

Borderline ovarian tumours: practice changes over time at a tertiary institution

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Introduction

Ovarian cysts are a common gynaecologic condition, and 5-10% of women will have surgical intervention for investigation and treatment. Borderline ovarian tumors (BOT) are a common histologic subtype and represent 10-20% of all epithelial ovarian tumors. Their pathologic classification and treatment recommendations have changed significantly in recent years.

Aims

We present an audit and trend analysis of all BOT cases at the Royal Women's Hospital from 2003-2020, assess change in practice in frozen section (FS) results, appendectomy, omental biopsy and lymph node assessment at initial surgery.

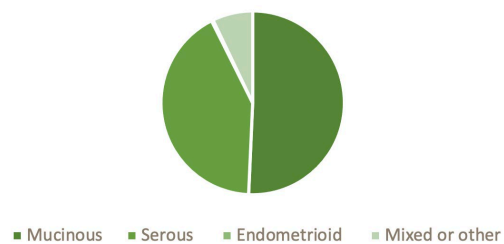
Methods

Cases were identified from GEMMA, the RWH gynaecological oncology database, and medical records reviewed. Trends over time were assessed with Mann-Kendall test.

Results

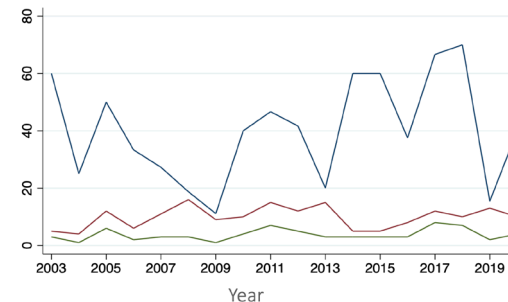
351 cases were included. 147 (42%) were serous borderline ovarian tumours (sBOT), 178 (51%) were mucinous borderline tumours (mBOT) and 26 (7%) were mixed or other. Median age at diagnosis was 43 [31, 55].

Borderline ovarian tumour subtypes at the Royal Women's Hospital: 2003-2020



109 (62%) mBOT underwent appendectomy, and there was no significant trend observed in appendectomy over time.

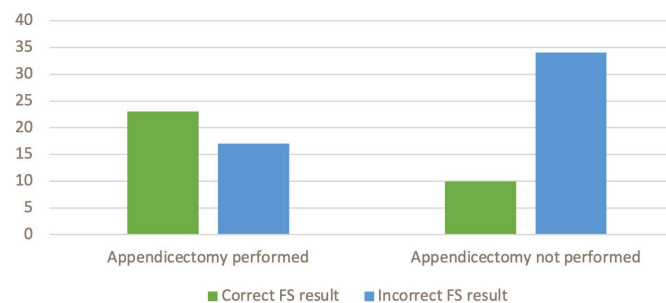
Appendectomy at initial mBOT surgery: 2003-2020



Percentage of mBOT cases that had appendectomy (% per year)
 Total mBOT cases that had appendectomy (cases per year)
 Total mBOT cases (cases per year)

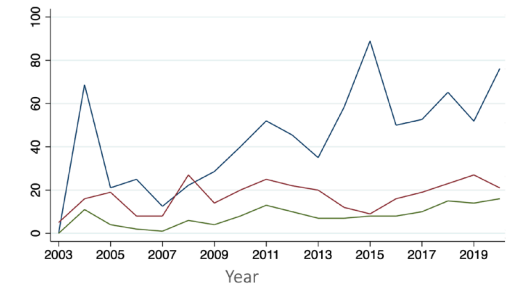
84 mBOT cases had a frozen section performed, of these 51 (61%) were identified as likely mBOT, and these cases were more likely to undergo appendectomy ($p < 0.001$). The proportion of cases who had FS increased over time ($p = 0.02$), but there was no significant trend in FS accuracy.

mBOT cases at the Royal Women's Hospital 2003-2020: accuracy of frozen section results and decision to perform appendectomy



167 (54%) BOT cases underwent omental biopsy at initial surgery, with an increasing trend over time ($p = 0.001$).

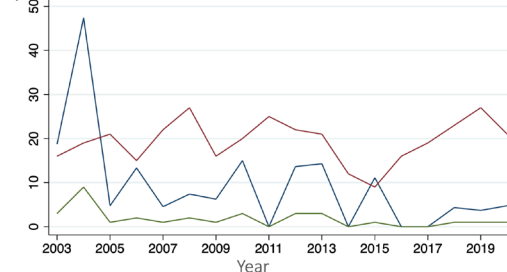
Omental biopsy at initial BOT surgery: 2003-2020



Percentage of BOT cases that had omental biopsy (% per year)
 Total BOT cases that had omental biopsy (cases per year)
 Total BOT cases (cases per year)

32 (9%) BOT cases underwent initial lymph node (LN) assessment, with a decreasing trend over the study period ($p = 0.04$).

Lymph node (LN) assessment at initial BOT surgery: 2003-2020



Percentage of BOT cases that had LN assessment (% per year)
 Total BOT cases that had LN assessment (cases per year)
 Total BOT cases (cases per year)

Discussion

Likely due to increasing evidence that LN assessment confers surgical morbidity without survival advantage in ovarian cancer management, a decrease in LN assessment was observed over the study period. The increase in omental biopsy may reflect improved pre-operative imaging and increased level of pre-operative suspicion of BOT or malignancy.