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Rare association of the ovarian low-grade invasive serous carcinoma with pregnancy: A case report

S. Bennaceur, N. Ouguerzi, R. Laaboudi, and Z. El Hanchi

Department of Gynecology-Obstetric, Military Training Hospital Med V, Faculty of Medicine and Pharmacy, Mohammed V University, Rabat, Morocco

ABSTRACT: The association of ovarian malignancy with pregnancy is rare; accounting for 3–6% of ovarian masses of which malignant germ cell tumors represent the type most frequently associated with pregnancy, whereas the incidence of epithelial ovarian cancer is only 1/12,000 to 1/50,000 of pregnancies. The diagnosis and management of ovarian cancer in pregnancy remain poorly codified because of the rarity of cases and the limited data available on this pathology. We report here the case of a 33-year-old woman with a low-grade invasive serous carcinoma of the left ovary diagnosed during pregnancy, identified by ultrasound and magnetic resonance imaging. The patient was treated by surgical resection followed by adjuvant chemotherapy without interrupting the pregnancy because she refused to. A c-section was programmed at 36 weeks of gestation with complement of surgery.

KEYWORDS: Ovarian, cancer, pregnancy, carcinoma.

1 INTRODUCTION

Ovarian cancer is uncommon during pregnancy, even though ultrasound often detects ovarian masses in expectant mothers. While these masses are rarely cancerous (around 2-3%), there's limited data on managing confirmed ovarian cancer in pregnancy. This study examines a case to understand the impact on both mother and fetus, and how pregnancy might affect diagnosis and treatment.

2 CASE REPORT

A 33-year-old woman, fourth gesture, third pare, mother of three live children delivered by vaginal delivery, presented for an unattended pregnancy presumed at 20 weeks of amenorrhea, who consulted for pelvic pain resistant to medical treatment with abdominal distension evolving in a context of altered general condition and weight loss not quantified.

The general examination on admission revealed a patient in poor general condition, asthenic, her weight was 55 kg.

The gynecological examination revealed an exaggerated uterine height for the term of the pregnancy, a long closed cervix of normal appearance with no bleeding and vaginal walls without anomalies.

Abdominopelvic ultrasound showed a large abdominopelvic mass suspected of malignancy, reaching the uterus, oblong and echogenic, heterogeneous, vascularized on Doppler, with multiple poorly limited cystic formations, measuring 7x6 ×67 cm, with intrauterine presence of an evolving monofetal pregnancy estimated at 20 weeks of amenorrhea according to the biparietal diameter.

The CA 125 biomarker assay was elevated to 756 IU/ml. Pelvic MRI showed a large solid cystic abdominal mass with heterosignal T1, T2, heterogeneously enhanced after gadolinium injection, measuring 72 x 61x 75 mm mentioning first a serous papillary tumor (Figure 1).

Corresponding Author: S. Bennaceur

The decision of the multidisciplinary consultation staff was to carry out an exploratory laparotomy and radical surgery associated with medical interruption of pregnancy in case of malignant origin of the tumor. However, the patient refused to terminate the pregnancy.

She underwent an exploratory laparotomy, with left salpingo-oophorectomy and multiple biposies (Figure 2).

The definitive anatomopathological result of the surgical specimen confirmed low-grade invasive serous carcinoma of the left ovary with omental involvement and positive peritoneal cytology, stage T3a.The patient then received adjuvant chemotherapy.

Until 33 weeks of gestational age, and a cesarean section was scheduled for 36 weeks of gestational age. A female newborn with an Apgar score of 10/10 and a birth weight of 2500g. During the cesarean section, the patient underwent a total hysterectomy with right salpingo-oophorectomy.

