ECRONICON OPEN ACCESS

EC GYNAECOLOGY
Case Report

Uterine Rupture in Choriocarcinoma: A Case Report

Ismail Belhaouz[1]*, Mahdi Liban[1], Moad Belouad[2], Sara Al maimouni[3] and Samir Bargach[1]

[1]*Department of Gynecology and Obstetrics, Souissi Maternity Hospital, Chu Ibn Sina, Rabat, Morocco*

[2]*Department of Gynecology and Obstetrics, Military Hospital of Instruction Mohamed V Rabat, Rabat, Morocco*

[3]*Department of Pediatrics, Rabat Children's Hospital, Chu Ibn Sina, Rabat, Morocco*

***Corresponding Author:** Ismail Belhaouz, Department of Gynecology and Obstetrics, Souissi Maternity Hospital, Chu Ibn Sina, Rabat, Morocco.

Received: August 01, 2024; **Published:** August 21, 2024

Abstract

We report the case of a 43-year-old patient with a rare metastatic choriocarcinoma complicated by uterine rupture and hemoperitoneum. On admission, she presented with severe hypovolemic shock requiring urgent intervention. Laparotomy revealed massive hemoperitoneum with rupture of the uterine horn. A total abdominal hysterectomy was performed and histopathological evaluation confirmed the diagnosis of choriocarcinoma. Post-operative treatment included methotrexate + folinic acid chemotherapy, which showed a favorable response with a reduction in βHCG levels and regression of metastases. This case highlights the importance of increased clinical vigilance in gestational trophoblastic disease to prevent serious complications.

Keywords: *Choriocarcinoma; Uterine Rupture; Hemoperitoneum; Gestational Trophoblastic Disease; Chemotherapy*

Introduction

Gestational trophoblastic disease (GTD) is a group of benign and malignant tumors that develop from placental tissue, including hydatidiform moles and gestational trophoblastic neoplasia (GTN).

Choriocarcinoma and invasive molar disease are rare forms of GTT and can occur following any pregnancy event, including term or preterm pregnancy, spontaneous abortion, ectopic pregnancy or molar pregnancy [1]. The incidence is low, ranging from 1 to 3/1000 pregnancies for hydatidiform mole to (1-9)/40 000 pregnancies for choriocarcinoma [2].

Although these pathologies can manifest with a wide range of symptoms depending on the metastatic site and extent of invasion, they are rarely documented in the emergency medical literature.

Case Presentation

A 43-year-old G3 P2 patient from a disadvantaged background was admitted to emergency with abdominal and pelvic pain that had been increasing for 3 days and vaginal bleeding associated with nausea, general fatigue and orthostatic dizziness. She had been complaining of abdominal distension for 3 days and amenorrhea for 6 weeks. The urine for the pregnancy test was positive. On admission to A&E, the patient presented with features of hypovolemic shock, anemia with Hb 6 g/dl and BP 80/40 mmHg; white blood cell count, platelets, coagulation profile, liver function tests and renal function tests were normal.

On abdominal examination, her abdomen was distended with free fluid. On vaginal examination, there was only minimal blackish bleeding with a lesion on the anterior vaginal wall. Ultrasound showed an enlarged heteroechogenic mass measuring 53 x 38 mm with various echogenic shadows in the myometrium with loss of the endometrial junction at the hypervascularised coronal level on color Doppler, normal ovaries with abundant peritoneal effusion. Her last delivery had been 2 years previously and she had no previous history of molar pregnancy apart from an early spontaneous abortion 1 year previously.

The patient was immediately prepared for emergency laparotomy. Intraoperatively, there was massive hemoperitoneum with approximately 3 liters of blood present, the uterus was enlarged showing multiple hemorrhagic nodules on the surface with rupture at the level of the uterine horn (Figure 1 and 2). The bilateral ovaries were normal and a total abdominal hysterectomy was performed (Figure 3). Intraoperatively, 3 units of packed red blood cells were transfused.

