Postmenopausal complete hydatidiform mole: A case report

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Received December 29, 2025; Accepted March 16, 2026

DOI: 10.3892/etm.2026.13165

Abstract. Complete hydatidiform mole (CHM) cases occurring in the postmenopausal period are quite rare and may be delayed in diagnosis. In the present study, the case reported is of a 55-year-old postmenopausal woman (menopausal for 5 years) who presented with painless postmenopausal bleeding in March 2025, ongoing for ~1 month and was diagnosed with CHM. Transvaginal ultrasonography showed endometrial thickness of 28-mm and serum β-human chorionic gonadotropin (β-hCG) level of 187,240 mIU/ml. After ultrasound-guided curettage, the diagnosis of CHM was confirmed in histopathological examination. Since the patient was postmenopausal, laparoscopic hysterectomy and bilateral salpingo-oophorectomy were performed. Postoperative follow-up was performed in accordance with International Federation of Gynecology and Obstetrics (FIGO) guidelines; the protocol used (weekly β-hCG until negative, then monthly for 6 months) is fully consistent with the 2025 FIGO update. By December 2025, the patient had successfully finished the suggested follow-up regimen and was still in total remission with no signs of recurrence. In patients with abnormal uterine bleeding and high β-hCG levels in the postmenopausal period, gestational trophoblastic diseases should be considered in the differential diagnosis. Malignant complications can be prevented with early diagnosis and treatment.

Introduction

Gestational trophoblastic diseases (GTD) are characterized by abnormal proliferation of trophoblastic cells. Complete hydatidiform mole (CHM) is the most common benign form of GTD and typically occurs in reproductive age (1). It is extremely rare postmenopausally, accounting for <1% of molar pregnancies (1,2).

Postmenopausal CHM cases can often be confused with endometrial hyperplasia or carcinoma due to their atypical clinical presentation. In these patients, diagnosis is made on the basis of high serum β-human chorionic gonadotropin (β-hCG) levels, characteristic ultrasound findings ('snow type' appearance), and histopathological examination (3). In the literature, high β-hCG levels (>100,000 mIU/ml) and heavy uterine bleeding have been reported in most postmenopausal CHM cases (4).

In the present study, the case presented is of a 55-year-old patient diagnosed with CHM in the postmenopausal period, and the diagnostic and therapeutic approaches are discussed in the context of the current literature. In addition, the role of surgical and medical options in the management of this rare clinical condition is emphasized.

Case report

Patient information. A 55-year-old woman (gravida 2, parity 2, menopause for 5 years) presented to Ereğli State Hospital (Konya, Turkiye) in March 2025 with painless postmenopausal bleeding, which had been ongoing for 1 month. The patient was not receiving hormone therapy and reported no recent sexual activity.

Clinical findings. Transvaginal ultrasonography (USG) revealed 28-mm heterogeneous endometrium with multiple anechoic cystic spaces, but the classic 'snowstorm' pattern was absent. Both ovaries were atrophic with no evidence of theca-lutein cysts. Serum β-hCG level was measured as 187,240 mIU/ml.

Diagnostic assessment. Ultrasound-guided curettage was performed to confirm the diagnosis before major surgery. Macroscopically, fragments were obtained without typical molar pregnancy vesicles (Fig. 1A). Histopathological examination revealed widespread hydropic villi forming cisterns and peripheral trophoblastic hyperplasia; no evidence of fetal fragments or amniotic membranes was found.

Histochemistry. Sections obtained from 3-μm thick tissues fixed in 10% buffered formaldehyde for 24 h were stained with hematoxylin and eosin (H&E) histochemistry stain at room temperature (Fig. 1B and C). To confirm the diagnosis,

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Abbreviations: β-hCG, β-human chorionic gonadotropin; BSO, bilateral salpingo-oophorectomy; CHM, complete hydatidiform mole; FIGO, International Federation of Gynecology and Obstetrics; GTD, gestational trophoblastic disease; H&E, hematoxylin and eosin; IHC, immunohistochemistry; USG, ultrasonography