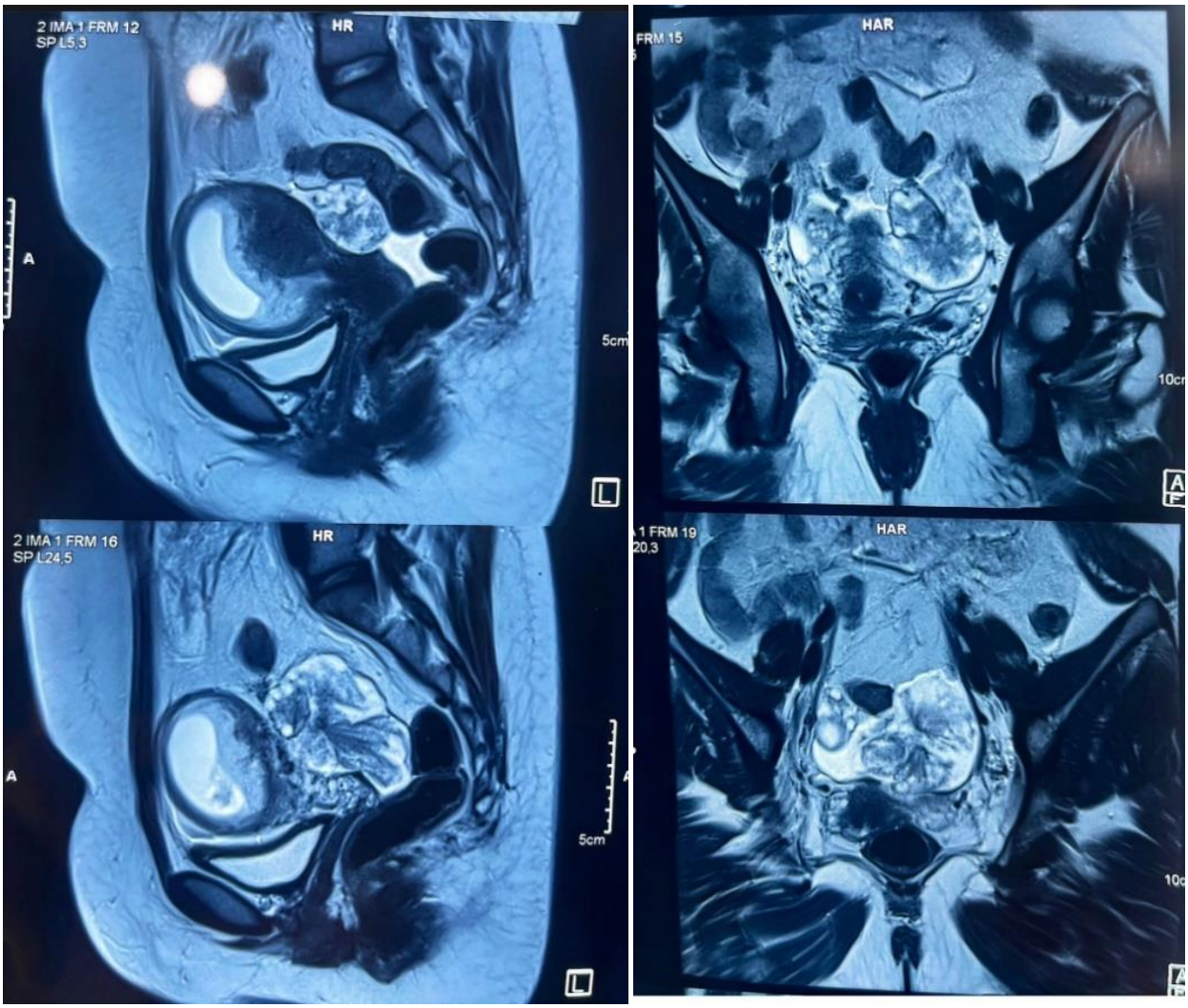

Fig. 1.

