Borderline Ovarian Tumours

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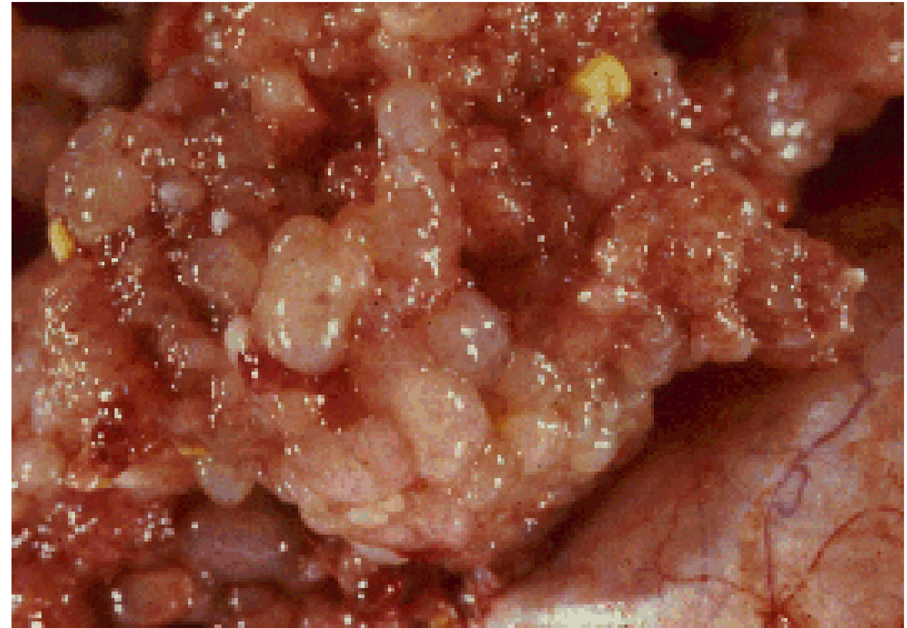
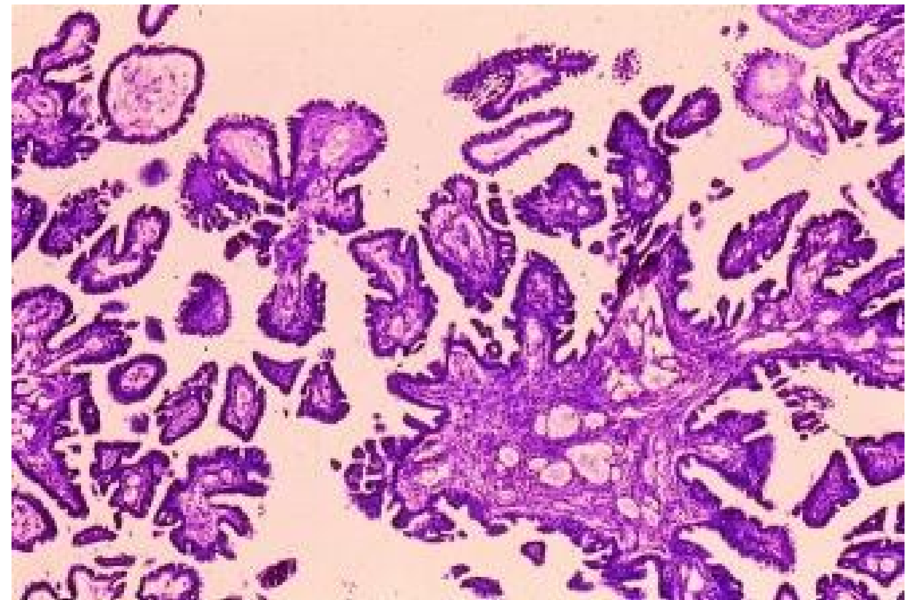
Definition

- First described in 1929
- Cellular features of malignancy
  - Cellular atypia
  - Mitotic activity
- No stromal invasion
- An entity per se ???
  - (or precursor lesions for ovarian cancer)





