International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Luniya IA et al. Int J Reprod Contracept Obstet Gynecol. 2023 Jul;12(7):2290-2293
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20231953

Case Report

Incidental finding of dysgerminoma in a full-term pregnancy: a case report

Isha A. Luniya*, Vaibhav Patil, Nayana K.

Department of Obstetrics and Gynecology, Government medical college, Mira, Maharashtra, India

Received: 28 April 2023
Accepted: 01 June 2023

***Correspondence:**
Dr. Isha A. Luniya,
E-mail: luniya.isha@gmail.com

ABSTRACT

Ovarian tumors are reported in 1 of every 200 pregnancies. Dysgerminoma with pregnancy is extremely rare, with a reported incidence of about 0.2-1 per 100,000 pregnancies. They are generally discovered due to their large size related complications like torsion, infarction, and obstruction of vaginal delivery. These rapidly growing tumors can have a heterogeneous presentation and lead to peripartum complications and morbidity. We present a unique case where a dysgerminoma went undiagnosed until labor in a patient who otherwise had an uncomplicated prenatal course. The purpose is to report and discuss our case, as further studies are needed to confirm the best management especially in the management of the incidentally diagnosed tumor.

Keywords: Dysgerminoma, Ovarian tumor, Torsion, Peri-partum

INTRODUCTION

The incidence of ovarian dysgerminoma, a rare malignant ovarian germ cell tumour, is highest in people who are in the reproductive age group. Common symptoms upon presentation include abdominal pain, abdominal distention, and appearance of a palpable lump.[1] KIT mutations are present in about one-third of dysgerminomas and are linked to advanced stage at presentation.[2] The cornerstone of treatment is surgery to remove majority of the tumour. Conservative surgery is crucial since it affects survival chances even in advanced stages. It is frequently possible to perform fertility-preserving surgery, such as a unilateral salpingoophorectomy, and the overall survival rate is 92.4%.[3,4] But because dysgerminomas, unlike other ovarian tumours, affect females in the reproductive age range, the question is whether or not a concurrent pregnancy should be allowed to continue?[5] Patients in low resource areas, those who received insufficient prenatal care, or those who gave birth before routine antenatal ultrasonography are frequently the subjects of cases describing the inadvertent identification of a dysgerminoma at the time of delivery.[6-8]

CASE REPORT

A 24 years old second gravida with 9 months of pregnancy referred from P.H.C to our institute in view of non-progress of labour. Patient was unbooked with only one recent ultrasonography of Single live intrauterine pregnancy of 34 weeks gestation, adequate liquor and effective fetal weight of 2.8 kg. She underwent Full term vaginal delivery 3 years back. Her past, medical and surgical history was non contributory. On examination patient was moderately built, afebrile, pallor present, PR-94/min, BP-110/74mmHg. On per abdominal examination overdistended abdomen with cephalic presentation with adequate uterine contractions. FHS was heard regular 120/min. On per vaginal examination cervix was in active stage of labour with fetal station at 0. Patient monitored and partograph maintained with continuous fetal heart rate tracing. At 30 minutes the fetal heart rate tracing deteriorated to repetitive late decelerations and moderate variability necessitating cesarean birth for non-reassuring fetal status. A cesarean delivery via Pfannenstiel incision was performed with delivery of a female infant weighing 3030 g. Once uterine hemostasis was achieved, the pelvis

was explored. Intraoperatively an enlarged right ovary with bosselated outer surface with solid consistency measuring approximately 15×10×8 cm, and an intact capsule was noted. (Figure 1 and 3). There was evidence of hemorrhage in the right ovarian mass. (Figure 2). Left-sided adnexal structures showed no pathology. No enlarged lymph nodes were appreciated and the omentum was unremarkable. A diagnosis of pregnancy with right ovarian tumour was made (Stage 1 A). Right oophorectomy and salpingectomy was performed. Post operatively patient was given Inj. Ceftriaxone and Inj metronidazole. Neonate suffered no complications. Her hospital course was uneventful. Final histopathology report of the mass demonstrated a large ovarian mass of 15×12×5 cm in size with bosselated outer surface. Cut section showed a solid firm homogenous tan colored mass along with foci of hemorrhage and necrosis (brown areas) (Figure 4). Microscopic examination revealed nests of medium to large polygonal cells with round nuclei, separated by fibrous septa with dense infiltration by lymphocytes and few multinucleated giant cells suggestive of dysgerminoma. The septa showed occasional non caseating granulomas and the stroma showed focal hyalinization (Figure 4). The final tumor stage was assigned IA and the patient received no adjuvant therapy. She entered a period of surveillance with good adherence to care and was serially followed up with pelvic examinations and CT scan.

