MALIGNANT TRANSFORMATION IN A MATURE CYSTIC TERATOMA OF THE OVARY. A 5-YEAR DESCRIPTIVE STUDY

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10.1136/ijgc-2023-ESGO.547

Introduction/Background Malignant transformation (MT) in mature cystic teratoma of the ovary (MCTO) is a rare event. This descriptive study primarily aims to determine the prevalence rate of MT in MCTO and describe clinicopathologic features, management, and prognosis of patients who developed this rare type of tumor and likewise deliver a review in the light of recent literature.

Methodology A descriptive observational study of patients with MT in MCTO. The clinical and pathological records of each patient were reviewed. Descriptive statistics were used.

Results Between January 2016 to December 2020, of the 369 cases of mature cystic teratoma, 22 cases with malignant transformation were reported with an incidence of 6%. The mean age of diagnosis was 32 years, of which 70% are aged 50 years old and above. Fifty-nine percent (13/22) and 32% (7/22) of the cases were squamous cell carcinoma and mucinous adenocarcinoma, respectively. Very rarely malignant transformations were carcinoid tumors (1) and follicular carcinoma (1). The most common reason for consult among patients is a palpable abdominal/pelvic mass (45.5%). Around 60% percent (180 U/ml) of the cases with malignant transformation had a CA-125 of >35. The most frequent reason for consultation of the patients was fertility sparing surgery. Fourteen had staging procedures. Twelve patients were at Stage I. Three, 4 and 3 patients were at Stage II, III, and IV respectively. Ten patients received adjuvant platinum-based chemotherapy and 9 patients warrant no treatment after surgery. The median survival time is 14 months.

Conclusion MT in MCTO is not a common occurrence but should be considered in older patients with large tumor sizes and elevated CA-125. This entity suggests an aggressive behavior but complete resection and indicated adjuvant platinum-based chemotherapy may improve survival.

Disclosures none

DIAGNOSIS OF MALIGNANT OVARIAN TUMORS: EVALUATION OF THE PERFORMANCE OF THE RMI 1 SCORE

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10.1136/ijgc-2023-ESGO.548

Introduction/Background The diagnosis of ovarian cancer is often established at a late stage of the evolution of the disease with the absence of universal screening method. The RMI1 (Risk of malignancy index 1) is a score to predict the risk of malignancy of a suspicious ovarian mass. The purpose of our work was to evaluate the performance of the RMI1 score in the evaluation of the risk of malignancy of suspicious ovarian masses in our service.

Methodology This was a descriptive, longitudinal, retrospective and mono-centric study conducted in the department of gynecology 'C', spread over a period of 03 years (from January 2019 to December 2021) conducted among women operated for suspected ovarian mass and meeting the criteria of suspicion. 89 patients were included in the work.

Women who were lost to follow-up were excluded.

Results The average age of the patients was 45.6 years. Concerning the circumstances of discovery, chronic abdominopelvic pain was the most frequent reason for consultation of the patients (n=39), i.e. 44.3% of the cases. A score greater than or equal to 200 suggestive of malignancy was observed in 70.5% of the cases. The suspected ovarian mass was malignant in 60.2% of cases. The malignant tumor was primary in 88.7% of cases and secondary in 11.3% of cases. The median RMI score was equal to 405 (IQR= [118.5–2034]).The RMI 1 score was significantly higher for malignant tumors (P=0.003), with an area under the ROC curve at 68.9%. 90% of the malignant epithelial tumors (n=27) had an RMI score higher than 200. On the other hand, 41.7% of borderline tumors had an RMI score <200, i.e. a rate of about 50% of cases.

Conclusion The diagnostic contribution of the RMI score in our series is low compared to the literature data, and a prospective multicenter study is needed.

Disclosures The author and the co-authors have not potential conflict of interest to report.

REAL WORLD EXPERIENCE WITH PARPI MAINTENANCE USE IN OVARIAN CANCER

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10.1136/ijgc-2023-ESGO.549

Introduction/Background Survival of ovarian carcinoma has improved in recent years due to determination of the homologous recombination defect (HRD), and the use of first-line maintenance with PARP inhibitors (PARPi).

The aim of our study was to do a real world study in patients treated in our Center.

Methodology A cross-sectional longitudinal observational study was designed in a cohort of 100 patients diagnosed with
IMMUNOPHENOTYPIC FEATURES AND BRCA1/2 CHARACTERIZATION OF TUMOR SPHEROIDS FROM HIGH-GRADE SEROUS OVARIAN CANCER BASED ON MORPHOLOGICAL FEATURES AND CELL COMPOSITION

Introduction/Background High-grade serous cancer (HGSC) is the most common and aggressive type of ovarian cancer, and it is often associated with ascites at presentation. The objective of our research was to evaluate the accuracy of cytopathology to identify immunophenotypic features of HGSC and BRCA1/2 mutations from ascites.

Methodology Forty-five patients with histologically confirmed primary HGSC and malignant ascites were included in our study. Immunocytochemistry (ICC) staining for PAX8, WT1, P53, P16, and Ki-67 was performed on cytopsins and cytoblocks prepared from ascites. Next-generation sequencing (NGS) was used to detect germline/somatic BRCA1/2 mutations in the ascites. Both ICC and NGS results were compared with immunohistochemistry (IHC) and NGS results from tissue blocks of the primary tumor. Cronbach’s α and χ² statistics, respectively, were used.

Results ICC/IHC results for PAX8, WT1, P53, and P16 showed good reliability between cytopsins, cytoblocks, and tissue blocks (α > 0.75), whereas poor reliability and significant differences were observed for Ki-67 between ascites and tissue blocks (α < 0.26; p < .001 [Kruskal-Wallis]). For germline BRCA1/2 mutations, 100% concordance was confirmed, but only 14% concordance was confirmed for somatic mutations.

Conclusion Our results confirmed that cytopathology is an accurate method for identifying immunophenotypic features of HGSC and detecting germline BRCA1/2 mutations from ascites. However, further investigation is required for assessing the proliferation activity of HGSC in ascites and for detecting somatic BRCA1/2 mutations.

No disclosure.

Disclosure The authors made no disclosures. The study was funded by the Slovenian Research Agency (research program P3–0289).

#271 CHARACTERIZATION OF TUMOR SPHEROIDS FROM HIGH-GRADE SEROUS OVARIAN CANCER BASED ON MORPHOLOGICAL FEATURES AND CELL COMPOSITION

#270 IMMUNOPHENOTYPIC FEATURES AND BRCA1/2 MUTATIONS FROM HIGH-GRADE SEROUS CANCER: THE ROLE OF CYTOPATHOLOGICAL ASSESSMENT

Abstract #263 Figure 1 Stage/Progression. PFS/HRD

Abstract #270 Figure 1 WT1, PAX8, P53, P16, Ki67 positive stained tumor cells on ascites cytopsins and cell blocks, and tumor tissue blocks (immunohisto/cytochemistry results). 200x magnification.