International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Slama L et al. Int J Reprod Contracept Obstet Gynecol. 2025 Jun;14(6):1921-1924
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20251420

Case Series

Gestational trophoblastic tumors: a case series of 18 cases at the university hospital center Mohammed VI of Oujda

Loubna Slama*, Zainab Chatbi, Ibtissam Bellajdel, Hafsa Taheri, Hanane Saadi, Ahmed Mimouni

Department of Obstetrics and Gynecology, Mohammed VI University Hospital Center, Oujda, Morocco

Received: 06 April 2025
Revised: 28 April 2025
Accepted: 29 April 2025

***Correspondence:**
Dr. Loubna Slama,
E-mail: loubnaslama6@gmail.com

ABSTRACT

Gestational trophoblastic tumors (GTTs) are rare but potentially life-threatening diseases arising from the abnormal proliferation of trophoblastic tissue following conception. Their clinical presentation, biological behavior, and metastatic potential vary significantly, complicating both diagnosis and management. We conducted a retrospective observational study over a 9-year period (July 2014 to June 2023) at the university hospital center Mohammed VI of Oujda. Eighteen patients diagnosed with GTTs, including invasive moles and choriocarcinomas, were analyzed in terms of epidemiological, clinical, therapeutic, and prognostic features. The mean age was 35.9 years (range: 19-52). All patients were married and unemployed. Most were referred from external healthcare centers and lived more than 60 km from the hospital. The predominant symptom was abnormal uterine bleeding. Diagnosis was based on abnormal β-hCG trends (89%) or histopathological confirmation (11%). Metastases were present in 43.75% of cases, most commonly in the vagina. Ten patients received chemotherapy: 8 with methotrexate monotherapy and 2 with EMA-CO. One patient underwent hysterectomy for hemorrhage. A favorable therapeutic response was observed, with β-hCG negativation achieved in 90% of patients after nine cycles. Fertility was preserved in most cases. No secondary malignancies were reported. Despite challenges in diagnosis and management, GTTs can be effectively treated with appropriate chemotherapy and close monitoring. Our experience underscores the need for early referral, standardized management protocols, and a national registry to improve patient outcomes.

Keywords: Gestational trophoblastic tumors, Choriocarcinoma, Invasive mole, β-hCG, Chemotherapy, FIGO score, Fertility

INTRODUCTION

Gestational trophoblastic tumors (GTTs), the malignant form of gestational trophoblastic disease (GTD), are rare pathologies resulting from the abnormal proliferation of trophoblastic cells following conception. They include invasive moles, choriocarcinomas, placental site trophoblastic tumors (PSTT), and epithelioid trophoblastic tumors (ETT).[1] Although rare, GTTs are among the most curable gynecologic malignancies when adequately treated and monitored.

Hydatidiform moles, benign form of GTD, can progress into malignant GTTs, necessitating strict post-molar surveillance. Due to their high metastatic potential, untreated GTTs can be fatal. Advances in early diagnosis, chemotherapy, and β-hCG monitoring have greatly improved prognosis.

In Morocco, GTTs are not uncommon and primarily affect young women of reproductive age. Given the presence of a sensitive tumor marker (β-hCG) and effective treatments, a structured approach is warranted. This study aims to evaluate the clinical characteristics, management

strategies, and outcomes of GTTs treated in our center, and to assess how they compare to international standards.

CASE SERIES

We conducted case series over a 9-year period (July 2014 to June 2023) at the university hospital center Mohammed VI of Oujda. Eighteen patients diagnosed with GTTs, including invasive moles and choriocarcinomas, were analyzed in terms of epidemiological, clinical, therapeutic, and prognostic features.

Patient characteristics

Eighteen cases of GTT were identified. The mean age was 35.9 years (range: 19-52). All patients were married and unemployed. Two-thirds lived in urban areas, and 66.7% lived more than 60 km from the hospital. Most patients (94.4%) were referred from external centers.

Clinical presentation

Abnormal uterine bleeding was the most frequent symptom (77%), alone or associated with pregnancy-like symptoms or pelvic pain. Eleven percent of patients were initially diagnosed in external facilities.

Diagnosis was made through serial β-hCG monitoring (89%) or histopathology (11%).

Obstetric history

Gravidity ranged widely, with paucigravidae being the most frequent (39%). Most women were primiparous or had low parity. No history of molar pregnancy was noted. One patient had a family history of GTD.