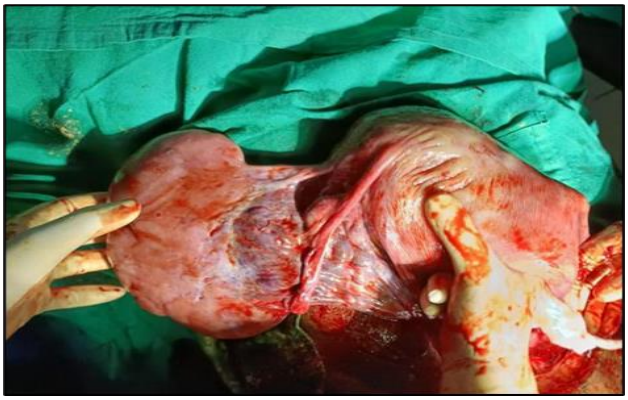

Figure 1: Intraoperative adnexal mass.

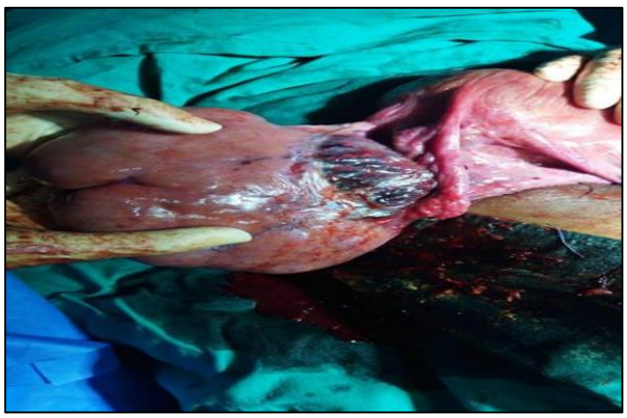

Figure 2: Hemorrhage in right ovarian mass.

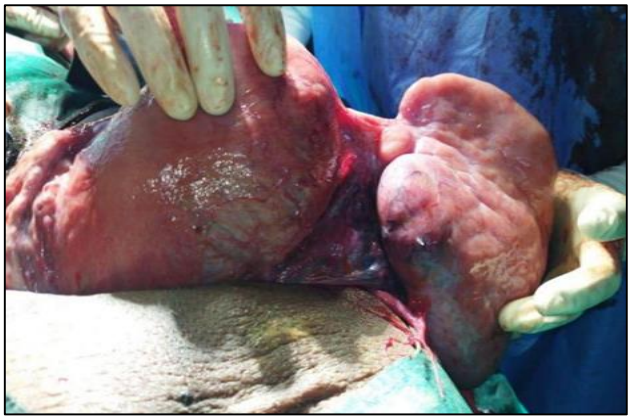

Figure 3: Posterior view of uterus and adnexal mass.

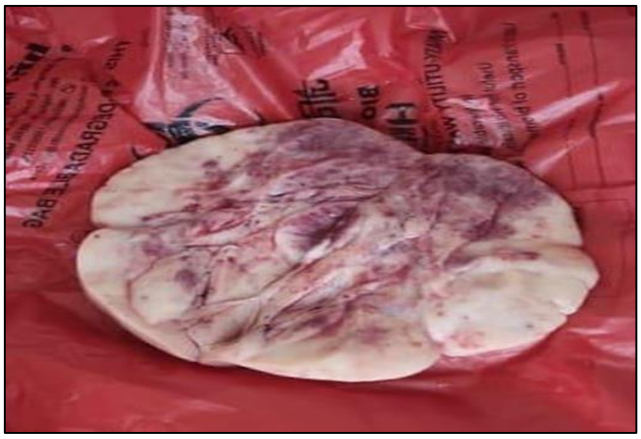

Figure 4: Cut specimen of adnexal mass.

