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PARA-AORTIC LN INVOLVED DYSGERMINOMA MASQUERADING AS MYOMA DURING PREGNANCY: CASE STUDY

Eun hyun Lee [1], Yong-Il Ji [1]
[1] Department of Obstetrics and Gynecology, Inje university Haeunade Paik Hospital, Busan, South Korea

Abstract

Ovarian dysgerminoma is a malignant germ cell tumor and it account for 1-5% of all ovarian cancers.
Dysgerminoma usually occurs in adolescence and early adult life. So, it could cause problems in fertility and if it is diagnosed during pregnancy, feto-maternal problems will be incurred.
Hereby, we report a case of successful delivery associated with para-aortic Lymph Node (LN) involved ovarian dysgerminoma masquerading as myoma during pregnancy and recommend ultrasound guided fine needle aspiration cytology for ovarian masses should be considered.

Keywords: Dysgerminoma; Myoma; Pregnancy; Para-aortic Lymph Node.

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1. Introduction

The detection of cancers during pregnancy is diagnostic as well as therapeutic challenges. Breast cancer is the most frequent malignant neoplasm in pregnancy and other frequent malignant neoplasms are thyroid cancer, cervical cancer, melanoma, ovarian cancer and lymphoma [1]. Malignant ovarian tumors are uncommon during pregnancy, but not exceedingly rare [2,3]. Only 2.2–5.0% of all ovarian tumors complicating pregnancy are malignant [3]. Most patients are clinically asymptomatic at presentation. Ultrasound examination is the ideal method for the detection and surveillance of adnexal masses [4]. The majority of ovarian cancers associated with pregnancy are diagnosed at an early stage [4]. We present a case where the patient was misdiagnosed as myoma prenatally, but diagnosed as ovarian tumor intraoperatively. It is both ovarian dysgerminoma even with para-aortic lymph node metastases.

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2. Case Report

A 24 year old female multi gravid was referred with 31 weeks gestational age and pelvic mass. There was no history of any medical problems before the pregnancy.

Ultrasonography (USG) revealed a pregnancy of 31 weeks, with remarkably large sized pelvic mass measured 15 cm. It was irregular inhomogenous, hypoechoic mass. It was reported as myoma at that time. On 4 weeks later follow up visit, 35 weeks gestationa age, the USG showed that the mass increased abruptly. Pelvic magnetic resonance imaging (MRI) without enhance was performed. On MRI findings, huge lobulated myoma measured about 22 cm occupied the right sided pelvic cavity and left side ovarian tumor measured 9 cm was also observed. (Fig. 1).

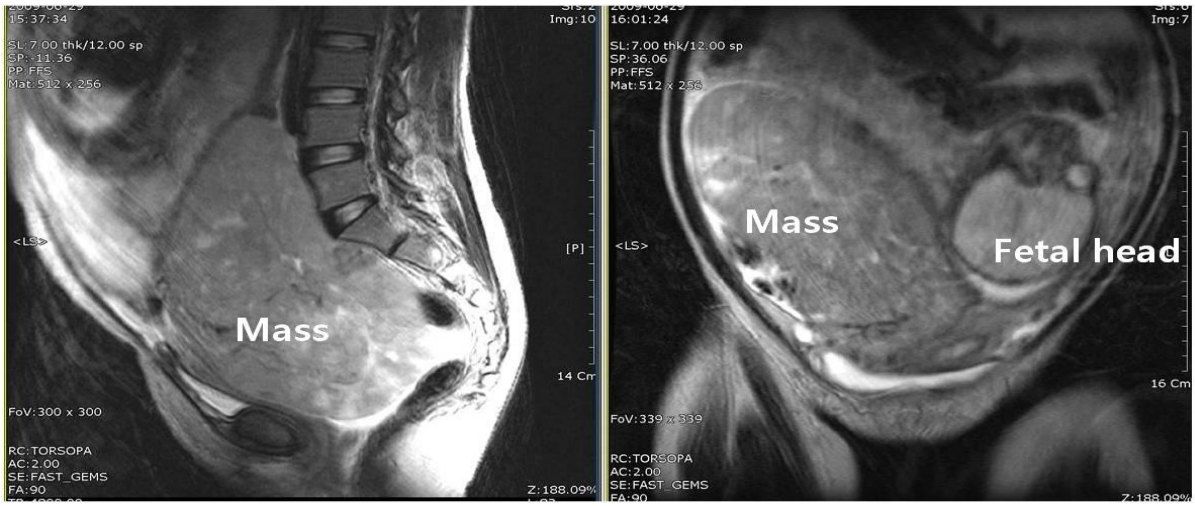

Figure 1: Pelvic magnetic resonance imaging without enhance was performed. The mass measured 22 cm in sized and the fetal head was also observed

At 4 weeks later, we conducted cesarean delivery and a female baby weighed 2,530 g was delivered. She was managed as a well-baby. Intraoperatively, huge right ovary tumor was found and there is no mass in uterus and left adnexa. Frozen section was conducted and it was revealed as malignant dysgerminoma. Cesarean hysterectomy, both salpingo-oophorectomy, pelvic lymph node dissection, para-aortic lymph node dissection, cytology, appendectomy, and total omentectomy were followed by. The patient subsequently underwent chemotherapy with bleomycin, etoposide and platinum (BEP x 6 cycles). Pathological findings were as follows: (1) right ovarian dysgerminoma 29 cm in size and weighed 2490 g with areas of tumor necrosis and infiltration of the tunica albuginea but with an unruptured capsule. (Fig. 2) (2) negative results for peritoneal cytology, right salpinx, left adnexa, omentum and appendix. (3) All pelvic lymph nodes (LN), 30 LN dissected, were negative. (5) 5 cm sized para-aortic LN was dissected and there were 4 LNs positive from 5 LNs. (6) Immunohistochemical analysis gave the following results: CD 30 was weakly positive;

LAC, vimentin, S100, and AFP were all negative. The International Federation of Gynecology and Obstetrics (FIGO) stage was likely consistent with a stage IIIC.

