SERUM MARKERS AND CYTOKINES IN PATIENTS WITH OVARIAN CANCER, BORDERLINE OR BENIGN OVARIAN TUMORS

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Introduction/Background The gold standard of serum tumour markers to detect ovarian cancer is CA125, HE-4 and algorithm ROMA. However there is still need to improve its accuracy. Cytokines play a crucial role in tumour growth and progression according to proangiogenic and immunosuppressive acting. The aim of this study was to investigate the potential use of serum levels of selected cytokines in preoperative diagnosing of adnexal mass.
Methodology The study group consisted of 128 patients: 35 with epithelial ovarian cancer (EOC), 8 with borderline tumors and 85 with benign cysts (24 teratomas, 27 endometriotic and 34 other epithelial). We measured in sera obtained preoperatively the level of CA125, HE-4 and the panel of 6 cytokines: IL 1β, 6, 8, 10, 12, TNF using cytometric bead array (CBA) and one chemokine CXCL1/GRO-α by ELISA.
Results Serum levels of IL-6, IL-8, IL-10 and CXCL1/GRO-α were the highest in patients with ovarian cancer (2045 pg/ml; 208; 32; 356 pg/ml, respectively), mid-range in borderline group (29 pg/ml; 45, 20; 278 pg/ml) and the lowest in benign ovarian tumours (17 pg/ml; 29; 16; 127 pg/ml, respectively). The similar pattern was present with standard ovarian cancer markers – CA125 (959 vs 206 vs 43 U/ml) and HE-4 (534 vs 117 vs 51 pmol/l). Other investigated cytokines had similar levels in all groups of patients. Analyzing the differences in the subgroups of women with benign ovarian tumours we didn't observe any significant except CA125 and IL-8; they were slightly elevated in cases of endometriotic ovarian cysts.
Conclusion Proinflammatory cytokines (IL-6, IL-8), immunosuppressive (IL-10) and CXCL1/GRO-α were highly elevated in sera of EOC patients what points on their role in cancer development. Moreover, they might be useful in preoperative assessment of the risk of malignancy as they were higher than in patients with benign and also borderline ovarian tumors.

COMPARISON OF SURGEON'S INTRAOPERATIVE ASSESSMENT OF RESIDUAL TUMOR AND POSTOPERATIVE FINDINGS ON COMPUTED TOMOGRAPHY IN PATIENTS WITH ADVANCED STAGE EPITHELIAL OVARIAN, TUBAL OR PERITONEAL CANCER – A RETROSPECTIVE COHORT STUDY

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Introduction/Background Primary debulking surgery (PDS) for advanced epithelial ovarian cancer aims to resect all macroscopically visible lesions. Previous studies showed a discrepancy of 20–48% between the surgeon's intraoperative assessment of residual tumor (RT) and findings on postoperative computed tomography (CT) scans. Patients with radiographical lesions that were suspicious of malignancy had worse prognosis. The current study aimed to compare the postoperative CT findings to the surgeon's intraoperative assessment at our centre and to determine their effect on survival.
Methodology All patients with newly diagnosed FIGO stage III-IV ovarian, tubal, or primary peritoneal cancer who underwent complete or near complete PDS (RT < 2.5 mm) at the Fondazione Policlinico Universitario Agostino Gemelli IRCCS hospital in Rome, Italy, between June 2019 and June 2021 and in whom CT evaluation was performed within 50 days from PDS were included. CT-scans were assessed using a 5-point scale, ranging from normal to definitely malignant. Indeterminate results were omitted from further analyses.
Results A total of 145 patients were identified. Clinical data and postoperative CT-scans could be retrieved from 102 patients. Of these patients, CT findings corresponded to the surgeon's intraoperative assessment in 77.5% of cases. In 13 patients (12.7%), CT findings were scored as indeterminate. Lesions that were deemed probably malignant or definitely malignant were found in seven (6.9%) and three patients (2.9%), respectively, with a median lesion size of 24.5 mm (range 8.0–85.0 mm). Most lesions were reported in the left flank. Comparing radiologically concordant and discordant findings, no differences in progression-free survival (17.7 versus 18.9 months, p = 0.463) or overall survival (20.0 versus 22.8 months, p=0.087) were seen.
Conclusion In line with previous data, a discrepancy of 22.5% was found between surgeon's intraoperative assessment and postoperative CT-scan on the presence of RT. Nonetheless, CT findings did not affect survival outcomes.

THE ROLE OF MINIMALLY INVASIVE SECONDARY CYTOREDUCTION IN RECURRENT OVARIAN CANCER PATIENTS

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Introduction/Background Retrospective series have shown minimally invasive secondary cytoreductive surgery (MI-SCS) is a feasible approach in selected cases of recurrent ovarian cancer (ROC). However, no predictors of MI-SCS feasibility are currently available.