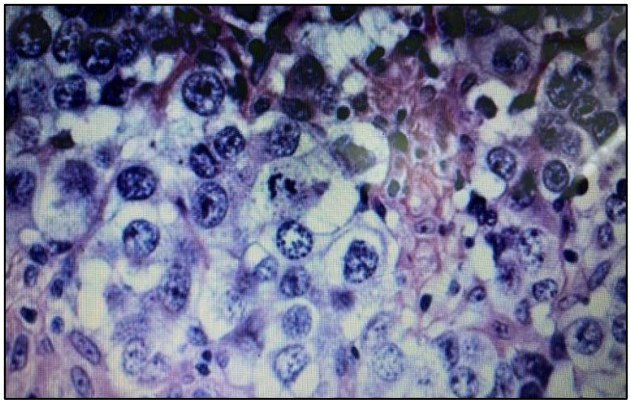

Figure 5: Histopathological slide of tumour.

DISCUSSION

Ovarian tumors are broadly classified into three types based on their cell of origin, epithelial, sex cord and germ cell tumors. While epithelial variety largely predominate, germ cell tumors (GCTs) are rare, comprising about 30% of all ovarian neoplasms and 3% of all ovarian malignancies.[9] The major challenge with dysgerminoma, the commonest malignant variety of germ cell tumor, is that they predominantly affect young women.

Approximately 80% of cases are reported in less than 30 years of age (mean: 21 years), a finding consistent with our case.[10] Lee et al reported the mean age of women in their study as 23.8 years (Range 4-63 years).[11] Gershenson has reported that natural conception is possible in case of germ cell tumors of the ovary, a finding similar to our case where patient concieved spontaneously.[12] Pregnancies associated with ovarian malignancies require balancing optimal maternal therapy and fetal well-being. In addition, cancer diagnosis may be delayed because of difficulties in distinguishing symptomatology from physiologic changes in pregnancy.[13] Natural course of pregnancy in cases of dysgerminoma is extremely difficult, due to large size of the tumors, irregular menstruation, and collection of fluid as well as tubal adhesions. Ovarian tumors generally remain asymptomatic, until they are discovered due to their large size or related complications, as seen in our case, patient was asymptomatic during her antenatal period until labour.[14] Sonography is crucial in assessing adnexal masses in the first trimester. In ultrasonography, finding of a large pure solid adnexal tumor divided into different lobules, with irregular internal echogenicity, smooth lobulated contours, and well-defined borders is suggestive of dysgerminoma, which was not available with our patient. Also, tumor markers commonly associated with malignant germ cell tumors (human chorionic gonadotropin and AFP, LDH in particular) are elevated during pregnancy, which can lessen their diagnostic value.[15] Tumour marker study was not done in our case. It is important to note that in cases where there is a high index of suspicion for a large pelvic mass or malignancy, a vertical midline incision should be created to allow for a complete exploration of the abdomen and contralateral ovary.[16] In our case pfannenstiel incision was taken for lower segment cesarean section as the diagnosis of pelvic tumour was not known. According to Quirk and Natarajan's findings, 75% of women with dysgerminomas exhibit clinical stage Ia illness, which is a finding that is consistent with our situation.[17] Bleomycin, etoposide, and cisplatin (BEP) or cisplatin, vinblastine, and bleomycin combined treatment can cure patients with advanced dysgerminoma and incompletely resected dysgerminoma.[18] This wasn't necessary in our situation. However, the fundamentals of management remain the same, and it's critical to provide patients with the right counselling and individualizing care on an individual basis.