Key words: CHM, postmenopausal bleeding, GTD, high β-hCG, thick endometrium

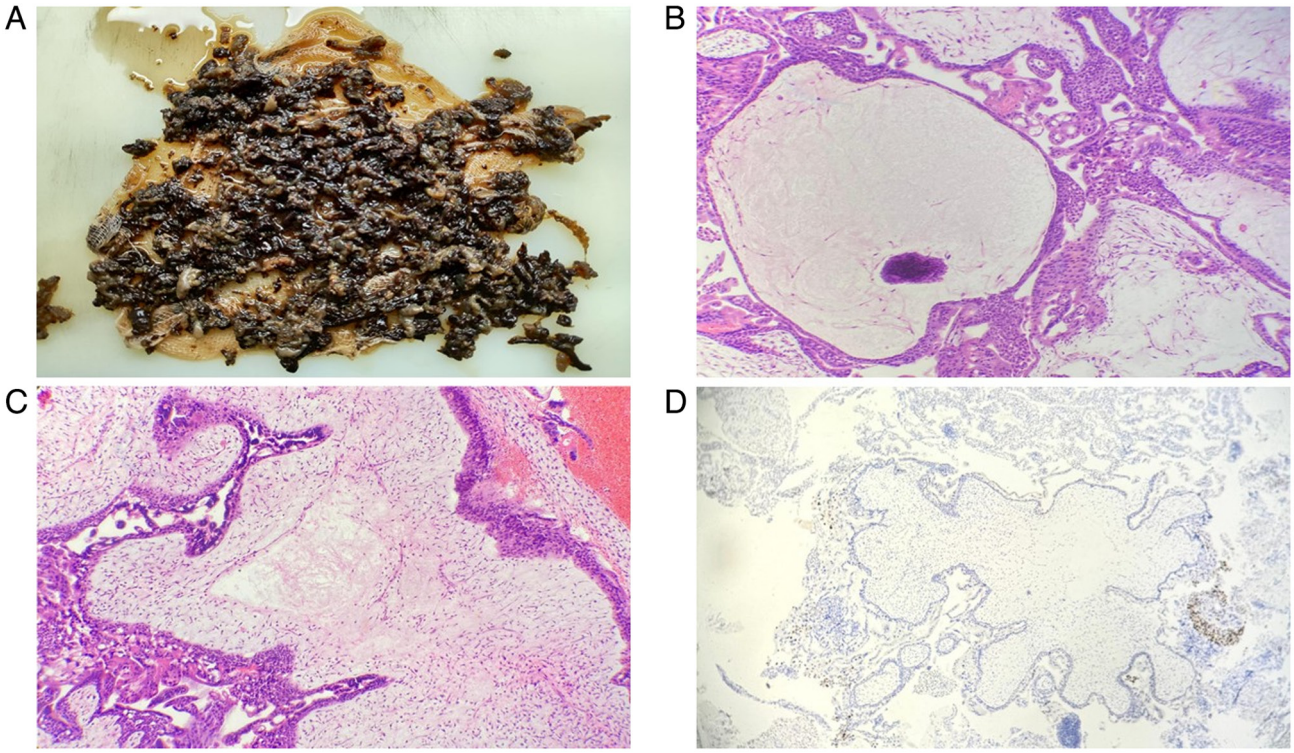

Figure 1. (A) Endometrial curettage macroscopic examination. Complete hydatidiform mole: Atypical endometrial curettage material. (B) Microscopic image. Hydropic Villi and Trophoblastic Hyperplasia (H&E; magnification, x200). (C) Microscopic image. Hydropic villi and trophoblastic hyperplasia (another view) (H&E; magnification, x200). (D) Microscopic image. p57 negativity in villus cytotrophoblasts and stromal cells, p57 positivity in extravillous areas (immunohistochemistry; magnification, x100).

immunohistochemical (IHC) staining for p57 was performed, which demonstrated negative nuclear expression in the cytotrophoblast and villous stromal cells, a finding consistent with the androgenetic origin of a CHM.

IHC. Sections (3-μm thick) obtained from formalin-fixed, paraffin-embedded tissues were stained with ready-to-use Patolab p57kib2 clone, (cat. no. PL2057; PatoLab) IHS stain. Examination was performed using a Nikon trinocular light microscope (Fig. 1D). Microscopic examination revealed diffuse, large, hydropic villi, some forming cisterns, and trophoblastic proliferation around these villi. As part of the metastatic workup, a chest X-ray was performed and revealed no evidence of pulmonary metastases, consistent with International Federation of Gynecology and Obstetrics (FIGO) stage I disease confined to the uterus.

Therapeutic intervention. Due to the high risk of malignant transformation (8-20%) (4), laparoscopic hysterectomy and bilateral salpingo-oophorectomy (BSO) were performed. Preoperative counseling included: Family history (negative), ovarian cancer risk (~1.3%) (5), and explicit information that BSO is optional; after discussing the benefits and risks, the patient preferred prophylactic BSO.

