

A case of unplanned pregnancy at 2 months after uterine curettage in a patient with a hydatidiform mole

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Abstract

Whether an unplanned pregnancy should be terminated during follow-up of a hydatidiform mole is controversial. We report a patient who had an unplanned pregnancy with a hydatidiform mole at 2 months after uterine curettage when the human chorionic gonadotropin level had decreased to a negative value. Hydatidiform mole was confirmed by histopathology. Uterine curettage was performed twice and regular follow-ups were performed after surgery. The patient achieved a full-term pregnancy. The Apgar score of the newborn was 10 at 1, 5, and 10 minutes, and the newborn had no malformations. We conclude that the pregnancy outcome might be good in an unplanned pregnancy when the human chorionic gonadotropin level is negative.

Keywords

Hydatidiform mole, trophoblastic neoplasm, uterine curettage, pregnancy, human chorionic gonadotropin, B-ultrasonography

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Introduction

When proliferation/invasion are not well controlled, trophoblast cells can give rise to a rare complication of pregnancy known as a hydatidiform mole (complete or partial).¹ Genetically, the presence of an excess paternal genome, and thus its androgenetic nature, appears to be the main factor in the pathogenesis of both types of hydatidiform moles, likely through altered genomic imprinting.² Patients with complete hydatidiform mole are often

diagnosed early in gestation. Patients with partial hydatidiform mole are less likely to be diagnosed before uterine evacuation, and

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are usually diagnosed with histological analysis of curettage specimens after incomplete or missed abortion.³ In some areas, the incidence of complete hydatidiform mole is approximately 1% to 3%, while that of partial hydatidiform mole is approximately 3%. According to data obtained from epidemiological investigations in China, the pregnancy rate of patients with hydatidiform mole is 0.81%.⁴ Common manifestations of a hydatidiform mole include abnormal vaginal bleeding and uterine enlargement during pregnancy. Monitoring of human chorionic gonadotropin levels is important for early diagnosis of gestational trophoblastic neoplasm after developing a hydatidiform mole,⁵ and pregnancy after uterine curettage of a hydatidiform mole can interfere with the judgment of illness. The Professional Committee of Gynecological Oncology of the China Anti-Cancer Association⁴ proposed that when hCG values become negative 6 months after identifying hydatidiform mole, the patient could become pregnant. However, whether an unplanned pregnancy should be terminated remains controversial. We describe the pregnancy outcome in a patient with a hydatidiform mole who had an unplanned pregnancy during follow-up after uterine curettage.

Case report

The patient was a 27-year-old woman who visited our hospital for vaginal bleeding after her menstrual period for longer than half a month on 27 November 2017. The patient gave informed, signed consent to participate in the study. The patient also provided consent for publication. This study was conducted with approval from the Ethics Committee of the First Hospital of Shanxi Medical University. This study was performed in accordance with the Declaration of Helsinki.

The patient's last menstrual period was on 17 September 2017. A urine immunoassay for pregnancy was positive at 30 days after her menstrual period and B-ultrasonography showed an intrauterine pregnancy sac at 35 days after her menstrual period. Her vital signs were stable at admission. We found anteversion of the uterus on intravaginal palpation, and the uterus was approximately 13 × 10 cm in size and tender in texture (Figure 1). Ultrasound showed a left-sided heterogeneous mass of approximately 104.0 × 86.2 × 64.0 mm, with high echo and no echoic areas. The levels of hCG and β -hCG were 2439,000 mIU/mL and 663,080 mIU/mL, respectively. The patient underwent uterine curettage on 29 November 2017, and approximately 700 mL of uterine content was aspirated during the operation. This content was found to be a blister-like tissue. A bulbous placenta with mild trophoblastic hyperplasia was observed by pathological assay (Figure 2). A specialist examination and B-ultrasonography showed that the uterus was larger than that expected at 12 weeks of gestation. Two times of uterine curettage were performed 1 week later. B-ultrasonography was used to approximately determine the location of intrauterine residue to determine whether to continue the operation and to predict the difficulty of the operation. At 5 days after surgery, pelvic B-ultrasonography showed that the uterus was approximately 88.4 × 68.8 × 56.3 mm in size. Additionally, an inhomogeneous mass of approximately 16.3 × 18.2 mm was found at the posterior bottom of the uterus, and it was close to the uterine cavity.

