.

## Ovary: Oral Abstract

### Two interesting cases of granulosa cell tumor: A case report

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**Introduction:** Granulosa cell tumor (GCT) is an ovarian malignancy that arise from granulosa cells of the ovary. This tumour is a type of the sex cord-gonadal stromal tumour. GCT have good prognosis in comparison with other epithelial tumors.

**Methodology:** Two cases of granulosa cell tumors were diagnosed in Sir Ganga ram hospital, Rajender Nagar, New Delhi in December 2015 and January 2016. The patient's age, clinical manifestations, radiological and histopathological findings were evaluated. One was in perimenopausal age group and other case was in postmenopausal age group. The clinical manifestations were menorrhagia and abdominal pain. Ultrasonographically, in one case focal hypoechoic zone showing peripheral hypervascularity with possibility of old hemorrhage follicular cyst was seen and in other case of granulosa cell tumors was both solid and cystic areas were seen. Histologically, variety of patterns like diffuse, trabecular, nodular, sheets, nests and fascicular patterns with nuclear grooving in ovarian tissue. In addition endometrial findings were suggestive of simple hyperplasia without atypia. Treatment modality used was surgery i.e. Total hysterectomy and bilateral salpingo-oophorectomy in both cases.

**Conclusion:** Granulosa cell tumor of the ovary is a rare ovarian malignancy. Endometrial pathology to rule out endometrial carcinoma specially when postmenopausal bleeding is concomitant finding is advised. Radical surgery is usually not required.

**Key words:** Endometrial pathology; granulosa cell tumor; histopathological findings; ovary

## Ovary: Oral Abstract

### Outcome of bowel resection in women with advanced ovarian carcinoma

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**Aim:** To evaluate the mortality and morbidity related to bowel resection in women with advanced ovarian carcinoma.

**Methods:** Retrospective case series of 47 women with stage III and IV carcinoma ovary who underwent bowel resection, over the period of 5 years from Jan 2011 to Dec 2015. The disease free survival was assessed and the prognostic factors for disease free survival was also analysed by bivariate analysis.

**Results:** In this cohort 64% (30/47) had primary debulking, 21% (10/47) had interval debulking and 15% (7/47) had secondary debulking. The mean period of follow up was 23 months (1 – 45 month). The mortality was 15% (7/47), while major morbidity like anastomotic leak were nil. The three variables considered for mortality were relaparotomy, paralytic ileus and surgical site infection. 6% (3/47) had relaparotomy, 21% (10/47) had paralytic ileus and 15% (7/47) had surgical site infection. The overall morbidity was 42.5% (20/47). A total 34% (16/47) of patients had stoma. 79% (37/47) patients had optimal debulking.

**Conclusion:** Bowel resection in optimally selected cases of advanced carcinoma ovary is a good option with limited mortality and morbidity. Often, bowel resection is the only way to achieve optimal debulking.