Diagnostic delays and clinical assessment

The 61.1% were diagnosed within four months post-pregnancy. Most patients (94.4%) were in good general health at admission; one patient presented in hemorrhagic shock. Proteinuria was positive in three cases (16.7%).

Imaging and metastases

Retained intrauterine tissue was observed in 77.7% of cases. Metastases were detected in 43.75%, primarily in the vagina, followed by the liver and lungs. No theca lutein ovarian cysts were reported. Myometrial invasion was evident on MRI or ultrasound.

Biological markers

Two-thirds (66.7%) had initial β-hCG levels above 100,000 IU/l. Kinetics showed elevation (61.1%), absence of negativation (22.2%), or stagnation (16.7%).

FIGO score and histology

Among the 12 patients with complete FIGO scoring, 58.3% were low-risk (≤6) and 41.6% were high-risk (>6). Histopathology confirmed choriocarcinoma in 6 cases and invasive mole in 2.

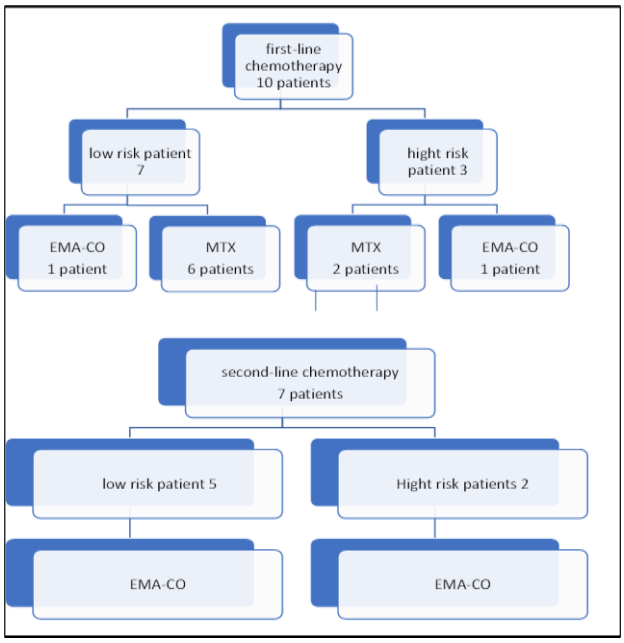

Figure 1: Distribution of patients according to the chemotherapy protocol received.

Treatment

Ten patients received chemotherapy-8 received methotrexate (6 low-risk, 2 high-risk), 2 received EMA-CO (1 low-risk, 1 high-risk), 7 patients escalated to EMA-CO due to resistance to methotrexate, 1 patient underwent hysterectomy for hemorrhagic complications, no patients received radiotherapy and reported side effects were mild, including grade 2 vomiting and pelvic pain (Figure 1).

Outcomes and follow-up

Ninety percent of treated patients achieved β-hCG negativation by the ninth chemotherapy cycle. One patient died of hemorrhagic shock. One patient became pregnant during follow-up and delivered successfully. No secondary malignancies were reported.

Table 1: Distribution of patients according to the circumstances of diagnosis.

Circumstances	N	Percentage (%)
Biology	16	89
Histology	2	11
Radiology	0	0
Metastases	0	0

DISCUSSION

GTT remain rare neoplasms, yet they are among the most curable malignancies in gynecologic oncology, with cure rates exceeding 90% in specialized settings. The present study, spanning nearly a decade at CHU Mohammed VI of Oujda, provides valuable insights into the clinical and therapeutic landscape of GTTs in Eastern Morocco and reflects both the strengths and the limitations of current management practices in a resource-limited context.

Our cohort of 18 patients aligns with the known epidemiologic profile of GTTs, which primarily affect women of reproductive age. The mean age of 35.9 years is slightly higher than that reported in international series, where peaks occur in women aged 20-35 years.[2] This may be attributed to delayed diagnosis or prolonged post-molar surveillance in our setting. Notably, all patients were married and unemployed, reflecting a socioeconomic vulnerability that may influence access to care, continuity of follow-up, and therapeutic compliance.

The primary clinical symptom was abnormal uterine bleeding (77%), consistent with the literature, where vaginal bleeding is the most common presentation of both invasive mole and choriocarcinoma.[3] However, the diagnostic pathway was suboptimal: only 11% of cases were diagnosed based on histology, while the majority relied on β-hCG kinetics. Although non-invasive, this approach requires rigorous follow-up, which is frequently challenged by patient non-compliance and healthcare access issues.

