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METASTATIC GESTATIONAL TROPHOBLASTIC NEOPLASIA PRESENTING WITH GASTROINTESTINAL HEMORRHAGE AT THE NATIONAL HOSPITAL OF OBSTETRICS AND GYNECOLOGY – A RARE CASE REPORT

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ABSTRACT

Background: Gastrointestinal metastasis of gestational trophoblastic neoplasia (GTN) is a rare complication and poses a direct threat to life.

Case Presentation: A 53-year-old woman presented with persistent gastrointestinal bleeding due to small bowel intussusception. Serum β-hCG was markedly elevated at 392,406 IU/L. Histopathology and immunohistochemistry confirmed metastatic GTN with multi-organ involvement. The patient was treated initially with low-dose EP chemotherapy followed by EMA-CO chemotherapy, achieving good clinical response and rapid decline of β-hCG levels.

Conclusion: Early β-hCG testing and immunohistochemistry are essential for diagnosis of metastatic lesions of unknown origin in women. Initial low-dose chemotherapy may safely control life-threatening complications in high-risk GTN patients.

Keywords: Gestational trophoblastic neoplasia, gastrointestinal bleeding, choriocarcinoma, β-hCG.

1. INTRODUCTION

Gestational trophoblastic neoplasia (GTN) is a malignant trophoblastic disease comprising four pathological entities: invasive mole, choriocarcinoma, placental site trophoblastic tumor, and epithelioid trophoblastic tumor. Choriocarcinoma is an extremely aggressive form characterized by marked vascular invasion and early hematogenous metastasis. The most common metastatic sites are the lungs, followed by the vagina, brain, and liver. Gastrointestinal metastasis, especially to the small intestine, accounts for less than 5% of cases and often presents as acute abdominal emergencies such as hemorrhage or bowel perforation. These clinical manifestations frequently delay diagnosis because symptoms are atypical and can easily be mistaken for other gastrointestinal surgical diseases [1].

2.SUBJECTS AND METHODS

We report a rare case of metastatic gestational trophoblastic neoplasia with multi-organ involvement causing gastrointestinal hemorrhage, treated at the Gynecologic Oncology Department of the National Hospital of Obstetrics and Gynecology.

3.CASE REPORT

3.1. General Information

Female patient, Dang Thi S., 53 years old, from Bach Xa Commune, Tuyen Quang Province.

3.2. Medical History and Disease Course

The patient had a gravida/para status of 2032 and had two previous vaginal deliveries.

3.3. September 2025

The patient was admitted to Hanoi Medical University Hospital with a diagnosis of intracerebral hemorrhage. Imaging revealed rupture of a left middle cerebral artery aneurysm, and she underwent surgical clipping of the aneurysm neck with hematoma evacuation. No focal neurological deficits remained postoperatively.

Following neurosurgery, a mass lesion in the upper and middle lobes of the right lung was incidentally detected on chest radiography but was not treated at that time.

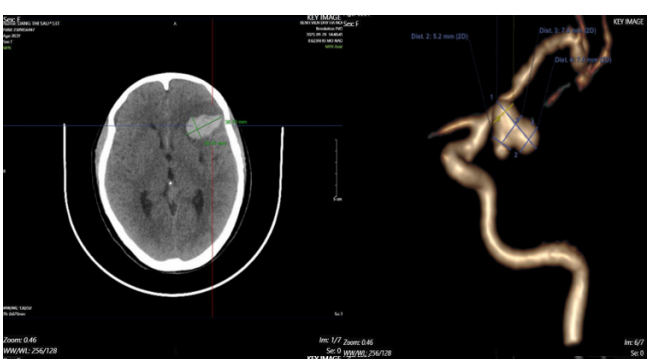


Figure 1. Brain CT scan showing intracerebral hemorrhage in September 2025.

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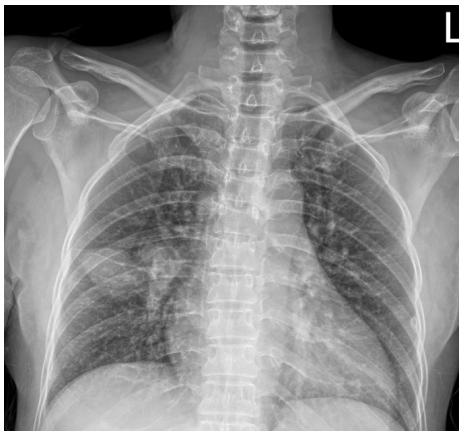


Figure 2. Chest X-ray demonstrating nodular opacities in the upper and middle lobes of the right lung in September 2025.

