

CASE REPORTS

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AN UNUSUAL CLINICAL COURSE AFTER MOLE EVACUATION: A CASE REPORT

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ABSTRACT

A 27-year-old woman evacuated a hydatidiform mole at 11 weeks of gestation. Her serum human chorionic gonadotropin (hCG) levels declined progressively but reached a plateau of 2–3 mIU/ml thereafter. The patient was treated with two courses of methotrexate, which did not affect her hCG levels. She refused further chemotherapy and, for more than one year, she was managed expectantly until a significant rise in her hCG titer. Fortunately, an unexpected pregnancy and subsequent missed abortion led to a spontaneous regression of her hCG levels.

Key Words: Hydatidiform mole, hCG, Persistent trophoblastic tumor

INTRODUCTION

It is sometimes very difficult to make the decision as to when to initiate chemotherapy to patients with a prolonged plateau at low levels of hCG after mole evacuation. Initiating chemotherapy too early may lead to unnecessary administration of drugs to a patient who does not have a persistent trophoblastic tumor. On the other hand, delaying chemotherapy can be associated with anxiety for the patient and stress for the physician. It also may result in an increased risk of metastatic disease or a requirement for more courses of chemotherapy.

Spontaneous regression of hCG levels is rare when they remain elevated for a prolonged period of time, and chemotherapy is usually required. This report describes an unusual case of spontaneous regression of serum hCG levels due to a missed abortion following prolonged hCG elevation after mole delivery.

CASE REPORT

A 27-year-old woman, gravida 3, para 2, presented at Nagoya City Higashi General Hospital with vaginal spotting for two days. Her past medical history was unremarkable. Her last menstrual period had been 5 weeks earlier with a previously regular 30-day cycle. She had a positive urine pregnancy test. Two weeks later, a transvaginal ultrasound scan showed two gestational sacs *in utero*. At 9 weeks' gestation, only one gestational sac without fetus was demonstrated. At

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11 weeks, a transabdominal pelvic ultrasound scan revealed no gestational sac but the typical appearance of a hydatidiform mole. The serum hCG level (HCG CTP TEST,¹⁾ Wako Junyaku Kogyo Co., Ltd., Osaka, Japan) was 240,000 mIU/ml. Uterine evacuation was performed and abundant vesicular tissue was obtained. This was histologically confirmed as a complete hydatidiform mole. A second evacuation of the uterus was performed one week later, and showed no residual molar tissue.

Serum hCG levels declined progressively over the following 5 months but reached a plateau of 2–3 mIU/ml thereafter (Fig. 1). At this time normal menstruation resumed. A chest X-ray was unremarkable. Neither transvaginal ultrasonography nor pelvic angiography detected any lesions in the uterus, but the patient was considered to have a nonmetastatic persistent gestational trophoblastic tumor (7 months after mole evacuation) and was treated with methotrexate, 0.4 mg/kg/day intramuscularly for 4 days, repeated every 14 days for two courses. However,

