

Metastatic Gestational Ovarian Choriocarcinoma: case report

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Abstract: *Gestational ovarian choriocarcinoma is an extremely rare and highly aggressive tumor. Preoperative diagnosis of extrauterine choriocarcinoma is difficult due to its nonspecific clinical presentation and similarity to ectopic pregnancy. We present the case of a 25-year-old woman who was admitted to our emergency department with pelvic pain, vaginal bleeding, and amenorrhea. The patient underwent emergency laparotomy. The discovery of a suspicious ovarian mass led to an adnexectomy. The histopathological results were inconclusive. Then, in view of persistent intermittent bleeding with an increasing hCG level and no evidence on ultrasound, a CT scan revealed secondary pulmonary lesions. A lung biopsy confirmed the diagnosis of gestational choriocarcinoma. It was classified as FIGO stage III and high risk according to the FIGO classification, and the patient underwent multi-agent chemotherapy without major complications and with favorable clinical and biological progression. We conclude that, due to the rarity of this entity, preoperative differentiation between ovarian ectopic pregnancy and ovarian choriocarcinoma is extremely difficult. Diagnosis is based on pathological examination and bHCG level kinetics. Treatment involves chemotherapy adapted to the FIGO stage and risk.*

KEYWORDS: gestational trophoblastic disease; ovarian choriocarcinoma; high-risk gestational trophoblastic neoplasia; ectopic pregnancy, chemotherapy

INTRODUCTION

Gestational trophoblastic disease (GTD) is a group of diseases associated with pregnancies that involve abnormal development of trophoblastic cells. GTD includes hydatidiform moles, which can continue to develop into gestational trophoblastic neoplasms (GTN), such as choriocarcinoma (CC). Gestational choriocarcinoma is a rare type of fast-growing cancer that can develop from a hydatidiform mole, other normal pregnancies, or other gestational events such as ectopic pregnancies. In most cases, it is a curable disease. However, it can metastasize to other parts of the body. Here we report a case of gestational CC that occurred following an ectopic pregnancy.

CLINICAL CASE: PATIENT AND OBSERVATION

A 25-year-old female patient with no significant medical history, presenting amenorrhea for 5 weeks, initially admitted for treatment of hemorrhagic shock due to a suspected ruptured ectopic pregnancy.

The initial examination found the patient conscious, tachycardic at 100 bpm, hypotensive at 100/60 mmHg, with discolored conjunctiva and moderate metrorrhagia on gynecological examination. Pelvic ultrasound revealed an empty uterus and an irregular, heterogeneous image measuring 8x7cm in the left lateral uterine region, with a large amount of peritoneal effusion reaching the Morison's space. Laboratory tests showed HCG at 9220mIU/L and hemoglobin at 7g/l.

The patient underwent emergency exploratory laparotomy with a transfusion of 2CG and was stabilised.

During exploration: discovery of a large amount of hemoperitoneum, 800 ml aspirated and a polylobular and hemorrhagic mass taking up the left ovary, measuring 8 cm.

