

Metastatic choriocarcinoma in amenorrheic woman following normal vaginal delivery

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A B S T R A C T

Gestational choriocarcinoma usually occurs following an intrauterine pregnancy. We report a case of metastatic choriocarcinoma to the left kidney and lungs with long term intermittent amenorrhea and vaginal bleeding after a normal vaginal delivery. A 43 year old rural woman presented with three years intermittent amenorrhea and vaginal bleeding following normal vaginal delivery. She also complained of gross hematuria and left flank pain and had a rising titer of serum β -hCG. Pathologic examination of endometrial curettage specimen revealed choriocarcinoma. Ultrasound revealed enlarged uterus involved by an irregular mass with heterogenous echo pattern and extensive myometrial invasion. A mass with similar echo pattern was also evident in the left kidney. Computerized tomography confirmed the intrauterine mass and involvement of the left kidney. On chest X ray, metastatic nodules were seen in both lungs and in the left retrocardiac space. The patient underwent chemotherapy with EMA-CO regimen (etoposide, methotrexate, actinomycin D, cyclophosphamide, and vincristine/oncovine). During chemotherapy, she became pancytopenic and febrile. This condition was successfully managed with G-CSF, leukovorin and antibiotics. The patient is now well and still under the chemotherapy. Her serum β -hCG level has fell to 6 IU/ml.

Key words: choriocarcinoma, amenorrhea, renal metastasis.

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Introduction

Gestational trophoblastic disease (GTD) encompasses a spectrum of benign and malignant diseases associated with pregnancy among which choriocarcinoma is the most malignant. Gestational choriocarcinoma usually occurs following an intrauterine pregnancy. Although this condition most frequently originates from a molar pregnancy, it may also occur following an abortion or a normal delivery. Patients with intrauterine choriocarcinoma frequently present with abnormal uterine bleeding¹. Less commonly, they may present with amenorrhea and even unusual clinical presentations such as acute abdomen resulting from spontaneous uterine perforation, hematuria, hemothorax, or fetomaternal hemorrhage¹⁻⁵. Herein, we report a case of choriocarcinoma presenting with intermittent amenorrhea and vaginal bleeding followed by gross hematuria and left flank pain after a normal vaginal delivery.

Case Report

A 43 year old rural woman (G7L6EP1) presented with intermittent amenorrhea and vaginal bleeding since her last normal vaginal delivery three years ago. During this period, she had been really mis-managed in outpatient visits and received useless interventions such as cervical dilatation to improve cervical stenosis. Serum β -hCG level had not been measured even once. Later, the patient complained of a persistent vaginal bleeding for about two months as well as gross hematuria and left flank pain. The patient underwent endometrial curettage. On microscopic examination of the curettage material, sheets of cytotrophoblasts and syncytiotrophoblasts were seen growing in a plexiform pattern in the background of hemorrhage and necrosis. The trophoblastic cells showed nuclear atypia and mitotic activity (figures 1). No chorionic villi were evident.

The patient was then referred to our center for treatment of choriocarcinoma.

