

### EP459 CLINICAL MANAGEMENT OF OVARIAN MASSES IN PREGNANCY

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**Introduction/Background** The number of women diagnosed with ovarian masses during pregnancy has increased in recent years and the management of these women is controversial.

**Methodology** To describe the diagnostic-accuracy of US in the differential diagnosis ovarian masses diagnosed during pregnancy. This is a retrospective single center study, approved by the local IRB. Clinical charts of pregnant women examined at our gynecologic oncology ultrasound center between 2000 and 2019 for a suspicious adnexal mass were retrieved. Ultrasound characteristics of the masses were described by using International Ovarian Tumor Analysis (IOTA) terminology.

**Results** 98 patients with an ovarian mass during pregnancy were found. Fifty-five women (56.1%) underwent close US monitoring each four weeks until delivery and one month after delivery. The remaining 43 cases (43.9%) underwent surgery for either high suspicious of malignancy, or high risk of side effects such as torsion, rupture or obstacle to pregnancy. Among them, 14 (32.5%) had a malignant tumor (10 primary ovarian and 4 metastatic tumor to the ovary), 17 (39.5%) had borderline ovarian tumor (4 mucinous and 13 serous histotype), 12 (28.0%) had a benign ovarian disease. At ultrasound, papillary projections were present in 16 of 31 malignant/borderline tumors (4 primary ovarian cancer and 12 borderline) and in 4 of 12 benign masses ( $p=0.281$ ). The most frequent US feature was multilocular-solid mass (12/31, 38.7%) followed by unilocular-solid (9/31, 29.1%), solid (7/31, 22.5%) and multilocular (3/31, 9.7%). Accuracy rate of US with respect to final histological diagnosis was 76.7% considering BOT as primary ovarian tumors.

**Conclusion** Differential diagnosis of ovarian masses during pregnancy is still challenging and clinical management needs clear US rules.

**Disclosure** Nothing to disclose.

### EP460 UNCOMMON CASE OF FALLOPIAN TUBES TERATOCARCINOMAS IN 36-YEAR-OLD FEMALE

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**Introduction/Background** Teratomas are type of germinal neoplasms derived from multipotential cells, may contain one to all tree germ layers. Usually localised in ovaries and testis due to migration of primary embryonic germ cells in developing embryo, mature teratomas found in other abdominal/pelvic locations are an extremely rare case.

**Methodology** A 36-year-old patient reported to the doctor for routine gynecological examination. In transvaginal ultrasound a 'small cystic-solid change in the right ovary' was detected. The Ca-125 level was 29.1 U/ml. The patient was sent for a

consultative examination to the ultrasound specialist. He found unchanged left ovary, and under it irregular form with mixed echogenicity. In the right adnexa was cystic-solid lesion with a highly vascularized solid field. The patient was referred for minimally invasive surgery. Next obtained results of laboratory tests: Ca-125 20,03U/ml and HE4 50 pmol/l. There were found unchanged uterus and ovaries, intraoperatively but both fallopian tubes were pathologically changed. The right fallopian tube was sent for an intraoperative study, giving a result suggesting teratocarcinoma of the fallopian tube.

**Results** The histology revealed bilateral teratocarcinomas. Currently, patient stays under clinical surveillance.

**Conclusion** In conclusion, teratomas of fallopian tubes are rarely encountered findings still should be considered in the differential diagnosis of extragonadal abdominal masses.

**Disclosure** Nothing to disclose.

### EP461 THE ROLE OF CERTAIN MORPHOLOGICAL AND DOPPLER VELOCIMETRIC ULTRASONOGRAPHIC CRITERIA IN THE PREDICTION OF ADNEAXAL MASS MALIGNANCY

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**Introduction/Background** To evaluate the diagnostic performance of certain morphological and Doppler parameters in the preoperative distinction of benign and malignant adnexal masses.

**Methodology** We recruited patients that had a newly diagnosed unilateral adnexal mass with no previously recorded gynecologic malignancy and were scheduled for surgery at the Department. We recorded the following morphologic characteristics, in accordance with the terms and measurements described by the IOTA group: tumor morphology (cystic, complex, solid), presence of septa, presence of papillary projections, presence of wall irregularities and presence of ascites. After the detailed gray-scale ultrasound evaluation of the morphology of the mass, we created Doppler flow velocity curves to calculate the PSV, TAMXV, RI and PI, in accordance with the IOTA criteria.

**Results** We recruited a total of 216 patients; the pathohistology revealed benign tumors in 77.31% of patients, borderline tumors in 0.93% and malignant neoplasms in 21.76% of patients. The presence of a unilocular cystic tumor reduced the risk of malignancy by LR+ 0.95. Solid tumor morphology was almost universally associated with malignant neoplasms, increasing the risk of cancer by LR+ 5.04. The presence of septa, wall irregularities and papillary projections were also suggestive of malignancy with LR+ of 8.03, 19.88 and 5.02, respectively. The risk of malignancy was higher in tumors with RI  $\leq 0.4$  (specificity 98.8%. LR+ 64.76). Most malignant tumors had PI  $< 1.0$  (LR+ 6.63). The criteria based solely on flow velocities performed worse than the indices in our series.

**Conclusion** It is very likely that the set of characteristics that we described could be useful for teaching purposes, particularly for clinicians with limited experience in diagnosing ovarian tumors, a process that is automated for experts. The data suggests that these simple morphological traits can be used to characterize the majority of ovarian tumors with a high degree of accuracy.

**Disclosure** Nothing to disclose.