Berek, Thomas and Ozols, NCBI Bookshelf

Clinical Features

- Age at diagnosis 10 years younger (49 yrs) than ovarian cancer patients (62 yrs)
  - A significant number of women are diagnosed during reproductive years
  - At QCGC the youngest patient is 13 years
- Stage: 90% of pt's are diagnosed at stage 1
- Grading is not established – adverse features:
  - Micropapillary features
  - Microinvasion

Clinical Features

- Histology epithelial:
  - Serous (62%) or mucinous (35%)
- Serous LMP tumours:
  - More likely to present with extraovarian spread
  - Lymph node metastases
- Mucinous LMP tumours:
  - Likely to be confined to the ovary
  - Up to 25% of mucinous LMP tumours at frozen section will be upstaged to “invasive cancer” on final histopathology

Clinical Features

- Minority of LMP tumours may spread
- Deposits
  - Non-invasive
  - Invasive >> chemotherapy
- Treatment = Surgical
  - Chemotherapy is not effective
  - Response rates in advanced cases very low (< 10%)
- Recurrences 5% to 7%
- Overall survival is 97% at five years (St 1 LMPs)

Incidental finding of LMP - FAQs

- Removal of whole ovary necessary?
  - Or will ovarian cystectomy suffice?
- How about contra-lateral ovary?
  - Given that many women will be young
- Is comprehensive surgical staging needed?
- Is laparoscopy safe to treat women with LMP tumours?

Salpingo-Oophorectomy vs. Ovarian Cystectomy

- Recurrence is more likely after ovarian cystectomy (23%) vs. Salpingo-oophorectomy (7%).
- Salvage rates after ovarian recurrence s very high.
- Conclusion: Ideally we recommend removal of the entire ovary.
- Young women: A conservative approach can be used. Meticulous follow is essential! Consider r/o entire ovary (once not needed).

Removal of contra-lateral ovary?

- Mucinous tumours almost always unilateral
- Serous tumours bilateral in up to 30%
- Recurrence rates higher in patients who had a USO than a BSO (19% vs. 5%)
  - Zanetta (JCO 2001): 189 pts with fertility-sparing surgery - 35 recurred. Of these 29 pts recurred within the preserved ovary.
  - Rao (multicentre USA, 2004): recurrence rate 16% vs. 4%
- Vast majority of recurrences can be salvaged.

Surgical (re-)staging necessary?

- Serous tumours more likely to be upstaged
- Upstaging in up to 40%
- Survival rates of staged and non-staged patients were similar
- Survival rates of pts with positive and negative nodes are similar (Seidman et al. 2000)
- Information gain:
  - invasive implants / Chemo;
  - avoid second operation if final histology is "invasive";

Is Laparoscopy safe?

- General gynaecologists will come across an ovarian LMP tumour in 5% to 10% of surgery for an adnexal mass.
- Negative tumour markers will not guarantee the absence of LMP or invasive cancer.
- Short term advantages of laparoscopy (over laparotomy) are undeniable;
- Concerns of oncological safety (long-term).

Laparoscopy vs. Laparotomy

- No data from RCT – evidence from retrospective studies (France & Italy).
- Number of patients: 34 to 479; follow-up short
  - Insufficiently powered to perform survival analysis
- All studies suggested a higher rate of cyst rupture with laparoscopy;
- None of the studies suggested that cyst rupture translates into adverse outcomes;
- Port-site metastases have been reported (use endobag).

Recommendations

- Remove both ovaries in postmenopausal women
- Conservative surgery OK in young women or with low-grade lesions
  - Follow-up is important in patients who had conservative surgery
  - Consider completion (TLH)BSO after completion of family (recurrences after many years possible)
- Surgical (re-)staging (nodes, omentum) is debated
  - Advocated for high-risk LMP tumours
- Laparoscopy is safe in ovarian LMP (not in ovarian cancer)

Thanks for your interest

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