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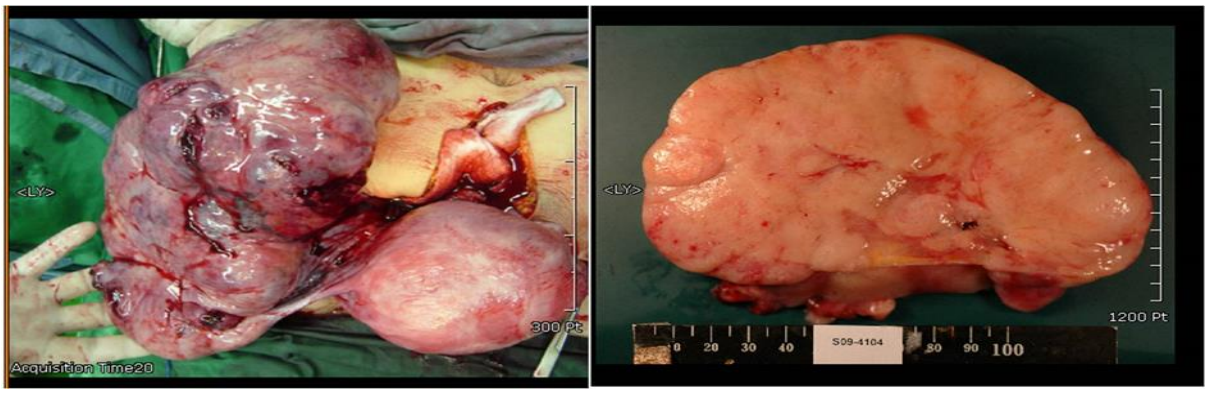

Figure 2: A large ovarian mass showed bosselated outer surface. Grossly cut section shows solid, firm, homogenous tan colored growth with foci of hemorrhage and necrosis

3. Discussion

Dysgerminoma is the most common ovarian germ cell tumor and accounts for 3–5% of all ovarian malignancies [5]. Diagnosing ovarian germ cell tumors is challenging [6]. Following clinical examination and imaging tests (ultrasound, computed tomography (CT) and magnetic resonance imaging (MRI)), the finding of increased serum levels of β-hCG, AFP and LDH suggest the diagnosis pre-operatively [6].

Although there is considerable variation in the production of these markers, the majority of endodermal sinus tumors produce AFP, and most choriocarcinomas and dysgerminomas produce β-hCG and LDH respectively. However, some dysgerminomas also produce β-hCG [7]. Transvaginal sonography is a good imaging modality for determining whether the mass is ovarian in nature and, more importantly, whether it has any malignant features [7]. Unfortunately, when an ovarian dysgerminoma is considered, the classic tissue characteristics described above are unhelpful because the tumor does not show any of them [6, 8, 9]. Findings of ovarian dysgerminomas on CT and MRI have been reported, but only a limited number of publications have described the sonographic findings [10].

In an extensive literature search, we found only two case reports of one and three patients, respectively, describing the sonographic appearance of ovarian dysgerminoma [8,10]. They all showed prominent arterial flow within the fibrovascular septa of the tumor and lobulated mass. But ultrasound pattern of dysgerminomas to be distinctly different from that of other solid malignant ovarian tumors such as solid metastases or lymphoma [11]. At magnetic resonance imaging (MRI) and computed tomography (CT), dysgerminomas also appear as lobulated solid Tumors with the lobules divided by fibrovascular septa [8,12].

This tumor is considered to have a higher incidence of lymph node metastases than other ovarian germ cell tumors and epithelial ovarian tumors and a few studies have reported that lymph node metastases from dysgerminoma more frequently occur in para-aortic lymph nodes than in pelvic lymph nodes [5,13]. Diagnosis of an ovarian neoplasm in pregnancy makes its removal imperative as soon as possible to exclude malignancy by histological examination [3]. We present the exceptional case of a patient who experienced misregarding para-aortic LN involved

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dysgerminoma even delay in histologic confirmation. It means our patient carried this pregnancy to term and at that time the mass was revealed to be a dysgerminoma. In the case described here, huge uterine myoma was diagnosed with US on her first visit (31 weeks gestational age) and neither adnexal tumor nor ovarian neoplasm was considered. Also its contiguity with the uterus was demonstrated. This is the reason why uterine myoma was suspected. Ultrasound guided fine needle aspiration (FNA) cytology for ovarian masses is employed as an initial diagnostic procedure as it is simple, safe, less painful and with fewer complications [14]. But in many cases, it could be not considered especially for pregnant women.

Based on our experience, we recommend FNA cytology for women with solid pelvic mass during pregnancy even it is revealed myoma.

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*Corresponding author.
E-mail address: jyimdog@ paik.ac.kr