This study aims to identify predictive factors of MI-SCS feasibility and to compare perioperative and survival outcomes in a matched series of ROC patients who underwent secondary cytoreduction via an open or minimally invasive surgical approach.
Methodology We retrospectively identified all platinum-sensitive epithelial ROC patients who underwent minimally invasive or laparotomic (LPT) SCS between January 2013 and July 2020. All patients underwent preoperative positron emission tomography computed tomography (PET-CT) scan and diagnostic laparoscopy before SCS. A 1:2 propensity score-

matched analysis was performed to balance predictive factors of MI-SCS.

Results Overall, 276 cases were identified (62 MI-SCS and 214 LPT), and a complete gross resection (CGR) was achieved in 262 (94.9%) patients. At multivariate analysis, predictive factors for MI-SCS were NACT (p=0.007), site of recurrence (p=0.031), and number of lesions (p=0.001) (Table).In the propensity-matched population (39 MI-SCS and 78 LPT), CGR was similar for both groups (39 MI-SCS vs 72 LPT; p=0.082). Early post-operative complications were significantly higher in the LPT-SCS (33.3%) than in the MI-SCS (10.3%) group (p=0.004). Only one (2.6%) patient experienced a grade≥3 early post-operative complication in the MI-SCS compared to 13 (16.7%) patients in the LPT cohort (p<0.001).The median follow-up period was 32 months (range18–92) in the propensity-matched population. The median post-recurrence survival (PRS) was 81 months in the MI-SCS group and not reached in the LPT Group (p=0.111).

Abstract 2022-RA-820-ESGO Table 1 Logistic regression for prediction of MI-SCS

Abbreviations: MI-SCS: minimally invasive secondary cytoreduction surgery: BMI: body mass index; PFI= platinum free interval; PDS= primary debulking surgery; NACT= Neoadjuvant chemotherapy; PET-CT: positron emission tomography.

Conclusion Patients with single or oligometastatic recurrences can be offered MI-SCS, mainly if localized in the lymph-nodes and/or if they received NACT at primary diagnosis. MI-SCS is associated with favourable perioperative outcomes with no statistically significant differences in terms of PRS with respect to open approach.

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Introduction/Background Predicting borderline ovarian tumors can be challenging. Despite a favorable prognosis, these patients should not be treated as benign disease as comprehensive surgical staging is needed. In Denmark, RMI is the gold standard for predicting malignancy and referral to PET/CT. We evaluated ultrasound features in accordance to IOTA terminology and risk of malignancy using the ADNEX model.

Methodology Patients ≥18 years with ovarian lesions were prospectively included at Dept. of Gynecology, Rigshospitalet, Denmark. Gynecologists described lesions using IOTA terminology in a template (EPIC). Clinical decisions were not based on IOTA scores.

Results N=47 patients with histologically verified borderline ovarian tumors were included (89.4% stage I, 10.6% stage II-III). Median age was 54 years (range 21 – 82). RMI was >200 in 29 (61.7%) and <200 in 18 (38.3%). PET/CT was performed in 36 (79.6%) and concluded malignancy suspicion in 18 (FDG-uptake in 15, suspicious CT in 3). Thus, malignancy was suspected in 18 (38.3%) and benign disease in 29 (61.7%) women preoperatively. A total of 10 (21.3%) women underwent secondary staging surgery. The majority were classified multilocular solid (53.2%) or multilocular (23.4%), and less often unilocular solid (21.3%) and unilocular (2.1%). Papillary projections were present in 59.6%, and 38.3% had ≥4. The largest diameter of lesion was >100 mm in 57.4%. Cystic content was anechoic in 46.8%, low level in 32.0%, ground glass in 10.6%, and mixed in 10.6%. Color score >1 was seen in 55.3%. A total of 41/47 (87.2%) had a malignancy risk >10% using the ADNEX model. All 6/47 (10.6%) with malignancy risk <10% were uni-/multilocular lesions (<10 locules), 2 with diameter >100 mm.

Conclusion Accurate diagnosis of borderline is essential for planning appropriate management. Ultrasound pattern recognition is a valuable clinical observation. The ADNEX model identified a malignancy risk above 10% in almost 90% of the population.

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Introduction/Background The study evaluated the risk of ovarian cancer in women with BRCA 1–2 mutations. BRCA 1–2 are tumor-suppressor genes involved in DNA homologous recombination and ovarian cancer development

Methodology From 2016 to may 2022, all risk reducing surgery (RRSO) which included salpingo-oophorectomy was performed in all patients carrying BRCA1 and BRCA 2 mutation.

Results We collected 172 women. The median age of BRCA 1 mutated patients was 51 aged (range 30–73 years), whereas the median age of BRCA 2 mutated patients was 53 (range 36–70). One hundred and three patients had previous history of breast cancer. Among the 172, 145 (85%) underwent risk reducing salpingo-oohorectomy (RRSO) though a laparoscopic minimally invasive approach. 12 (7%) underwent laparoscopic RRSO and contextual hysterectomy, 3 (2%) underwent RRSO through a laparotomic approach and 10 (6%) laparotomic