CONCLUSION

Dysgerminoma being the common subtype of ovarian malignancy in pregnancy, little is known about its behavior during pregnancy. Dysgerminomas can be diagnosed by tumour markers like LDH and HCG, but interpretation during pregnancy is non specific and non reliable. Although rare, adnexal masses should be part of a broad differential diagnosis when faced with abnormal labor progress and symptoms. Most dysgerminomas during pregnancy are diagnosed in the early stage, with 75% being stage I thus having excellent prognosis. The management of ovarian tumour in pregnancy is complicated. First trimester dating scan should be used as an important time to look for presence of adnexal structures. Decisions in each case must be individual, taking into account age, clinical stage, gestational age, parity and desire of future fertility.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Hyseni N, Llullaku S, Jashari H, Zahiti K, Hyseni F, Kurshumliu F et al. Advanced ovarian dysgerminoma infiltrating both ovaries and uterus in a 7-year-old girl. Case Rep Oncol Med. 2014;2014:910852.
2. Cheng L, Roth LM, Zhang S. KIT gene mutation and amplification in dysgerminoma of the ovary. Cancer. 2011;117(10):2096-103.
3. Biswajit D, Patil CN, Sagar TG. Clinical presentation and outcome of pediatric ovarian germ cell tumor: a study of 40 patients. J Pediatr Hematol-Oncol. 2010;32(2):e54-6.
4. Tangjitgamol S, Hanprasertpong J, Manusirivithaya S, Wootipoom V, Thavaramara T, Buhachat R. Malignant ovarian germ cell tumors: clinico-pathological presentation and survival outcomes. Acta Obstetricia et Gynecologica Scandinavica. 2010;89(2):182-9.
5. Kharane P, Tondage G, Munde S. Dysgerminoma with pregnancy and viable baby: A case report. MedPulse Int J Gynaecol. 2020;13(1):01-4.
6. Chen Y, Luo Y, Han C, Tian W, Yang W, Wang Y et al. Ovarian dysgerminoma in pregnancy: a case report and literature review. Cancer Biol Ther. 2018;19(8):649-58.
7. Gupta M, Saini V. Germ cell tumors and their association with pregnancy. Germ Cell. 2018;31:123.
8. Akhtar K, Ahmad SS, Kumar A, Afshan N. Dysgerminoma with pregnancy and viable baby: a case report. Oman Med J. 2011;26(3):198-200.
9. Zalel Y, Piura B, Elchalal U, Czernobilsky B, Antebi S, Dgani R. Diagnosis and management of malignant germ cell ovarian tumors in young females. Int J Gynaecol Obstet. 1996;55:1-10
10. De Palo G, Pilotti S, Kenda R, Ratti E, Musumeci R, Mangioni C et al. Natural history of dysgerminoma. Am J Obstet Gynecol. 1982;143(7):799-807.
11. Lee KH, Lee IH, Kim BG, Nam JH, Kim WK, Kang SB et al. Clinicopathologic characteristics of malignant germ cell tumors in the ovaries of Korean women. Kor Gynecologic Oncol Group Study. Int J Gynecol Cancer. 2009;19:84-7.
12. Gershenson DM. Update on malignant ovarian germ cell tumors. Cancer. 1993;71(4):1581-90.
13. Dgani R, Shoham Z, Atar E, Zosmer A, Lancet M. Ovarian carcinoma during pregnancy: a study of 23 cases in Israel between the years 1960 and 1984. Gynecol Oncol. 1989;33(3):326-31.

14. Tangir J, Zelterman D, Ma W, Schwartz PE. Reproductive function after conservative surgery and chemotherapy for malignant germ cell tumors of the ovary. Obstet Gynecol. 2003;101(2):251-7.
15. Kodama M, Grubbs BH, Blake EA, Cahoon SS, Murakami R, Kimura T et al. Feto-maternal outcomes of pregnancy complicated by ovarian malignant germ cell tumor: a systematic review of literature. Eur J Obstet Gynecol Reprod Biol. 2014;181:145-56.
16. Tewari K, Cappuccini F, Disaia PJ, Berman ML, Manetta A, Kohler MF. Malignant germ cell tumors of the ovary. Obstet Gynecol. 2000;95(1):128-33.
17. Quirk JT, Natarajan N. Ovarian cancer incidence in the United States, 1992-1999. Gynecol Oncol. 2005;97(2):519-23.
18. Williams SD, Blessing JA, DiSaia PJ. Second-look laparotomy in ovarian germ cell tumors: the gynecologic oncology group experience. Gynecol Oncol. 1994;52(3):287-91.

Cite this article as: Luniya IA, Patil V, Nayana K. Incidental finding of dysgerminoma in a full-term pregnancy: a case report. Int J Reprod Contracept Obstet Gynecol 2023;12:2290-3.