Hysteroscopy and a second uterine curettage were performed on 6 December 2017. A moderate amount of decidua-like tissue was aspirated, 10 U of oxytocin was injected into the cervix, and the operation was successful. A small amount of decidua-like tissue without the hydatidiform mole was found by pathology. After curettage

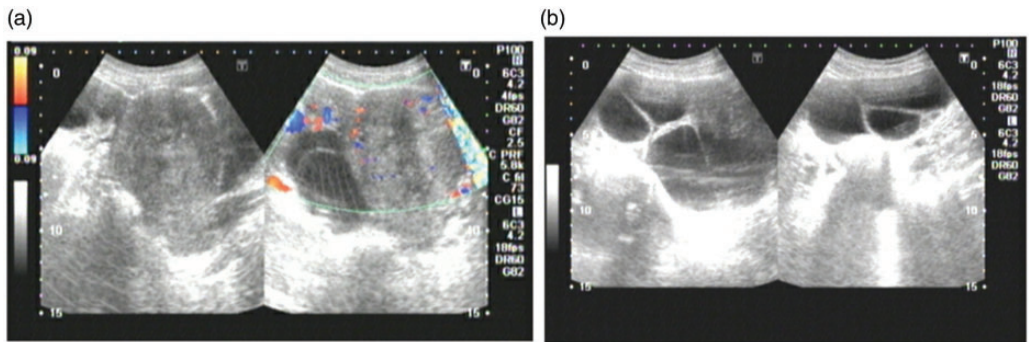


Figure 1. Ultrasound of a left-sided heterogeneous mass of approximately $104.0 \times 86.2 \times 64.0$ mm, with high echo and no echoic areas.

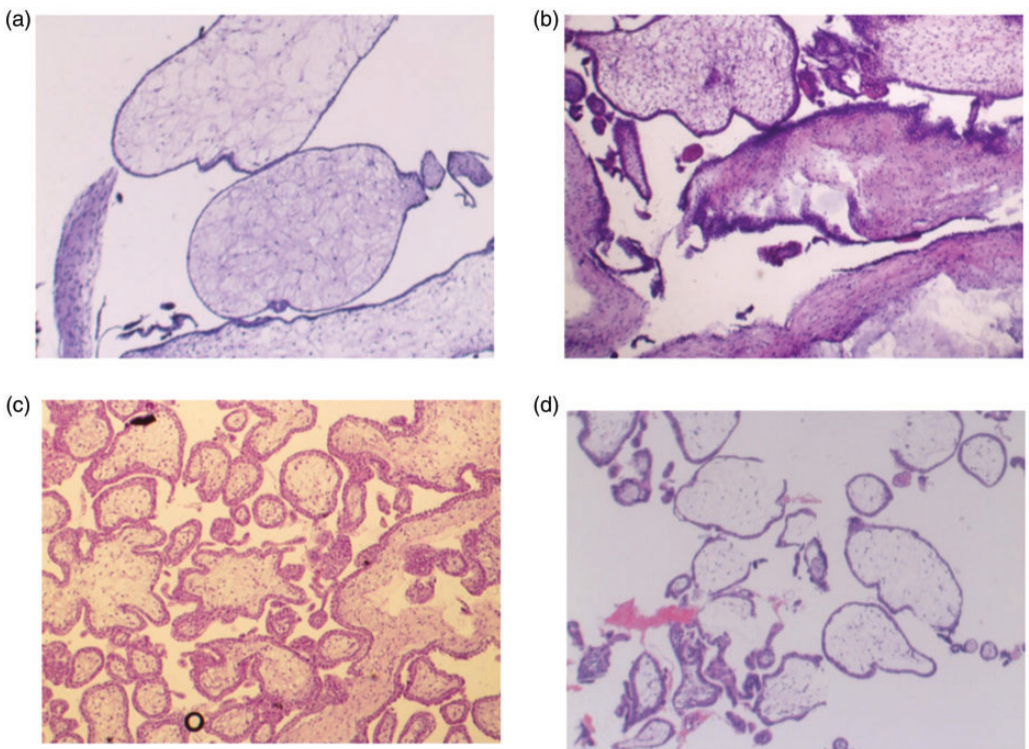


Figure 2. Pathological results of a bulbous placenta with mild trophoblastic hyperplasia.

of the hydatidiform mole, pelvic B-ultrasonography showed multiple cystic masses in the pelvic cavity. The patient had conscious intermittent lower abdominal pain for longer than 12 hours. The possibility of a

luteinized ovarian cyst was considered. An ovarian luteinized cyst subsides automatically after uterine curettage of a hydatidiform mole. A patient with acute torsion can have the cyst punctured with drainage

under B-ultrasonography or laparoscopy, and the cyst can be naturally repositioned. The patient and her family refused to undergo laparoscopic surgery after being informed of the patient's condition.

