ISP-13-2 Attempt of preoperative risk estimation of ovarian malignancy by ultrasound: Using 3D ultrasound and IOTA study

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[Objective] To examine whether preoperative evaluations of benign or malignant ovarian masses by IOTA (International Ovarian Tumor Analysis) methods and 3DUS are possible or not. [Methods] 45 cases underwent surgery for ovarian masses since January 2013 enrolled. 2DUS, 3DUS and MRI have been performed before surgery. Preoperative 2DUS (IOTA LR2, ADNEX model), 3DUS and MRI findings are compared with the histological diagnosis. We retrospectively evaluated which method is useful for the differential diagnosis of benign or malignant ovarian masses. [Results] By 3DUS and MRI, 7 of 12 cases of borderline (BL) malignancy and malignancy had been correctly estimated. By IOTA methods, only two cases were failed. As compared with 3DUS and MRI, the findings by IOTA methods had a false positive rate tended to be higher. For the diagnosis of BL malignant and malignant tumors by 3DUS and MRI, specificity, negative predictive value (NPV) and accuracy rate were higher. On the other hand by IOTA methods, sensitivity and NPV was higher, but positive predictive value was low. [Conclusion] 3DUS evaluation showed a similar trend as MRI against the accuracy of the risk estimation of ovarian malignancy, but the evaluation by IOTA methods showed the different tendency with 3DUS and MRI. The combination analysis of 3DUS and IOTA methods may provide discrimination between benign and malignant ovarian masses.

ISP-13-3 A comparative analysis of diagnostic performance to detect ovarian malignancy among three assessment indices

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[Objective] This study was aimed to examine the clinical usefulness of three different methods, the International Ovarian Tumor Analysis (IOTA) logistic regression models (LR2 and simple rules), and echo pattern classification of the Japan Society of Ultrasions in Medicine (JSUM), and risk of malignancy index (RMI) in preoperative assessment of ovarian malignancy. [Methods] This study was conducted under approval of the ethics committee in our institution. 100 patients with ovarian tumors who underwent surgery from 2012 to 2015 at our hospital were randomly chosen and included in this study. IOTA models, JSUM classification, RMI were applied retrospectively among all patients included. Sensitivity and specificity of each diagnostic model were determined based on pathological diagnosis of surgical specimen. [Results] Among 100 ovarian tumors, prevalence of malignancy was 32% (26 primary invasive epithelial ovarian cancers, 8 borderline tumors, 1 malignant sex-cord stromal tumor). Sensitivity and specificity of IOTA LR2 were 97% and 68%, those of IOTA simple rules were 97% and 78%, those of JSUM were 97% and 71% and those of RMI were 51% and 89%, respectively. [Conclusion] IOTA models and JSUM classification displayed higher sensitivity as compared with RMI, suggesting the advantage of IOTA models and JSUM classification over RMI to rule out ovarian malignancy as a screening tool.

ISP-13-4 Prognostic significance of the Recurrence pattern and Risk factors for survival in ovarian cancer patients with No gross residual disease after Primary Debulking Surgery

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[Objectives] The aim of this study was to analyze the patterns of recurrence and their association with clinical outcomes in recurrent ovarian cancer patients with no gross residual disease after primary debulking surgery. [Methods] This study was conducted on 303 ovarian cancer patients with no residual disease after primary cytoreduction in Samsung Medical Center since January 2002 to December 2012. For each relapse, information on date of clinical/pathological recurrence, and pattern of disease presentation were retrieved. [Results] Within a median follow-up of 53 months (range 3–156), 88 recurrences (29.0%) and 28 cancer-associated deaths (9.2%) were recorded. By analyzing the pattern of relapse, most of the recurrences were distant (n=65, 73.9%), discrete (n=57, 64.8%) and transcoelomic (n=41, 46.6%). Of 88 recurrences, 79 cases (89.8%) recurred within 36 months. Percentage of distant recurrence of stage III, IV was comparably higher than stage I, II (83.3% vs. 53.8%, p=0.063). Percentage of platinum resistant was higher in mucinous and clear cell group than endometrioid and serous group (39% vs. 4.6%, p<0.001). In multivariate analysis for overall survival, independently significant indicators related to recurrence were location, recurrence type and spread pattern. Also, histology type and platinum sensitivity were significantly associated with overall survival. [Conclusions] In recurrent ovarian cancer patients with no gross residual disease after primary debulking surgery, patients with distant, diffuse recurrence, mixed spread pattern, mucinous and clear cell histology, and less than 6 months of platinum free interval are likely to have higher risk in overall survival.