



Borderline Ovarian Tumor & Pregnancy – A successful outcome

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Objective: The rare occurrence of this tumor histology and its impact during pregnancy makes this case an interesting platform to know and learn more about this entity.

INTRODUCTION

- Ovarian tumors of low malignant potential (borderline tumors, BOT) comprise 10%–20% of all ovarian malignancies and affect younger women in the reproductive age group.
- Antenatal patients with adnexal masses have an incidence of 0- 8 % of BOT.
- They carry an excellent prognosis with 95%–99% long-term survival.
- We report a case of 33 year G2P1L1, COVID-19 positive, at 16 weeks 1 day period of gestation with a borderline ovarian tumor , which was managed with a successful outcome.
- Unilateral salpingo-oophorectomy or bilateral cystectomy should be recommended as preferred choice of treatment for young patients with unilateral and bilateral borderline ovarian tumor who desire to preserve fertility or opt for a lesser aggressive approach.

CASE REPORT

- 33year G2P1L1, COVID-19 positive at 16 weeks 1 day period of gestation
- Pain abdomen since 3 days.
- Physical examination revealed height of uterus was 34weeks period of gestation. Imaging studies revealed right adnexal mass. Tumor markers were normal. Surgical management and right salpingo-oophorectomy was done. *Thorough exploration was not possible at the time due to the complexity surrounding COVID-19 infection.* Grossly no other macroscopic deposits were found in the abdomen and pelvis. Postoperatively patient monitored for recovery. The HPE report suggestive of Borderline mucinous ovarian tumor.
- The rest of the pregnancy was unremarkable. Elective LSCS for second look surgery in view of previous diagnosis planned at 39 weeks period of gestation.
- The patient explained all treatment options but opted for a less aggressive approach despite not desiring future fertility. Baby delivered via LSCS and thereafter a step wise abdominal exploration done. No macroscopic deposits were found.
- Biopsies taken & sent for HPE - left ovarian wedge biopsy, left fallopian tube, omentum, peritoneal biopsies from abdomen and pelvis, placenta and peritoneal fluid for cytology. The right adnexa was unremarkable. The frozen section of all the biopsies were unremarkable.
- The patient opted against hysterectomy as well as appendectomy which were advised in view of mucinous subtype. Patient educated about importance of continued surveillance.
- The ultrasound done at 1 year post-procedure revealed a uterus normal in shape ,size and echotexture, endometrial thickness 5.6 mm. Right ovary not visualized. Left ovary measured 21 x 18 mm without any evidence of a mass or cyst. No free fluid or significant lymphadenopathy seen in abdomen and pelvis. Tumor markers were normal.



Fig.- The cyst shown adjacent to the gravid uterus

INVESTIGATIONS

- Blood investigations – within normal limits.
- Endocrine parameters - within normal limits.
- Tumor markers (Ca-125, CEA, AFP,LDH) – normal.
- Ultrasound – revealed intrauterine pregnancy of 16+3 weeks & Cystic round septate mass of 220.8 x 171 mm in right adnexa.

HISTOPATHOLOGY

Multiple sections of cyst wall lined by intestinal type columnar epithelium with goblet cells. Focal areas show papillae and villiform pattern. Large areas of hemorrhagic necrosis, congested blood vessels, edema along with chronic inflammatory infiltrate in cyst wall. Areas also showing stratification of nuclei , mild nuclear atypia and mitotic figures. Foci not more than 5mm in linear dimensions with mild atypia. **Features suggestive of atypical proliferative mucinous tumor with microinvasion.**

CONCLUSIONS

Although previously hysterectomy with bilateral salpingo-oophorectomy with peritoneal staging was considered for all patients regardless of the age of the patient, new advancements, accurate diagnosis through histopathology and staging facilities has made unilateral salpingo-oophorectomy with or without staging the recommended treatment for women who want future fertility or do not want a hysterectomy.

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