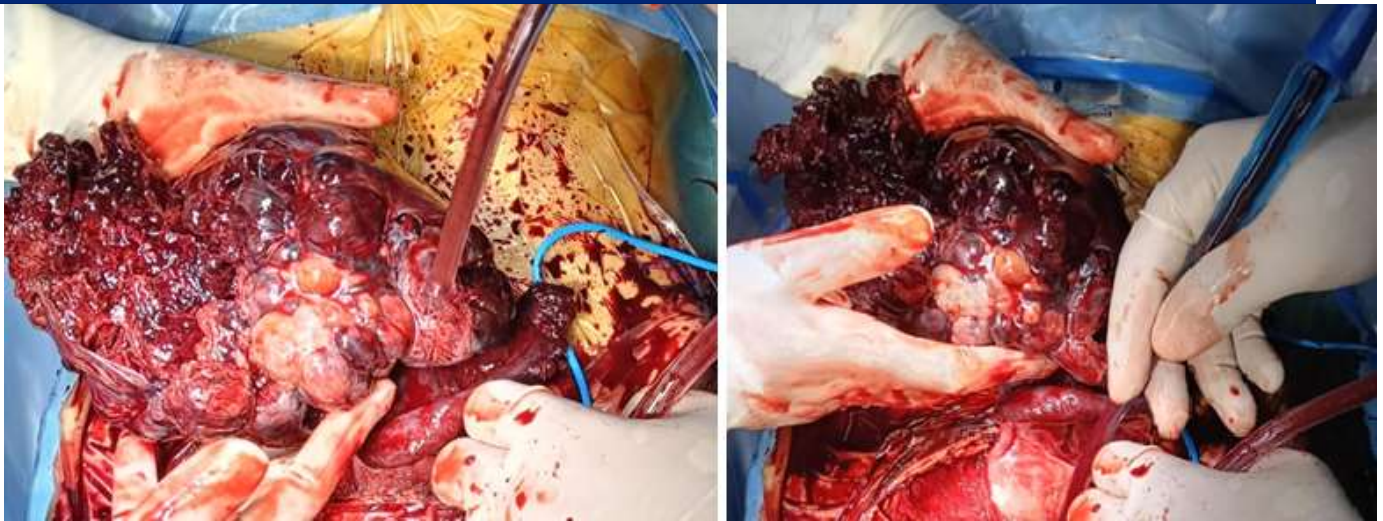


Figure 1 : Intraoperative image showing a left ovarian mass

Given the suspicious appearance of malignancy of this ovarian mass, an adnexectomy was performed. Anatomopathological study of the specimen reviewed twice: Signs of pregnancy. Given this inconclusive result, we performed a bHCG kinetic test:

Dates	05/07/2025	04/07/2025	03/07/2025
bHCG (mUI/ml)	7205,5	10335	19227,8

We note a clear decrease in the post-operative bHCG level from 19,227.8 mIU/mL to 7,205.5 mIU/mL, but then the patient was lost to follow-up for four months before returning to the gynaecological emergency department with moderate metrorrhagia. A pelvic ultrasound revealed moderate effusion and a bHCG level of 7395.2 mIU/ml. An exploratory laparoscopy was performed urgently, revealing serous effusion, no abnormalities in the right adnexa or left horn, and no trophoblastic implantation in the abdominal cavity.

We continued to monitor bHCG kinetics:

Dates	29/11/2025	27/11/2025	24/11/2025	22/11/2025	20/11/2025	17/11/2025
bHCG (mUI/ml)	9093,4	9803,6	9181,3	9220,2	7742,5	7395,2

Cerebro-thoraco-abdominal-pelvic scan found:

- Multiple pulmonary parenchymal nodules and micronodules, consistent with secondary lesions
- Postoperative changes in the abdominal-pelvic region
- No other abnormalities in the TAP regions

Chest X-ray revealed 8-10 pulmonary nodules

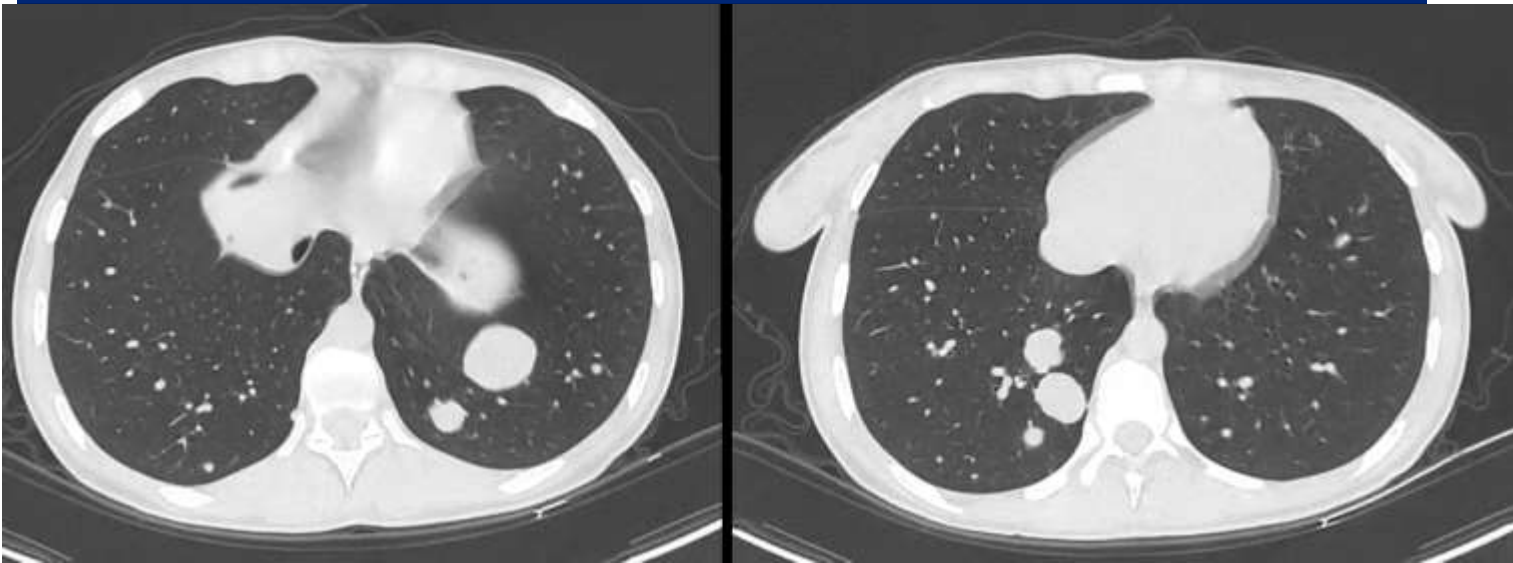


Figure 2 : Scannographic images showing lung metastases



Figure 3 : X-ray images showing lung metastases

CT-guided biopsy of pulmonary nodule demonstrated histological and immunohistochemical features of choriocarcinoma.