On physical examination, the uterus was large and the patient had tenderness on her left flank. Serum β -hCG level was 1500 μ IU/ml at the time of admission and rised to 10000 μ IU/ml before beginning the treatment. Abdominal and pelvic sonography revealed a large uterine mass with myometrial invasion and heterogenous echo pattern measuring 57 x 36 mm in the fundus and body. A 126 x 82 mm mass lesion was also seen in the middle pole of the left kidney. Computerized tomography of the abdominopelvis showed a large hemorrhagic mass in the left kidney confined to the fascia gerota (figure 2). Two enlarged lymph nodes were also evident in the left renal hilus. Metastases to the liver and spleen were absent. On chest X-ray, multiple nodules were seen in both lungs and in the left retrocardiac space (figure 3). Upper and lower gastrointestinal endoscopy were normal. Brain imaging revealed no brain metastasis. According to World Health Organization Prognostic Index for gestational trophoblastic disease, our patient fitted into the high risk category with a total score of at least 13 (age score: 1, antecedent pregnancy: 2, interval: 4, β -hCG: 1, largest tumor: 2, site of metastases: 1, number of metastases identified: 2)⁶. Chemotherapy with standard EMA-CO regimen (etoposide, methotrexate, actinomycin D, cyclophosphamide, and vincristine/ovcovine) was planned for the patient. Her general status was weekly checked by complete blood count, serum BUN and creatinine and liver function tests. Serum β -hCG level was also measured weekly. After receiving five courses of chemotherapy, the patient became febrile and pancytopenic. This condition was successfully managed with G-CSF, leukovorin and antibiotics. It is now six months that the patient is still under chemotherapy. Her last serum β -hCG level has been 6 μ IU/ml.

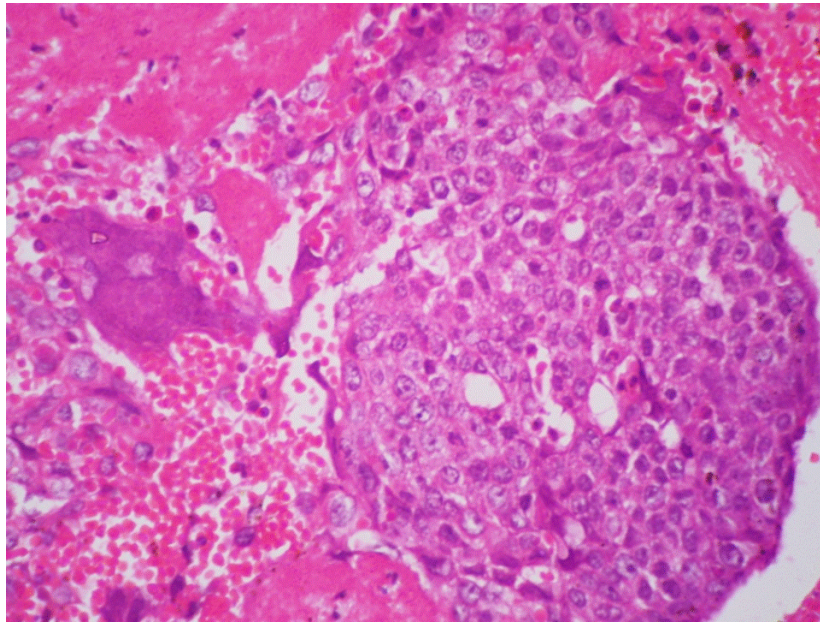


Fig.1: Sheets of cytotrophoblasts and syncytiotrophoblasts growing in a plexiform pattern in the background of hemorrhage and necrosis (H & E staining, x 100)