Therefore, the patient underwent puncture of the cyst and drainage on 18 December 2018 because of torsion of the luteinized ovarian cyst. On the second day after surgery, a heterogeneous echo area in the posterior myometrium of approximately 40.7×29.9 cm in size was found on review by pelvic B-ultrasonography. Pelvic magnetic resonance imaging was performed on 25 December 2018 (Figure 3a). The results of the pelvic B-ultrasonography on review were as follows. The size of the uterus was $68.0 \times 59.1 \times 49.9$ mm. The echo of the muscular layer was homogeneous, the endometrium was not clear, and the uterine cavity separation width was 5.2 mm. The hCG level of the patient

was assayed every week according to the doctor's request (changes in hCG levels from post-uterine curettage until the end of follow-up are shown in Figure 3b). The patient's menstrual period re-occurred and a urine immunoassay for pregnancy and pelvic B-ultrasonography suggested intrauterine pregnancy at the early stage. The estimated date of conception was 26 November 2018. The changes in hCG levels during pregnancy are shown in Figure 3c. Chest computed tomography at the 39th week of pregnancy showed no nodules in the lungs. The results of pelvic magnetic resonance imaging are shown in Figure 4. The patient vaginally delivered a live female neonate on 26 November 2018. The Apgar score of the newborn was 10 at 1, 5, and 10 minutes, without malformations. Levels of hCG and β -hCG were negative at the 50th day postpartum.

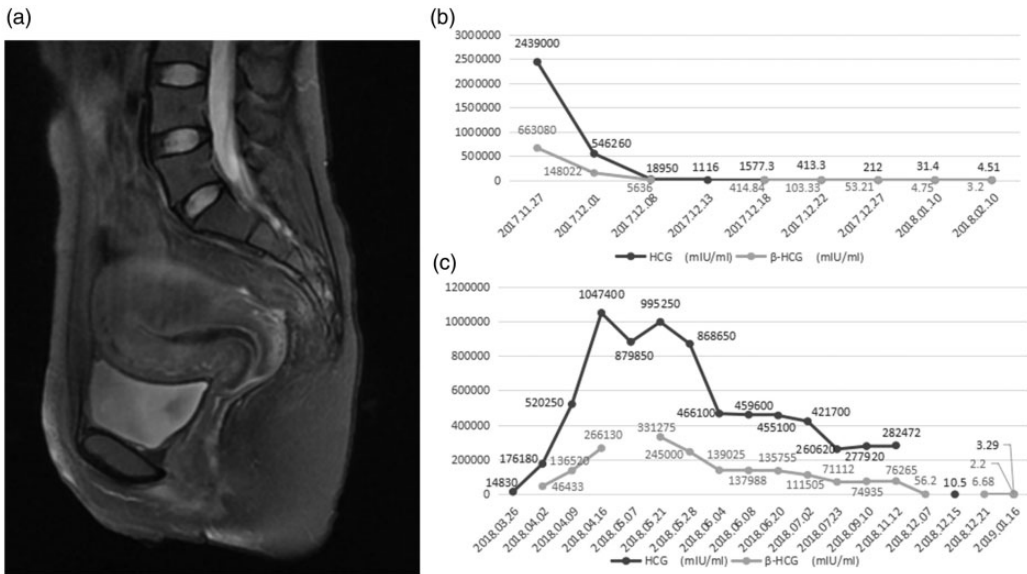


Figure 3. (a) Magnetic resonance imaging shows that the uterus is approximately $12.5 \times 6.2 \times 7.9$ cm in size. A diffusion-weighted imaging scan showed a diffuse hyperintense signal in the uterine myometrium, while the apparent diffusion coefficient showed a low signal. A vascular void signal was observed in the myometrium. (b) Changes in hCG levels in the patient from post-uterine curettage until the end of follow-up. (c) Fluctuation of hCG levels in the patient during pregnancy.