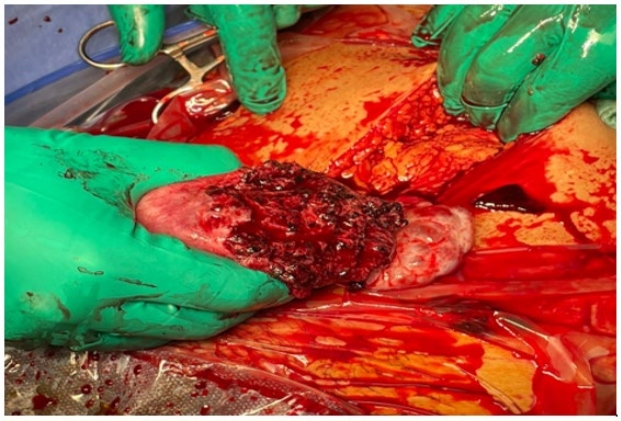

Figure 1: *Intraoperative photography showing multiple nodules on the surface of the uterus.*

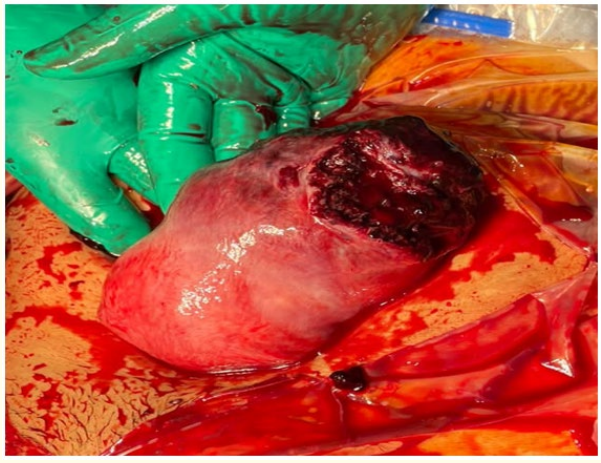

Figure 2: *Intraoperative photography showing the coronal location of the choriocarcinoma.*

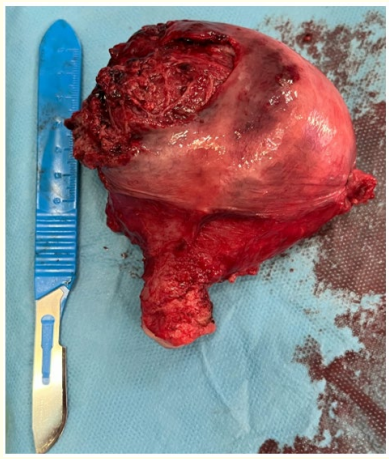

Figure 3: *Surgical specimen for total hysterectomy (after excision).*

The patient recovered well in the postoperative period. Histopathology was consistent with a choriocarcinoma. No villous structures were identified. Thus, a final diagnosis of low-risk GTT (stage 2, Figo < 6) was made after extension work-up and the patient started chemotherapy with Methotrexate + Folinic Acid at standard doses. Serum βHCG levels during subsequent follow-up fell and the patient responded well to chemotherapy with complete disappearance of the vaginal metastasis.

Discussion

Uterine choriocarcinoma is a rare and aggressive form of gestational trophoblastic disease (GGT), characterized by infiltration of trophoblastic tissue into the myometrium and a high propensity for distant metastases [3]. Typical symptoms include amenorrhea and unusual bleeding, with less frequent manifestations such as hemoptysis, cerebral hemorrhage and hepatic hematomas. Occasionally, it can lead to acute abdomen due to hemoperitoneum and uterine rupture, although this presentation is rare [4]. There are documented cases of haemoperitonitis secondary to liver, lung and spleen metastases, but this is rare in the context of choriocarcinoma [4].

The exact pathogenesis of uterine rupture in choriocarcinoma remains obscure, although several theories have been put forward, including invasion of the uterine vessels by malignant trophoblasts, causing vascular lesions with thrombosis, aneurysms and intratumoral bleeding [5].

In our case, the presentation was atypical: the patient had no notable history of recent ectopic pregnancy, her last delivery having been 3 years previously. Heavy bleeding led to emergency admission for an acute abdomen and uterine rupture.

The differential diagnosis included ectopic pregnancy with hemoperitoneum, ruptured corpus luteum cyst and invasive mole. Pelvic ultrasound imaging and serum β-hCG are essential for the diagnosis of choriocarcinoma. In our case, due to shock and hemoperitoneum, preoperative testing was not possible and an exploratory laparotomy was performed as an emergency.

