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Case Report

A case report on a rare case of malignant ovarian tumour complicating pregnancy

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ABSTRACT

The incidence of ovarian tumor in pregnancy is 2.4-5.7%of which 5% are malignant. A 26-year-old primigravida was diagnosed with benign ovarian cyst during first trimester ultrasound. Elective LSCS with left oophorectomy was performed. Histopathological examination revealed malignant ovarian tumor (high grade serous carcinoma). The objective of this report is to highlight the importance of early diagnosis and management of ovarian tumor in pregnancy.

1. Introduction

Ovarian cancer is the second most common gynecologic cancer diagnosed during pregnancy complicating 1 in 15000 to 1 in 32000 pregnancies.[1] The most common ovarian tumors in pregnancy are-borderline ovarian tumors, germ cell tumors and sex cord stromal tumors with fewer cases of epithelial ovarian tumors compared to non pregnant women.[2] Since ovarian tumors in pregnancy are diagnosed early, most of them have a better prognosis. The survival rate depends on the stage of the cancer, varying from around 72-90% in stage 1 to 30% in stage 4.[1,3]

2. Case Report

A twenty-six year old primigravida who was diagnosed to have benign ovarian tumor by first trimester ultrasound presented to us for safe delivery. Her first trimester ultrasound showed single live intrauterine gestation of 8 weeks with a complex cyst of size 7×5×4 cm with few septations and echoes with dependent debris in the left adnexa. Her antenatal period was otherwise uneventful. She had a similar history of ovarian tumor 6 years ago for which right oophorectomy was done and the histopathological examination revealed mucinous cystadenoma. There was no family history of endometrial, breast, ovarian or gastrointestinal malignancies. Her general and systemic examination were normal. On obstetric examination, there was a single live fetus in longitudinal lie and cephalic presentation. All baseline investigations were normal. Ca 125 was 13.78. Repeat ultrasound revealed 7.1x 5.7x 4.5 cm multilocular predominantly cystic lesion with ground glass appearance and few solid nodules of 2-3mm in size.

An elective LSCS was done at 38 weeks of gestation and delivered a live term baby of weight 2.6 kg. Left ovary was replaced by an irregular mass of size 7*5cm with bosselated surface which was solid to cystic in consistency with no papillary excrescences. Right ovary was absent. There was no ascites. Other intraabdominal organs were normal. Left oophorectomy was done as she had a history of right oophorectomy with mucinous cystadenoma and specimen sent for histopathological examination. Since the patient had a history of mucinous cystadenoma right ovary, we

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proceeded with appendicectomy as mucinous cystadenoma ovary may be associated with mucocele of appendix. Intraoperative and postoperative period was uneventful and hence the patient was discharged.

Fig. 1: Left ovary showing irregular bosselated solid to cystic mass

The HPE report showed tumor with solid and cystic areas with the solid areas being composed of tumor cells arranged in papillary architecture lined by tumor cells having high nuclear grade. The tumor cells were invading the hyalinized stroma in the form of cords and trabeculae. There were multiple foci of psammomatous calcification – suggestive of FIGO stage 1a, hybrid serous carcinoma. Appendicectomy specimen showed features of resolving appendicitis.

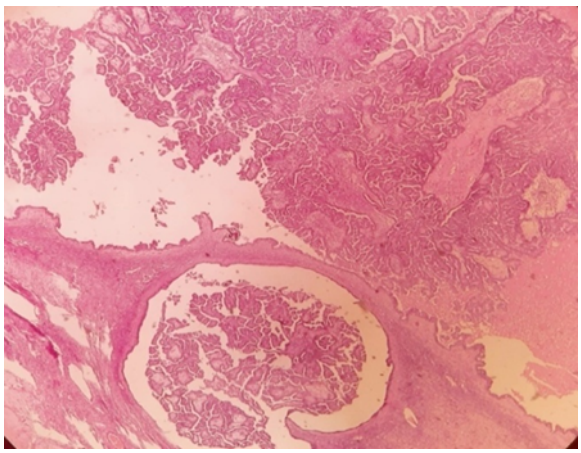

Fig. 2: Scanner view showing cyst mass with complex branching papillae

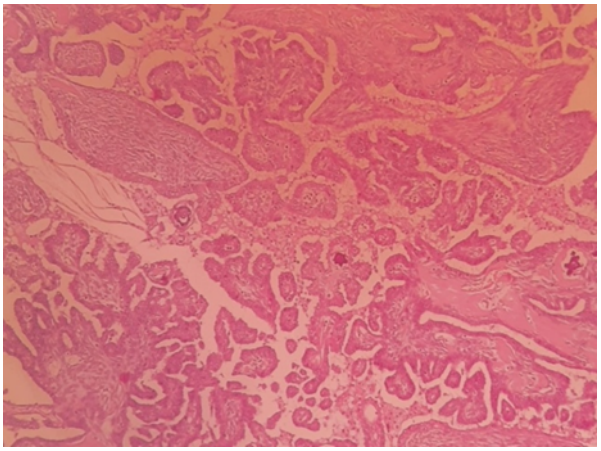

Fig. 3: Low power view showing branching papillae with psammomatous calcification at tip of papillae