3.4. Gastrointestinal Complication

Two months after brain surgery, the patient developed gross hematochezia. On November 7, 2025, she was admitted emergently with small bowel intussusception. Surgical exploration identified a tumor located approximately 2 meters from the ileocecal junction, acting as the lead point for intussusception. Segmental small bowel resection with end-to-end anastomosis was performed.



Figure 3. Abdominal CT scan confirming small bowel intussusception in November 2025.

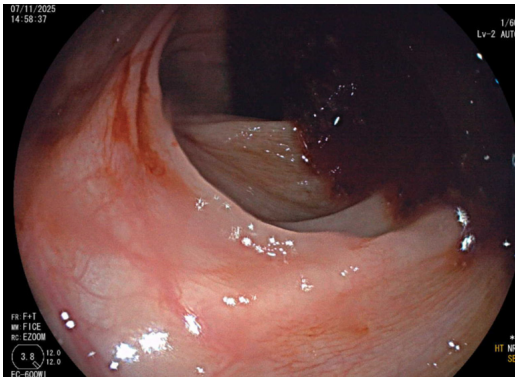


Figure 4. Gastrointestinal endoscopy showing blood within the small intestine in November 2025.

Repeat chest CT demonstrated enlargement of the right lung mass compared with imaging obtained in September. In addition, the patient developed hematuria. Cystoscopy revealed blood clots within the bladder, while urinary tract CT showed a vascularized mass lesion at the lower third of the left kidney.



Figure 5. Chest CT showing enlargement of the right lung lesion in November 2025 and urinary tract CT identifying a renal mass associated with hematuria.

Histopathological examination revealed invasive malignant epithelial tumor cells with large hyperchromatic nuclei arranged in clusters. Immunohistochemistry demonstrated positivity for CK7, CD68 (multinucleated giant cells), alpha-AFP, and PLAP, while CK20, SATB2, TTF1, Napsin A, PAX8, WT1, SALL4, and CD30 were negative. Combined with the markedly elevated serum β-hCG level of 392,406 IU/L, the patient was diagnosed with metastatic choriocarcinoma involving multiple organs (brain, lungs, small intestine, and uterus).

Immediately after the pathological diagnosis was established, the patient was transferred to the National Hospital of Obstetrics and Gynecology. She was admitted to the Gynecologic Oncology Department on November 27, 2025, in stable condition. Physical examination revealed an alert patient with stable hemodynamics. The abdomen was soft and non-distended. However, persistent loose brown stools mixed with mucus continued 1–2 times daily despite bowel surgery three weeks earlier. Gynecological examination showed no vaginal bleeding, although the uterus was enlarged.

Laboratory evaluation demonstrated persistently elevated β-hCG levels at 392,406 IU/L. Pelvic ultrasound identified two heterogeneous hypervascular lesions at the lower uterine segment and internal cervical os, measuring 22 × 27 mm and 24 × 16 mm, respectively.

Because recurrent intussusception or ongoing gastrointestinal bleeding due to metastatic invasion was suspected, consultation with gastrointestinal surgeons was obtained; however, no surgical intervention was indicated. Based on FIGO stage IV disease and the WHO prognostic scoring system, systemic chemotherapy was initiated.

3.5. Treatment consisted of two major phases:

Phase 1: Initial Chemotherapy

Because the patient was physically debilitated after two major surgeries (neurosurgical and gastrointest inal), with ongoing gastrointestinal bleeding and anemia, low-dose EP chemotherapy (etoposide and cisplatin) was selected to reduce tumor burden while minimizing acute toxicities. The patient completed three cycles of this regi-men. During treatment, supportive care included parenteral nutrition, blood transfusions, and palliative management.

Phase 2: Intensified Chemotherapy

After three cycles of EP, clinical improvement was observed, and gastrointestinal bleeding was well controlled. However, β-hCG levels remained elevated, and the risk of recurrence persisted. Multidisciplinary consultation

recommended escalation to the EMA-CO regimen (etoposide, methotrexate, and dactinomycin alternating with cyclophosphamide and vincristine). The patient is currently receiving the third cycle of EMA-CO chemotherapy.

Following the third EMA-CO cycle, the patient remained alert and clinically stable. Both clinical and laboratory findings improved progressively, accompanied by a gradual decline in β-hCG levels.

