Ovarian Cancers

Epidemiology

- One in 78 women (1.3 percent) during lifetime
- Epithelial ovarian carcinomas make up 90% of ovarian cancers, including the more indolent low-malignant –potential (borderline)
- Average age of diagnosis early 60s
- Overall 5 year survival rate is low (45%)

Risk factors

- Family history of Breast or ovarian cancer
- Nulliparity
- Early menarche
- Late meopause
- Increasing age
- Personal history of breast cancer
- Pelvic inflammatory disease

Protective factors

- OCPs
- Tubal ligation
- hysterectomy

- High grade serous carcinoma (HGSC), the most common and deadly type, is believed to originate from the fimbrial end of the fallopian tubes

Signs and Symptoms

- Typically portrayed as “silent” killer
- However, patients have symptoms even with early stage disease.
- Common symptoms: Increased abdominal size, bloating, urinary urgency, pelvic pain, constipation, loss of appetite, fatigue
- Occasionally: Nausea and vomiting, with partial intestinal obstruction

- A pelvic or abdominopelvic mass palpable in most patients during bimanual exam.
- Malignant tumors tend to be solid, nodular and fixed.
- Paradoxically, a huge mass filling the pelvis and abdomen, often benign or borderline.
- Rectovaginal examination is necessary.

Other findings

- Abdominal fluid wave, suggests ascites.
- Pelvis mass + Ascites = ovarian cancer, if there is no mass, rule put cirrhosis or other cancer
- In advanced disease, examine for central mass in upper abdomen (omental caking)
- Rarely, umbilical nodule (Sister Mary Joseph sign).
- Auscultation of chest may show pleural effusion

Blood tests

- CBC: might show thrombocytosis in 25%
- Hyponatremia: SIADH
- CA125: High in most of patients, however, false negative (in Stage I disease), false positive (PID, endometriosis, fibroids …)
- Human epididymal protein 4 (HE4)
- CA19.9 and CEA: better indicators in mucinous tumors

Imaging

- Transvaginal sonography, most useful in deifferentiating benign and malignant
- Malignant masses: multiloculated, solid, large (>5 cm), thick septa, papillary projections, neovascularization.
- In advanced disease, US less helpful.
- Chest radiograph should be done.
- CT scan has primary role to plan management.

Histologic types

- Serous: more than 50% of all epithelial cancers, psammoma bodies
- Endometrioid: 15-20%
- Mucinous: 5-10%
- Clear Cell adenocarcinoma: 5-10%, Hobnail cells and clear cells
- Transitional cell: less than 5%
- Carcinosarcoma: less than 1%

Secondary tumors

- Krukenberg tumor: metastatic mucinous cancer of the ovaries that originates from primary tumors of the intestinal tracts (mainly stomach)

Patterns of spread

- Predominantly by exfoliation: released into endometrial cavity after penetrating ovarian capsule.
- Lymphatic dissemination
- Direct extension: to uterus, rectosigmoid, colon ..
- Hematogenous spread: atypical and with recurrent disease, to liver, brain and lung

Staging

- It is surgically staged, and stage is assigned according to findings before tumor removal.
- Only one third of cases are stage I or II diseases.

Management of early stage cancer

- Extrafascial hysterectomy with BSO
- Aspiration of ascitic fluids
- Removal or biopsy of infracolic omentum
- Platinum-based chemotherpay given according to stage
- Follow up with pelvic exam and CA125, every 2-4 months for 2 years, then every 6 months for 3 years

Management of advanced stage

- Ideally, cytoreductive surgery followed by six courses of platinum-based chemotherapy.
- The surgery is done via a vertical incision and the attempt to remove all gross disease
- Considered optimal if less than 1 cm residual of disease could be achieved
- Chemotherapy: adjuvant vs. neoadjuvant, intravenous vs intraperitoneal
- Relapse rate is high, follow up with exam and CA125

Favorable rognostic factors

- No ascites
- Younger age
- Early-stage disease
- Well-differentiated tumor
- Good health status
- Histologic type other than mucinous or clear cell
- Small disease volume prior to debulking
- Small residula tumor following surgery

Prevention

- No accepted general method of screening
- Mainly directed at BRCA1 and BRCA2 carriers and women with a strong family history of breast and ovarian cancer
- By CA12 and pelvic US.
- Chemoprevention with COCs, slightly reduce risk
- Prophylactic BSO is the only proven way, at age 35-40 years for BRCA1, and 40-45 for BRCA2

Thank you