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IMMATURE TERATOMA OF THE OVARY: A REPORT ON FOUR CASES

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Background: Malignant teratomas represent 1% of teratomas, 1% of ovarian cancers, and 20% of malignant ovarian germ cell tumors. They are composed of tissues derived from all three embryonic layers (mesoderm, endoderm and ectoderm). Pathologic grade is based on extent of immature neuroepithelial tissue present.

Aim: The objective of our study was to evaluate the clinicopathologic and ultrasound characteristics of cases with immature teratoma (IT) who underwent surgical treatment in our clinic.

Methods: This was a retrospective analysis of 4 women with IT. They were treated in 1st Clinic of Gynecology from Women Clinical Hospital "Cuza Vodă" Iași, Romania between 2006 and 2017. Patient's clinical presentation, operative and pathological details were estimated.

Results: Three patients were 18 years old, one diagnosed at 6 months after vaginal delivery. Abdominal mass was the most common clinical presentation. Based on IOTA criteria of malignancy, transvaginal ultrasonography, ovarian mass has been described as an irregular solid tumor with a strong blood flow ±ascites (fig. 1,2,3). At the moment of diagnosis the tumor was exclusively unilateral (fig. 4), stage I and grade 3 tumors were found in all cases. Initial management was surgery. Each time unilateral salpingo-oophorectomy was done with cytologic washings and omentectomy for staging. Macroscopically IT were large (20-25cm), encapsulated masses which have a prominent solid component (fig. 5, a-b). All received adjuvant therapy (cisplatin). Recurrence was present at 8 months and 2 years for two of them.

One woman was 25 years old and the diagnosis was established during pregnancy at 13 weeks of gestation by surgery. At 21 weeks she came with clinically stage III of disease (fig. 7) and at 23 weeks of pregnancy the fetal death was noticed (fig. 6). After secondary debulking surgery of recurrence, the patient died. During pregnancy AFP tumor marker can't be of help in diagnosis but is important in follow up if we know the initial level. Unfortunately we didn't establish AFP value for this patient.

References:

Vicus D, Beiner ME, Clarke B et al: Ovarian immature teratoma: treatment and outcome in a single institutional cohort. Gynecol Oncol.2011;123(1):50-53

Pashankar F, Hakle JP, Dang H et al: Is adjuvant chemotherapy indicated in ovarian immature teratomas? A combined analysis from the Malignant Cell Tumor International Collaborative. Cancer,2016;122(2):230-237

Fig. 1 A large solid mass (the left ovary) with a small quantity of ascites

Fig. 2 The same case with small cystic zones

Fig. 3 Doppler ultrasound vascular score of 3

Fig. 4 Uterus and normal contralateral ovary

Fig. 5 Macroscopicall aspects of immature teratoma

Fig. 6 Pregnancy 23 weeks with fetal death

Fig. 7 The same case ultrasound aspect of imature teratoma recurrence

Conclusions: IT was always unilateral and the fertility preserving surgery was the first option. Chemotherapy must be considered for grade 3 patients, because of recurrence's high risk, predominantly within 2 years of diagnosis. During pregnancy IT seems to be more aggressive.