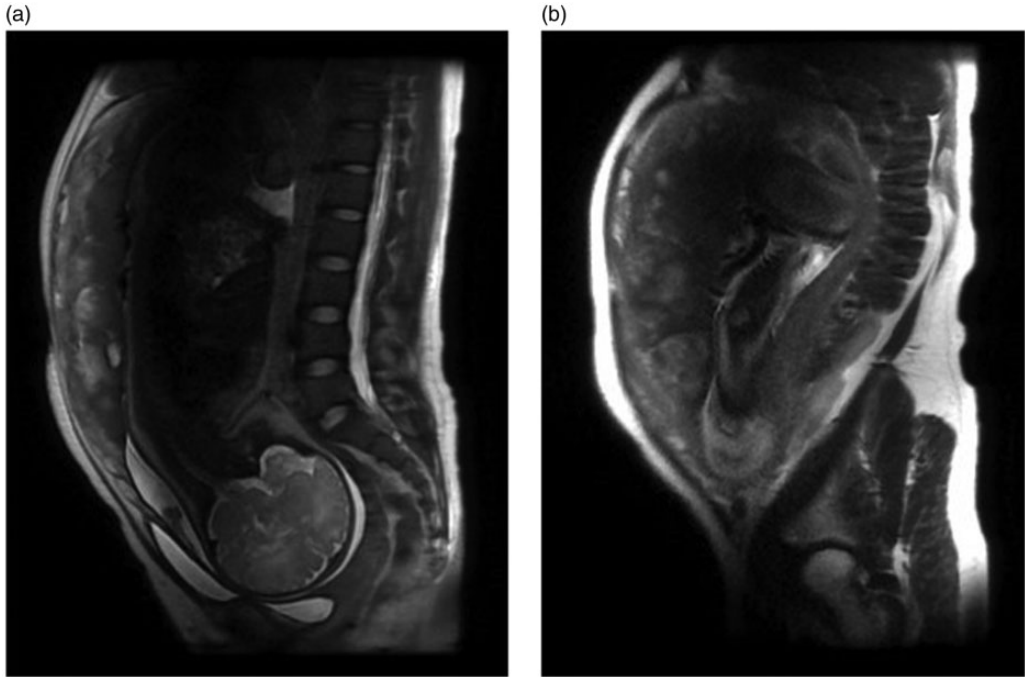


Figure 4. Pelvic magnetic resonance imaging shows irregular long T2 signal shadows on the left side of the uterus.

Discussion

For pregnancies with a hydatidiform mole, the probability of its recurrence is 1% to 2% and the risk of gestational trophoblastic neoplasm in a hydatidiform mole is 15% to 20%. Furthermore, the risk of trophoblastic neoplasms in a hydatidiform mole can reach up to 27% to 46%.¹ To eliminate interference of pregnancy on judgment of this condition, patients with a hydatidiform mole should avoid pregnancy again within 6 months after uterine curettage for a hydatidiform mole.⁶ In the present case, the patient had an unplanned pregnancy after persistent negativity of hCG and β -hCG levels for two times during follow-up of a hydatidiform mole, and the hCG values were higher than those during normal pregnancy. The patient had a strong will for fertility and demanded to continue the

pregnancy. Fluctuation of hCG levels during pregnancy were in accordance with that for a normal pregnancy, but the increase in hCG levels was 10 times higher than that for a normal pregnancy. Tuncer et al.⁷ retrospectively studied 44 patients who were pregnant again within 6 months after hCG levels were negative, and 75% of these patients successfully delivered without fetal malformations. A study conducted by Ngan et al.⁸ showed that a hydatidiform mole concomitant with a normal pregnancy was rare, but there were still approximately 40% to 60% of live births in these cases. The Professional Committee of Gynecological Oncology of the China Anti-Cancer Association⁴ proposed that when hCG levels are negative 6 months after a hydatidiform mole, the patient could become pregnant, even when an unplanned pregnancy occurs at less than 6 months during

follow-up. Therefore, as long as hCG levels are negative, termination of pregnancy should not be considered.

Generally, medical staff should take into account the prenatal diagnosis, fetal development, maternal complications, the trend of hCG levels, and the intention of pregnancy of patients. This information could provide reasonable opinions on continuing or terminating pregnancy, and formulating individualized diagnosis and treatment programs.⁹

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Declaration of conflicting interest

The authors declare that there is no conflict of interest.

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