The management of patients with acute abdomen and active bleeding requires prompt surgical intervention to control the hemorrhagic focus. Total abdominal hysterectomy is generally preferred in patients, especially if the family is complete, while conservative approaches are considered in those wishing to preserve fertility and whose disease is confined to the uterus [6]. In our case, a total abdominal hysterectomy was planned because of the patient's complete family situation. Invasive mole can perforate the myometrium, leading to uterine perforation and intraperitoneal bleeding. However, uterine perforation due to choriocarcinoma is rare [7].

The International Federation of Gynecology and Obstetrics (FIGO) scoring and classification system is essential for assessing and stratifying gestational trophoblastic disease (GGT) into low- and high-risk groups [8]. It also guides the choice of appropriate treatments, including chemotherapy regimens. Methotrexate monotherapy is recommended for non-metastatic, low-risk choriocarcinomas (score ≤ 6), while metastatic, high-risk choriocarcinomas (score > 6) require treatment regimens combining several chemotherapeutic agents and sometimes radiotherapy [8,9]. In our case, a standard methotrexate-based treatment regimen was chosen because of the low-risk nature of the disease.

Conclusion

Choriocarcinoma presenting with uterine rupture accompanied by shock is a rare clinical manifestation. Prompt intervention, combining surgery and chemotherapy, is crucial to saving lives in such situations. A high level of clinical suspicion is essential to ensure appropriate management of these cases. It is important that these cases are reported regularly so that gynecologists are aware of the possibility of ruptured invasive mole and that it is retained as a differential diagnosis in all pregnant women presenting with acute onset of lower abdominal pain.

Although this is a rare case, it is a single case report that is not supported by statistical data; further cases and studies are still needed.

Highlights

The article presents a rare case of choriocarcinoma in a 43-year-old woman complicated by uterine rupture and hemoperitoneum, requiring urgent surgical intervention.

This case underscores the critical need for prompt diagnosis, swift surgical and chemotherapy management, and heightened clinical awareness in addressing choriocarcinoma and gestational trophoblastic diseases effectively.

Conflicts of Interest

The authors declare no conflict of interest.

Author Contributions

All authors contributed to the conduct of this work. All authors also declare that they have read and approved the final version of the manuscript.

Bibliography

1. Lurain JR. "Gestational trophoblastic disease I: epidemiology, pathology, clinical presentation and diagnosis of gestational trophoblastic disease, and management of hydatidiform mole". *American Journal of Obstetrics and Gynecology* 203.6 (2010): 531-539.

2. Ngan HYS., *et al*. "Update on the diagnosis and management of gestational trophoblastic disease". *International Journal of Gynecology and Obstetrics* 143.S2 (2018): 79-85.

3. Froeling FEM and Seckl MJ. "Gestational trophoblastic tumours: An update for 2014". *Current Oncology Reports* 16.11 (2014): 408.

4. Liberis V., *et al*. "Acute abdomen as initial presentation of gestational choriocarcinoma". *Archives of Gynecology and Obstetrics* 280.5 (2009): 859-862.

5. Ma Y., *et al*. "The prognostic analysis of 123 postpartum choriocarcinoma cases". *International Journal of Gynecological Cancer* 18.5 (2008): 1097-1101.

6. Xie C., *et al*. "Spontaneous uterine perforation of choriocarcinoma with negative beta-human chorionic gonadotropin after chemotherapy". *Medical Principles and Practice* 20.6 (2011): 570-573.

7. Mackenzie F., *et al*. "Invasive hydatidiform mole presenting as an acute primary haemoperitoneum". *British Journal of Obstetrics and Gynaecology* 100.10 (1993): 953-954.

8. Kohorn EI. "The new FIGO 2000 staging and risk factor scoring system for gestational trophoblastic disease: description and critical assessment". *International Journal of Gynecological Cancer* 11.1 (2001): 73-77.

9. Bolze PA., *et al*. "Formalised consensus of the European Organisation for treatment of trophoblastic diseases on management of gestational trophoblastic diseases". *European Journal of Cancer* 51.13 (2015): 1725-1731.

Volume 13 Issue 9 September 2024