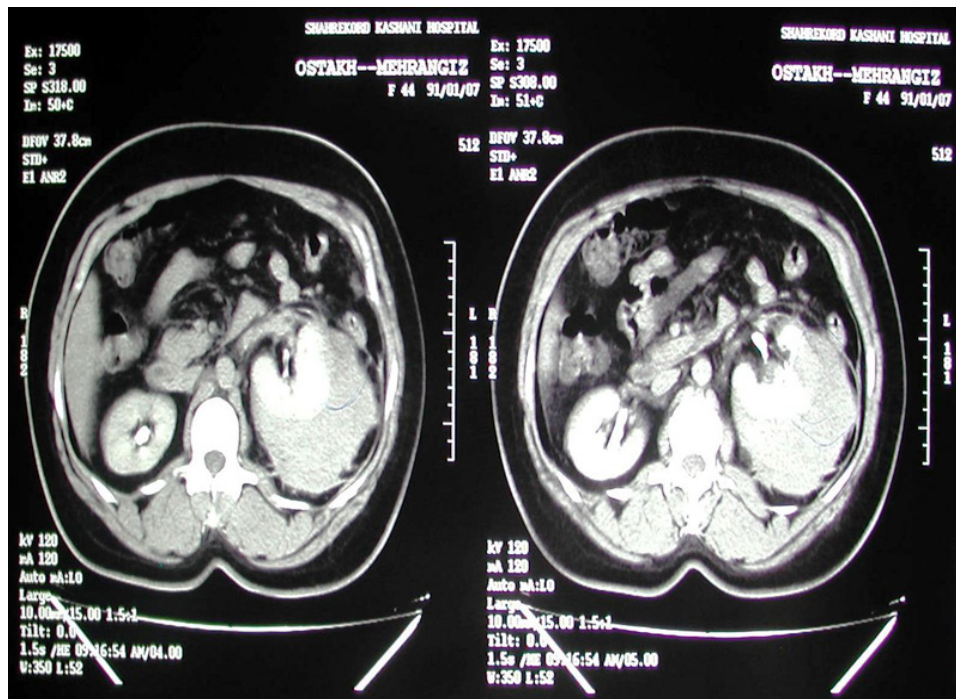


Fig.2: Abdominopelvic CT scan showing left renal mass

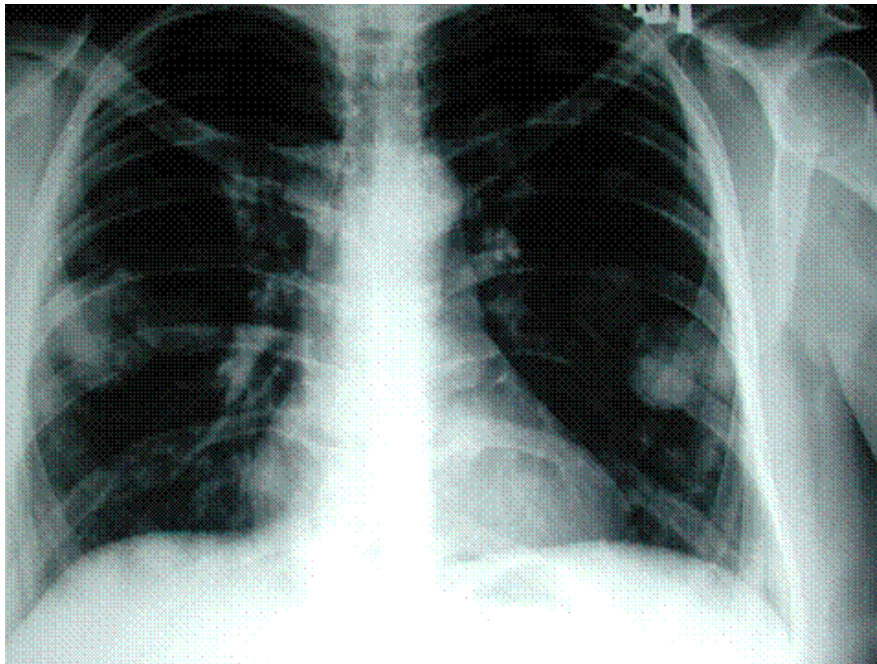


Fig.3: Chest X- ray showing bilateral nodules in the lungs

Discussion

Choriocarcinoma is divided into gestational and nongestational types. Gestational choriocarcinoma is most commonly seen in women of reproductive age, generally within the first year after a molar or nonmolar pregnancy. About 30 percent of the patients with choriocarcinoma initially present with metastatic disease and lung is the most common site of metastatic involvement^{1,7}. Renal metastasis may result in oliguria, hematuria or massive retroperitoneal hemorrhage⁸. Renal metastases are almost invariably preceded by pulmonary metastases. This seems to be the result of dissemination of tumor cells from lung metastasis through the general circulation⁸.