Table 1. Changes in serum β-hCG levels during treatment.

Treatment Time Point	Clinical Status	β-hCG Level (IU/L)
At admission (27/11/2025)	Post-bowel surgery, persistent hematochezia	392,406
After low-dose EP cycle 1	Gradual improvement in general condition	382,957
After low-dose EP cycle 2	Resolution of hematochezia	108,544
After low-dose EP cycle 3	Stable condition, preparing for EMA-CO	795
After EMA-CO cycle 1	Stable	105
After EMA-CO cycle 2	Stable	29
After EMA-CO cycle 3	Stable	8

4.DISCUSSION

Choriocarcinoma is an extremely malignant subtype of gestational trophoblastic neoplasia characterized by aggressive vascular invasion and early hematogenous dissemination. Although pulmonary and vaginal metastases are most common, gastrointestinal involvement is particularly rare, accounting for only 2–5% of cases [2], [3].

In the present case, the patient's age (53 years) represented a major diagnostic challenge. According to West et al. (2023), gestational choriocarcinoma in perimenopausal or postmenopausal women is frequently diagnosed late because of atypical clinical manifestations and reduced clinical suspicion for obstetric disease in this age group [4]. The patient's initial presentation with neurological symptoms and surgical treatment for a cerebral aneurysm in September 2025 is especially noteworthy. Chang et al. (2008) reported that cerebral metastases from choriocarcinoma may erode vascular walls, resulting in pseudoaneurysm formation and massive intracerebral hemorrhage, radiologically mimicking isolated vascular aneurysms [5]. This explains why the initial diagnostic focus was on neurosurgical pathology while the underlying uterine malignancy remained undetected.

The metastatic lesion in the small intestine manifested as two severe surgical complications: intussusception and persistent gastrointestinal bleeding. This finding is consistent with the report by Sayani et al. (2018), in which metastatic choriocarcinoma lesions originated in the submucosa and subsequently protruded into the intestinal lumen, acting as a mechanical lead point for intussusception [6].

A key biological characteristic of trophoblastic cells is their ability to destroy vascular structures in target organs to establish tumor circulation. This mechanism explains the patient's prolonged gross gastrointestinal bleeding. Persistent hematochezia even after resection of the involved bowel segment suggested the presence of additional microscopic metastatic foci scattered throughout the gastrointestinal tract, a feature commonly observed in FIGO stage IV disease [3].

With a serum β-hCG level of 392,406 IU/L, the diagnosis of trophoblastic disease was strongly supported. Nevertheless, immunohistochemistry played a decisive role in confirming tumor origin and excluding other gastrointestinal malignancies. Positivity for CK7 and particularly PLAP (placental alkaline phosphatase) provided strong evidence of trophoblastic differentiation. Furthermore, positivity for alpha-AFP and CD68 (multinucleated giant cells) further supported the diagnosis of choriocarcinoma, a tumor known for its diverse differentiation patterns [1].

Our treatment strategy was individualized:

Initial Low-Dose EP Chemotherapy

According to Sabetta et al., patients with high tumor burden (brain, lung, and intestinal metastases) and poor performance status require initial low-dose chemotherapy to prevent "early death" caused by tumor lysis syndrome or catastrophic hemorrhage from rapidly necrotic metastatic lesions [7].

Transition to EMA-CO

After three cycles of EP chemotherapy, β-hCG levels decreased to 795 IU/L, indicating good therapeutic response. Escalation to the EMA-CO multi-agent regimen was therefore considered a strategic step to achieve complete remission and prevent chemoresistance in this high-risk GTN patient.

5. CONCLUSION

Metastatic gestational trophoblastic neoplasia represents a dangerous clinical "pitfall" because of its aggressive vascular invasion, leading to multi-organ hemorrhagic complications such as rupture of cerebral pseudoaneurysms and gastrointestinal bleeding due to intussusception. This case demonstrates that hemorrhagic stroke in women may represent the initial manifestation of occult trophoblastic disease and can easily be mistaken for isolated vascular pathology. Early serum β-hCG measurement and initiation of low-dose EP chemotherapy are crucial strategies for controlling internal bleeding and preventing early mortality before escalation to EMA-CO multi-agent chemotherapy. Multidisciplinary collaboration among gynecologic oncologists, gastrointestinal surgeons, and neurosurgeons is essential to avoid missed diagnosis and optimize outcomes in advanced-stage disease.

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