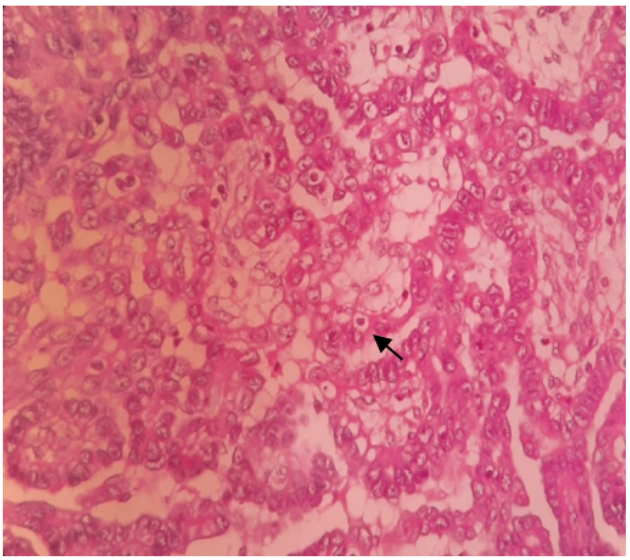

Fig. 4: High power view showing papillae lined by cells with high grade nuclear atypia, increased N:C ratio, vesicular chromatin and prominent nucleoli

3. Discussion

Ovarian tumor is the fifth most common tumor in pregnancy after breast, thyroid, cervical and Hodgkin's disease. Malignant ovarian tumor in pregnancy is quite rare-3-5%.[4–6] They are easily detected during early pregnancy ultrasound.[7] The symptoms may be non specific as in other ovarian tumors or they may present as acute abdomen due to torsion, rupture or hemorrhage.

Apart from ultrasound, tumor markers may aid diagnosis. Ca-125 may be elevated in epithelial tumors. CEA and Ca-19-9 are elevated in mucinous tumors. LDH, PLAP, AFP and ßCG might be elevated in germ cell tumors. In case of high suspicion of malignant ovarian tumor, second line

imaging with MRI may be done to assess the nature of tumor and its spread and is highly accurate in assessing indeterminate complex ovarian masses and for presurgical evaluation of extent of disease, peritoneal dissemination and nodal metastasis.[8] CT scan is contraindicated in pregnancy due to its teratogenic effects.

Management depends on the gestational age at diagnosis and the nature of tumor as suggested by imaging and tumor markers. The ideal time for surgery is early second trimester.[6] It is indicated in tumor larger than 10 cm or with features suggestive of malignancy (irregular, multiloculated, solid areas, thick septa, ascites).[1] Since the size of the tumor in this patient was less than 10 cm with no features of malignancy in ultrasound and normal Ca - 125, conservative surgery was done during LSCS. Since scanty evidence is available regarding the best possible management of epithelial ovarian tumors in pregnancy, individualized approach must be addressed for different cases. Staging during pregnancy may include infracolic omentectomy, peritoneal biopsy and lymph node dissection wherever possible.[1] If proper staging could not be done during primary surgery, revision staging can be done after delivery. Several studies have reported that histologic types of ovarian cancer during pregnancy are similar to non-pregnant women in reproductive age group.[6,9] The HPE report of this patient showed high grade serous cancer. Based on this report, she was advised CECT abdomen and pelvis at 6 weeks in postpartum period followed by revision staging/chemotherapy depending on presence/absence of residual disease.

4. Conclusion

A rare case of ovarian tumor complicating pregnancy which was suspected to be benign in nature based on clinical and ultrasound findings and tumor markers. Hence, conservative surgery was done. HPE revealed a malignant ovarian tumor for which imaging followed by chemotherapy/revision staging was advised in the postpartum period. This case highlights the importance of early diagnosis and management of ovarian tumors in pregnancy with multidisciplinary team to improve survival in patients with malignant ovarian tumor.

5. Source of Funding

None.

6. Conflict of Interest

None.

References

1. Dłuski DF, Mierzyński R, Poniedziałek-Czajkowska E, Leszczyńska-Gorzelak B. Ovarian Cancer and Pregnancy-A Current Problem in Perinatal Medicine: A Comprehensive Review. *Cancers (Basel)*. 2020;12(12):3795.
2. Prat J. Ovarian carcinomas: five distinct diseases with different origins, genetic alterations, and clinicopathological features. *Virchows Arch*. 2012;460(3):237–49.
3. Zhao XY, Huang HF, Lian LJ, Lang JH. Ovarian cancer in pregnancy: a clinicopathologic analysis of 22 cases and review of the literature. *Int J Gynecol Cancer*. 2006;16(1):8–15.
4. Kwon YS, Mok JE, Lim KT, Lee IH, Kim TJ, Lee KH, et al. Ovarian cancer during pregnancy: clinical and pregnancy outcome. *J Korean Med Sci*. 2010;25(2):230–4.
5. Whitecar MP, Turner S, Higby MK. Adnexal masses in pregnancy: a review of 130 cases undergoing surgical management. *Am J Obstet Gynecol*. 1999;181(1):19–24.
6. Khullar H, Mediratta G, Garg S. Ovarian tumor diagnosed during pregnancy & their management. *Integr Cancer Sci Therap*. 2020;7. doi:10.15761/ICST.1000338.
7. Zanotti KS, Belinson JL, Kennedy AW. Treatment of gynecologic cancers in pregnancy. *Semin Oncol*. 2000;27:686–98.
8. Fruscio R, DeHaan J, Calsteren KV, Verheecke M, Mhallem M, Amant F. Ovarian cancer in pregnancy. *Best Pract Res Clin Obstet Gynaecol*. 2017;41:108–17.
9. Behtash N, Zarchi MK, Gilani MM, Ghaemmaghami F, Mousavi A, Ghotbizadeh F. Ovarian carcinoma associated with pregnancy: a clinicopathologic analysis of 23 cases and review of the literature. *BMC Pregnancy Childbirth*. 2008;8:3.

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