The case we reported presented with intermittent amenorrhea and vaginal bleeding followed by

left-sided flank pain and gross hematuria. Although 50 percent of gestational choriocarcinomas are preceded by a molar pregnancy, our patient lacked such a history and developed choriocarcinoma following a normal vaginal delivery.

Patients with high risk metastatic gestational trophoblastic neoplasia should be first treated by multiagent chemotherapy. Standard EMA/CO regimen is highly effective for treatment of high-risk gestational trophoblastic neoplasia⁹. Wang et al have reviewed 448 cases of choriocarcinoma admitted in their center in a 30 year period. The incidence of renal metastasis was 6.9% in the studied population. These renal metastases were found to be very sensitive to chemotherapy. This may be attributable to the high drug concentration in the renal tissue during their excretion⁸.

Adjuvant surgical procedures may be indicated in chemotherapy-resistant high-risk gestational trophoblastic neoplasia. These procedures especially include hysterectomy and pulmonary resection of chemotherapy resistant foci of choriocarcinoma in the lung. Surgical intervention may also become necessary to control hemorrhage¹⁰.

In conclusion, gestational trophoblastic diseases should be considered in the differential diagnosis of intermittent amenorrhea and vaginal bleeding in patients of reproductive age with a history of prior pregnancy. Moreover, symptoms related to metastatic involvement such as hematuria and flank pain may be among the first clinical manifestations of choriocarcinoma. Standard EMA/CO regimen is usually the choice treatment in patients with high-risk gestational trophoblastic neoplasia.

References

1. Saha K, Basuthakur S, Jash D, Bandyopadhyay A. Gestational choriocarcinoma presenting as hemothorax. *Indian J Med Sci* 2010 May; 64 (5):237-40.
2. Kairi-Vassilatou E, Papakonstantinou K, Grapsa D, Kondi-Paphiti A, Hasiakos D. Primary gestational choriocarcinoma of the uterine cervix. Report of a case and review of the literature. *Int J Gynecol Cancer* 2007 Jul-Aug; 17(4):921-5.
3. Liberis V, Bouchlariotou S, Ammari A, Psillaki A, Ntati-dou M, Sivridis E, et al. Acute abdomen as initial presentation of gestational choriocarcinoma. *Arch Gynecol Obstet*. 2009 Nov; 280(5):859-62.
4. Zajaczkowski T, Straube W, Kissler W, Schumacher T, de Dycker RP. Spontaneous kidney rupture. *Urologe A* 1990 Sep; 29 (5):256-60.
5. Touboul C, Faivre E, Boithias C, Mass AE, Senat MV, Fernandez H, et al. Fetomaternal hemorrhage caused by intraplacental choriocarcinoma. *J Gynecol Obstet Biol Reprod (Paris)* 2010 Apr; 39(2):156-8.
6. Rosai J. *Rosai and Ackerman's surgical pathology*. 10th ed. Edinburgh: Mosby, 2011:1644.
7. Sierra-Bergua B, Sánchez-Martel M, Cabrerizo-García JL, Sanjoaquin-Conde I. Choriocarcinoma with pulmonary and cerebral metastases. *Singapore Med J* 2008 Oct; 49 (10):e286-8.
8. Wang YE, Song HZ, Yang XY, Dong SY, Gan N. Renal metastasis of choriocarcinoma. A clinicopathological study of 31 cases. *Chin Med J (Engl)* 1991 Sep; 104 (9): 716-20.
9. Turan T, Karacay O, Tulunay G, Boran N, Koc S, Bozok S, et al. Results with EMA/CO (etoposide, methotrexate, actinomycin D, cyclophosphamide, vincristine) chemotherapy in gestational trophoblastic neoplasia. *Int J Gynecol Cancer* 2006 May-Jun; 16 (3): 1432-8.
10. Lurain JR, Singh DK, Schink JC. Role of surgery in the management of high-risk gestational trophoblastic neoplasia. *J Reprod Med* 2006 Oct; 51 (10): 773-6.