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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