Multidisciplinary Consultation Meeting decision: EMA-CO (etoposide, methotrexate, actinomycine, and cyclophosphamide.) chemotherapy protocol for high-risk TTG, FIGO score 8, FIGO stage III.

Kinetic of bHCG levels after the start of chemotherapy:

Date	23/02/2026	30/01/2026	20/01/2026	13/01/2026	08/12/2025
bHCG (mIU/ml)	1347,6	2878,9	5900,1	18252,8	7395



Figure 4: Graph showing the evolution of bHCG levels before and after the start of chemotherapy

DISCUSSION:

Gestational trophoblastic disease complicates approximately 1 to 2 pregnancies per 1,000. [3] The most common form is a partial or complete hydatidiform mole diagnosed during the first trimester or early second trimester, which resolves with uterine evacuation. Disturbed kinetics of quantitative b-hCG levels after appropriate treatment may indicate malignant transformation into GTN. Choriocarcinoma is an aggressive form of GTN that can occur after any type of previous pregnancy.

GTN is an uncommon malignancy that is classified by anatomical stage and prognosis, a FIGO system unique among gynecologic cancers.

Anatomical staging (FIGO 2000) [6] :

- Stage I: Disease confined to the uterus
- Stage II: Gestational trophoblastic tumor extending beyond the uterus but confined to the genital tract (adnexa, vagina, broad ligaments).
- Stage III: Gestational trophoblastic tumor spread to the lungs, with or without known involvement of the genital tract.
- Stage IV: Any other metastatic site.

Prognostic classification (FIGO 2000) [6] :

Score	0	1	2	4
Age (years old)	<40	≥40		
Previous pregnancy	Hydatiform mole	Miscarriage	Full-term pregnancy	
Time since previous pregnancy (months)	<4	≥4 ;<7	≥7, <13	≥13

Largest tumor size		3-5cm	≥ 5 cm	
hCG level before treatment (mIU/ml)	$<10^3$	$\geq 10^3, < 10^4$	$\geq 10^4, < 10^5$	$\geq 10^5$
Metastatic site(s)	Aucun, Lungs	Spleen, Kidney	Bowel, Peritoneum	Brain, Liver
Number of metastases**	0	1-4	5-8	>8
Failure of previous chemotherapy (CMT)			Mono CMT	PloyCMT
** Only lung metastases visible on standard chest X-rays are counted				

One-quarter of CC cases occur after a normal pregnancy, with poorer outcomes when symptoms suggest liver or brain metastases. These patients have lower remission rates and are therefore assigned unfavorable variables in the FIGO prognostic score. [1-2] Metastatic gestational choriocarcinomas coexisting with a full-term pregnancy have been rarely reported and tend to have higher prognostic scores and historically high mortality rates for both the mother and fetus. [4]

Patients with GTN with a prognostic score greater than or equal to 7 are classified as high risk and require multiagent chemotherapy. More than one-third of those with a score greater than or equal to 13 die prematurely as a result of hemorrhage related to rapid tumor response. The use of a low-dose induction protocol of etoposide and cisplatin prior to conventional treatment with etoposide, methotrexate, and dactinomycin alternating weekly with cyclophosphamide and vincristine has reduced premature death rates by 90%. [4]

Malovrh's study [8] is a review of the literature on 12 cases of gestational ovarian choriocarcinoma. Five women were initially treated for suspected ectopic pregnancy. The other seven cases were already suspected to be ovarian tumors prior to surgery. This shows that ectopic pregnancy is the main differential diagnosis and that the presentation is very similar to that of ectopic choriocarcinoma. [7] Only one recurrence was reported in 13 cases (7.7%), confirming the excellent prognosis after standard chemotherapy treatment [9].

Our study shows that after polychemotherapy, there is a good clinical and biological outcome with a 92% decrease in bHCG levels, and treatment is still ongoing.

CONCLUSION :

The diagnosis of gestational choriocarcinoma is difficult, especially if it occurs in an ectopic pregnancy. In this situation, it is usually diagnosed after surgery. Management is based primarily on the early detection and chemotherapy. High-risk gestational trophoblastic neoplasia is associated with early death due to treatment-induced hemorrhage. The use of a low-dose induction protocol reduces this risk tenfold by decreasing tumor mass before the start of conventional chemotherapy. The prognosis reported after polychemotherapy is excellent.

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6. Référentiel Maladie Trophoblastique Gestationnelle, Môle Hydatiforme, Choriocarcinome, Tumeurs

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