A concerning finding was the high rate of metastatic disease at presentation (43.75%), predominantly involving the vagina, liver, and lungs. This percentage exceeds figures from Western series (20-30%) and underscores the diagnostic delays observed in our population.[4]

Such delays were also reflected in the fact that only 61.1% of patients were diagnosed within four months post-pregnancy, a critical window for GTT identification.[5]

The management adhered to international recommendations with risk stratification according to the FIGO scoring system. The majority of patients were low-risk (58.3%), yet 20% of these received multi-agent chemotherapy (EMA-CO), suggesting a possible overestimation of risk or clinical discretion based on local judgment. While methotrexate remains the first-line treatment for low-risk patients due to its efficacy and favorable toxicity profile, early identification of resistance and timely escalation to EMA-CO were successfully implemented in our series.[6]

The therapeutic outcomes were encouraging: 90% of treated patients achieved β-hCG negativation, and only one death was recorded (5.5%), due to hemorrhagic shock in a previously undiagnosed patient. These results are comparable to those from established centers, where survival exceeds 95%.[7] Fertility preservation was achieved in the majority of cases, with one spontaneous pregnancy reported during follow-up-a testament to the efficacy and reproductive safety of current chemotherapeutic regimens.

Nevertheless, our study highlights several challenges. The absence of a centralized registry, limited access to histopathology in some cases, and inconsistent referral practices hinder optimal patient management. Moreover, socioeconomic barriers-including geographical distance (over 60 km for most patients), low educational level, and lack of medical insurance-contribute to poor follow-up, as seen in 3 cases lost after the first cycle of chemotherapy.

In the future, molecular profiling of GTNs and use of targeted therapies (e. g., anti-angiogenic agents) may improve outcomes, especially in resistant or relapsing cases.[8]

CONCLUSION

Gestational trophoblastic tumors, though rare, are highly curable malignancies when diagnosed early and treated effectively. Our study demonstrates favorable outcomes using chemotherapy protocols aligned with international recommendations, even in a resource-limited setting. However, significant challenges remain — particularly regarding early diagnosis, patient compliance, and long-term follow-up. Strengthening awareness among healthcare providers, improving referral systems, and establishing a national registry are essential steps toward optimizing care and outcomes for Moroccan women affected by these diseases.

ACKNOWLEDGMENTS

Authors would like to thank the staff of the departments of gynecology and oncology at CHU Mohammed VI of Oujda for their support.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. National Cancer Institute. Gestational Trophoblastic Disease. In: Cancer Topics. Bethesda (MD): National Cancer Institute (US). 2019.
2. Braga A, Mora P, de Melo AC, Sun SY, Elias KM, Horowitz N. Challenges in the diagnosis and treatment of gestational trophoblastic disease in low- and middle-income countries. Int J Gynecol Cancer. 2021;31(6):857-63.
3. Lurain JR. Gestational trophoblastic disease I: epidemiology, pathology, clinical presentation and diagnosis of gestational trophoblastic disease, and management of hydatidiform mole. Am J Obstet Gynecol. 2010;203(6):531-9.

4. Seckl MJ, Sebire NJ, Berkowitz RS. Gestational trophoblastic disease. Lancet. 2010;376(9742):717-29.
5. Horowitz NS, Goldstein DP, Berkowitz RS. Management of gestational trophoblastic neoplasia. Hematol Oncol Clin North Am. 2012;26(1):111-31.
6. Mangili G, Lorusso D, Brown J, Jacobus P, Leon M, Michelle V, et al. Trophoblastic disease review for diagnosis and management: FIGO 2021 recommendations. Int J Gynecol Obstet. 2021;155(S1):86-93.
7. Alazzam M, Tidy J, Osborne R. Pregnancy outcomes after treatment for gestational trophoblastic neoplasia in the UK. BJOG. 2020;127(8):1018-25.
8. Ngan HY, Seckl MJ, Berkowitz RS, Yang X, François G, Paradan KS, et al. Update on the diagnosis and management of gestational trophoblastic disease. Int J Gynaecol Obstet. 2018;143(2):79-85.

Cite this article as: Slama L, Chatbi Z, Bellajdel I, Taheri H, Saadi H, Mimouni A. Gestational trophoblastic tumors: a case series of 18 cases at the university hospital center Mohammed VI of Oujda. Int J Reprod Contracept Obstet Gynecol 2025;14:1921-4.