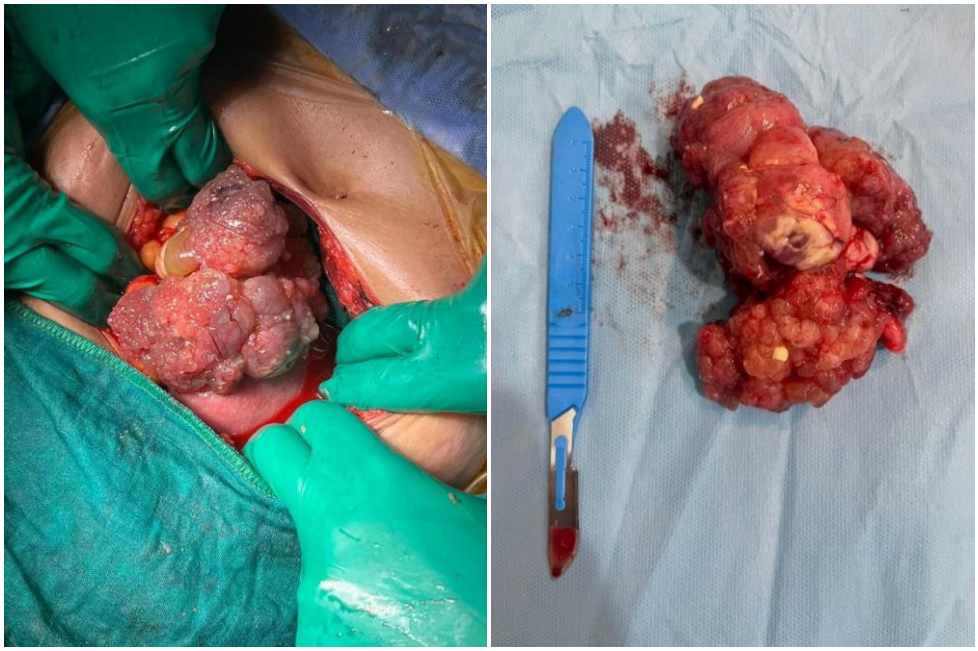

Fig. 2.

3 DISCUSSION

Ovarian cancer ranks as the second most prevalent gynecologic malignancy complicating pregnancies, following cervical cancer [1,2]. The prevalence of detecting adnexal masses has surged with the widespread utilization of prenatal ultrasound, of which roughly 3–6% are identified as malignant [3]. Predominant among the ovarian malignancies diagnosed during gestation are germ cell, sex cord, or borderline tumors, while invasive epithelial cancers are comparatively less common [4,5].

Timely diagnosis of ovarian cancer during pregnancy is pivotal for favorable therapeutic outcomes, irrespective of gestational status. Regrettably, diagnosing cancer during gestation is frequently delayed due to challenges in distinguishing certain symptoms from those typical of pregnancy, notably nausea, vomiting, breast changes, abdominal pain, anemia, and fatigue [1]. These ovarian cancers are predominantly observed in primigravida, with the majority being diagnosed at early stages through routine ultrasound examinations [6,7].

Ultrasound examination emerges as the preferred diagnostic modality during pregnancy owing to its heightened sensitivity and specificity in characterizing abdominal mass morphology, facilitating discrimination between benign and malignant masses [5,8]. Malignant ovarian tumors manifest distinct sonographic features, including size, solid component or complex appearance, papillary structure, internal septations, irregular margins, and hyper-vascularization [9,10]. Nonetheless, ultrasound assessments fall short in differentiating benign tumors from those with low malignant potential, necessitating supplementary imaging modalities [8]. MRI examinations, deemed safe in the second and third trimesters, offer insights into potential extraovarian extension [2,10].

Biological markers such as CA125 lack utility in pregnancy due to their physiologic elevation [6]. Managing malignant tumors in pregnant women presents challenges due to balancing maternal treatment optimization with fetal well-being [6]. Both laparoscopic surgery and open laparotomy stand as acceptable surgical approaches, with precautions taken to prevent ovarian rupture. Whenever feasible, staging surgery with preservation of the uterus and contralateral ovary is recommended [8].

For stage 1 or 2 disease, primary surgical treatment often entails uterine preservation with peritoneal biopsies. In cases with peritoneal disease extension, complete debulking surgery is standard, necessitating hysterectomy and thus terminating the pregnancy [8]. In instances where stage 3 cancer is diagnosed during the first or second trimester, standard procedures should be considered. If the pregnancy is continued, debulking surgery may be performed post-delivery, if necessary [9]. Standard chemotherapy regimens for epithelial ovarian tumors, comprising a platinum-based agent with a taxane, can be administered with minimal fetal risks in the second and third trimesters [10].

4 CONCLUSION

The timing of delivery in ovarian cancer patients is contingent upon both the stage of the cancer and the gestational age.

The diagnosis of ovarian cancer during pregnancy presents a formidable challenge fraught with numerous dilemmas.

An optimal therapeutic approach necessitates a multidisciplinary team comprising specialists in gynecologic oncology, perinatology, and neonatology services.

Our patient's outcomes align with existing literature regarding the effectiveness of initial radical surgery combined with bi-chemotherapy utilizing platinum-based agents and taxanes.

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