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CASE REPORT

Laparoscopic management of a cornual ectopic pregnancy associated with persistant gestational throphoblastic disease: a case report

Ziya Gunenc · Banu Bingol · Narter Yesildaglar

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Abstract A 30-year-old woman underwent laparoscopy for diagnosis and treatment of ectopic pregnancy. A dark-red bulging mass was observed in the right uterine horn. Laparoscopic hysterotomy was performed. The histological examination revealed a hydatidiform mole, which was confirmed by DNA ploidy analysis showing triploidy (69 XXY) as apartial hydatidiform mole after the cytogenetic examination. On the third postoperative day, the thoracic computed tomography scan revealed punctuate lesions. These lesions disappeared after single-agent chemotherapy with methothrexate. To the best of our knowledge, this is the first case of cornual persistent gestational trophoblastic neoplasia managed by laparoscopic surgery.

Keywords Hydatidiform mole · Cornual pregnancy · Ectopic pregnancy

Introduction

Hydatidiform moles are abnormal gestations characterized by the presence of hydropic change affecting placental villi accompanied by trophoblastic proliferation. To date, 40 cases of hydatidiform mole within ectopic gestational tissue have been reported [1]. A hydatidiform mole located in the uterine horn as an ectopic pregnancy is extremely rare.

This report describes a case of cornual pregnancy associated with persistant gestational trophoblastic neoplasia, diagnosed and managed by laparoscopic surgery followed by chemotherapy.

Z. Gunenc · B. Bingol (✉) · N. Yesildaglar
Metropolitan Florence Nightingale Hospital,
Cemil Aslan Güder Sok, No: 8,
34349 Gayrettepe, Istanbul, Turkey
e-mail: banubingol1975@yahoo.com

Case report

A 30-year-old single woman, gravida 2, abortion 1, was admitted to our clinic with complaints of metrorrhagia. She had her last menses about 6 weeks before. Her initial serum beta human chorionic gonadotropin (beta-hCG) level was 6,580 mIU/ml. Transvaginal ultrasound showed an empty uterine cavity but a 2-cm mixed echogenic mass on the right side of the fundus. Dilatation and curettage were performed; however, no chorion or fetus was found.

Laparoscopy was performed in order to confirm and treat the ectopic pregnancy. No blood was found in the peritoneal cavity and the fallopian tubes and ovaries were bilaterally normal in appearance. A 2-cm dark-red bulging mass in the cornual region of the uterine fundus was observed. The myometrium surrounding the cornual ectopic pregnancy was thin (3–5 mm).

The lesion was first coagulated with bipolar forceps to prevent bleeding, and then a small incision was made with a needle tip cautery. Bleeding was controlled with bipolar forceps. An endoscopic bag was used to remove the specimen, which was sent for frozen section. The remaining gestational material was removed by suction irrigation and sent for histological examination. The site of the mass and the uterine cavity were not connected. Afterwards, the minor haemorrhages were controlled with bipolar coagulation and the incision was left open to heal. Microscopic examination of the frozen section showed hydropic villi and abnormal proliferation of trophoblasts.

The serum beta-hCG level was 11.688 mIU/ml on the first postoperative day, and thyroid function tests were

within normal limits. A thoracic computed tomography (CT) scan showed very small punctuate lesions, suggesting metastasis, and a normal CT scan of the brain was obtained on the third postoperative day. Abdominal and pelvic ultrasonography demonstrated no abnormality postoperatively. The serum beta-hCG level was 24,880 mIU/ml on the third postoperative day. Laboratory findings on the third postoperative day indicated low-risk persistant gestational trophoblastic disease, and therefore we decided to initiate single-agent chemotherapy [methotrexate (MTX), 50 mg i.m., days 1–3–5–7; folinic acid, 5 mg i.m., days 2–4–6–8]. The patient received four courses of MTX at 7-day intervals.

Beta-hCG level dropped to 14,880 mIU/ml at the end of the first MTX course; falling subsequently to 7,860 mIU/ml, 2,080 mIU/ml, and finally <5 mIU/ml at the end of fourth course. The histological examination revealed ahydatidiform mole, which was confirmed by DNA ploidy image analysis.

After the patient was discharged, she was called back for weekly beta-hCG follow-ups. Three consecutive normal values were obtained and thereafter, monthly levels were recorded. One year after treatment, the patient was in good health and taking oral contraceptive pills.

Discussion

The diagnosis of a hydatidiform mole depends upon the correlation of clinical and pathological features, including a persistently elevated beta-hCG, histological features and DNA flow cytometric analysis to determine ploidy. Nonmolar hydropic abortions are common and it is important to distinguish molar pregnancies from nonmolar hydropic changes, because molar pregnancies can cause persistent trophoblastic disease. In cases of doubt regarding the type of molar pregnancy, DNA flow cytometric analysis is valuable. It must be emphasized that DNA flow cytometry is the only method in distinguishing a diploid mole from a triploid mole once the diagnosis of molar pregnancy has been confirmed histologically [1]. In our case, the histological examination revealed a hydatidiform mole, which was confirmed by DNA ploidy analysis revealing triploidy (69, XXY) after the cytogenetic examination.

Cornual pregnancy has traditionally been treated by either cornual excision or hysterotomy through a laparatomy [2, 3]. The current tendency is to treat hemodynamically stable patients affected by ectopic pregnancy by means of medical treatment or conservative laparoscopy [4].

In our case, we failed to diagnose a trophoblastic disease accompanying cornual pregnancy; preoperative transvaginal sonography was not helpful and preoperative beta-hCG titers were not indicative.

We treated the patient by laparoscopic hysterotomy. Laparoscopy is helpful for the diagnosis of cornual pregnancy associated with molar gestation and the diagnosis can be confirmed by frozen section.

A thoracic CT scan showed punctuate lesions in the third postoperative day. However, these were thought to be occult metastases not previously detected. The follow-up of beta-hCG levels revealed that it was a persistent trophoblastic neoplasia and we initiated MTX after the operation.

Since gestational trophoblastic disease can be seen in a wide spectrum of clinical conditions, it should be regarded as a systematic disorder because of its potential of metastasis.

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