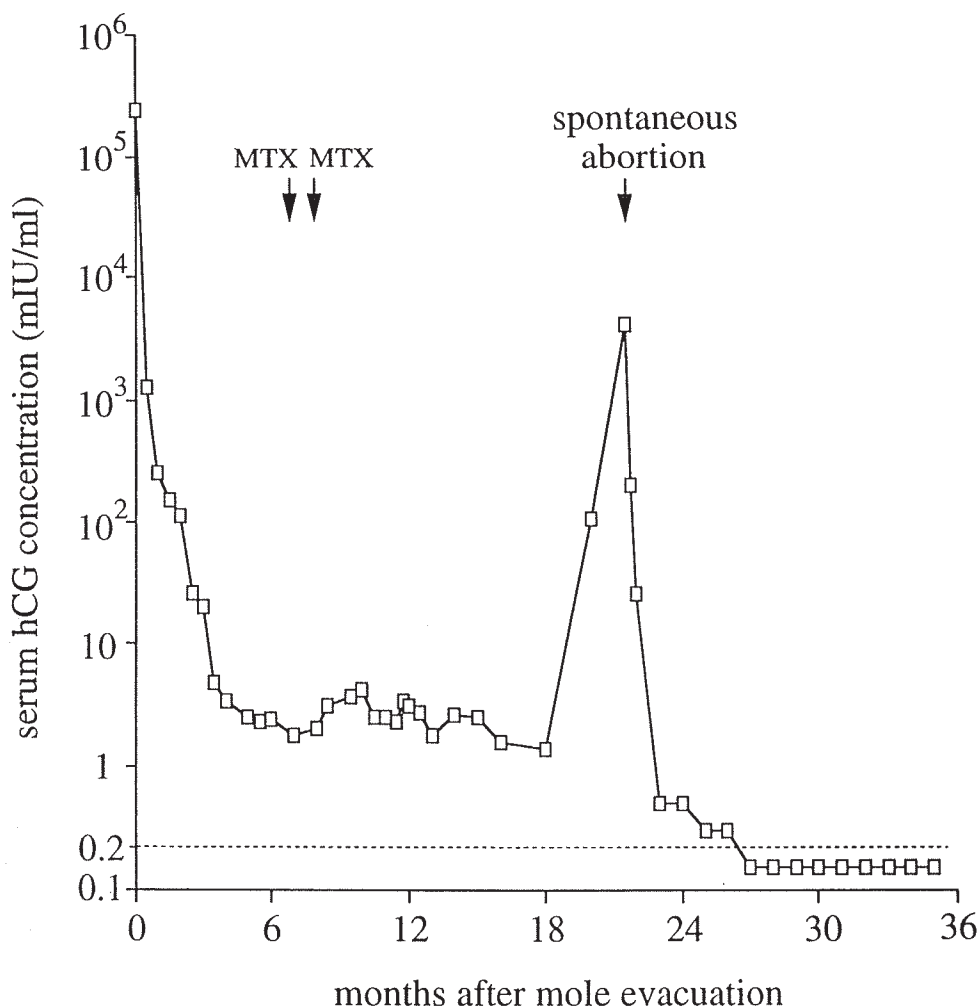


Fig. 1: Serum hCG levels following mole evacuation. The dotted line shows the detection limit of the assay. MTX: methotrexate

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hCG levels did not decrease, and she was referred to Nagoya University Hospital for further follow-up.

At the time of referral (10.5 months after mole evacuation), serum hCG was 2.5 mIU/ml. Serum levels of luteinizing hormone (LH) and follicle stimulating hormone (FSH) were not elevated (4.8 mIU/ml and 5.5 mIU/ml, respectively). Pelvic ultrasonography revealed no abnormal findings. Metastatic survey included a normal chest roentgenogram and normal computed tomography of the head, chest and liver. Since serum hCG levels remained at a plateau (2–3 mIU/ml) with subsequent monitoring and the patient refused chemotherapy, she was managed expectantly until a significant rise in hCG titer was seen. She was instructed to avoid conception during the follow-up period. However, her contraception efforts failed; a gestational sac without fetal heart beat was demonstrated in the uterus at 10 weeks' gestation (21 months after mole evacuation). Two days later, she presented with vaginal bleeding. No gestational sac was seen. Dilatation and curettage were performed and histology revealed villous and decidual tissue.

Eight weeks after the spontaneous abortion, serum hCG levels returned to the nonpregnant level (less than 1 mIU/ml), and decreased below the detection limit of the assay (0.2 mIU/ml) 6 months after the abortion (or 27 months after mole evacuation). During the two-year follow-up after complete regression of hCG titer, the patient has remained well.

DISCUSSION

It is generally agreed that a rise in hCG titer, the presence of metastases or the histologic diagnosis of choriocarcinoma warrant the initiation of chemotherapy after evacuation of a hydatidiform mole. There is, however, no consistent pattern in the decision criteria to make the diagnosis of nonmetastatic gestational trophoblastic disease on the basis of hCG values at a plateau, and the length of time of hCG plateau observation before therapy initiation varies widely even among physicians experienced in the management of trophoblastic tumors.²⁾ According to a report by Bagshawe *et al.*, 0.3% of 4205 patients had abnormal hCG values 30–32 weeks after mole evacuation, but did not require chemotherapy.³⁾ In the present case, methotrexate was administered 7 months after mole evacuation due to the plateauing of hCG titer, which did not result in regression of hCG levels. The assay for hCG monitoring (HCG CTP TEST) recognizes C-terminal peptide of hCG β -subunit which does not exist in LH β -subunit, making this assay highly specific for hCG β -subunit (less than 0.1% cross-reactivity with LH). The patient was not in a hypergonadotropic state, which ruled out a possible effect of hCG-like substance secreted from the hypophysis. Thus, it is reasonable to conclude that there occurred persistent retention of trophoblasts from the hydatidiform mole which were viable enough to secrete hCG and to be resistant to methotrexate but were not capable of proliferating rapidly and invading the myometrium. With this analysis in mind, after two courses of chemotherapy, we resumed an expectant policy until a significant rise of hCG titer was seen. Although prolonged waiting might lead to further drug-resistance, the patient could be safely observed for at least one year with this policy. This suggests that patient reliability is an important factor in the decision regarding whether to initiate chemotherapy or to continue observation.

Fortunately, the subsequent pregnancy before complete regression of hCG titer gave no growth-stimulating effect on the remaining trophoblasts, and it is likely that they were either shed at the time of the spontaneous abortion or underwent necrosis along with the change in uterine vasculature after the abortion. However, if the pregnancy had progressed until term, a persistent trophoblastic tumor coexisting with a viable pregnancy might have developed. In this

regard, this patient may have been lucky. In light of the foregoing, instructions regarding contraception should be strictly followed until complete regression of hCG titer.

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