Follow-up and outcomes. Weekly postoperative β-hCG measurements were made, and 6 weeks following surgery (mid-May 2025), negative results were obtained. Monthly monitoring continued for 6 months following three consecutive weekly negatives (early June 2025). Every monthly β-hCG measurement stayed within the normal range, according to the final follow-up evaluation conducted in December 2025. There was no sign of a recurrence, and the patient remained in total remission.

Discussion

CHM in postmenopausal women is extremely rare, accounting for <1% of molar pregnancies (1,2). Only ~14 cases have been reported since 1973 (6). While pregnancy over the age of 50 years is uncommon, it carries a 519-fold increased risk of molar pregnancy (6). The 2025 FIGO update confirmed a 7.5-fold increased risk for women aged over 40 years (7). Other factors implicated in GTD risk, such as dietary deficiencies (for example, vitamin A and carotene) and environmental exposures, have been studied in reproductive-age populations, although data specific to postmenopausal women are not available due to the extreme rarity of cases in this age group (6).

The sonographic diagnosis of CHM in postmenopausal women can be particularly challenging. While the classic 'snowstorm' appearance has been well-described (8), its absence does not rule out the disease in older patients. In the present case, the absence of typical vesicles on both ultrasound and macroscopic examination initially made endometrial hyperplasia or malignancy the primary suspicion. However, the disproportionately high serum β-hCG level (187,240 mIU/ml) was the key factor that shifted the differential diagnosis toward GTD, as has been similarly emphasized in other postmenopausal case reports (3,4).

This highlights the critical importance of combining quantitative β-hCG measurement with sonographic findings in postmenopausal women with bleeding, even when imaging features are not pathognomonic for molar pregnancy.

Mehrotra *et al* reported a similar case with diagnostic delay due to malignancy suspicion (3). Similarly, in the current case, high β-hCG (187,240 mIU/ml) and endometrial thickening may be confused with endometrial hyperplasia or carcinoma. However, it should not be forgotten that β-hCG measurement and USG play a critical role in early diagnosis (8).

GTD and endometrial pathology are not the only differential diagnoses. The presence of hydropic villi, which are pathognomonic for hydatidiform mole, ruled out non-gestational choriocarcinoma (6). Complete mole was confirmed by negative p57 IHC, which also ruled out hydropic abortion and partial mole (9). Rapid postoperative β-hCG decline and histopathological confirmation eliminated phantom hCG caused by heterophilic antibodies (10). Normal ovarian appearance on imaging and intraoperatively ruled out primary ovarian tumors (6). Alternative diagnoses were methodically ruled out by the comprehensive diagnostic approach.

According to FIGO guidelines, chest X-ray is the recommended modality for screening pulmonary metastases in gestational trophoblastic disease, and chest CT is not required when chest X-ray findings are normal, as it does not influence treatment outcome or time to remission (6). In the current patient, the chest X-ray was normal, confirming FIGO stage I disease and guiding the decision for primary surgical management without the need for staging chemotherapy.

Treatment for postmenopausal CHM must balance the risk of malignant transformation with surgical morbidity. Compared with uterine evacuation, hysterectomy was linked to an 83% lower risk of post-molar GTN (RR=0.17; P=0.015) and a 92% lower need for chemotherapy (RR=0.08; P=0.016), according to a recent multicenter cohort study [Desmarais *et al* (11); n=275, ≥40 years]. The FIGO 2025 and European Organization for the Treatment of Trophoblastic Disease/European Society of Gynecological Oncology/Gynecological Cancer InterGroup/International Society for the Study of Trophoblastic Diseases guidelines recommending primary hysterectomy for patients over 40-50 years with completed fertility are supported by the 56.3% malignant sequelae rate following evacuation in women over 50 (6,7,9). This advantage must be weighed against the risks of surgery, though, as the Desmarais cohort had a 45.1% complication rate (11). Curettage is less invasive but necessitates strict postoperative β-hCG monitoring in accordance with FIGO guidelines, whereas hysterectomy eliminates the risk of local recurrence (9). In this instance, histopathological confirmation was obtained prior to definitive surgery through initial diagnostic curettage and hysterectomy, reducing the need for needless drastic intervention.

The decision to perform BSO warrants balanced discussion. BSO eliminates future ovarian cancer risk and aligns with literature where most postmenopausal CHM cases underwent BSO (6,12). A recent meta-analysis [Hassan *et al* (13)] showed that BSO is associated with 22% lower breast cancer risk (HR 0.78) but increased risks of cardiovascular disease (HR 1.18), stroke (HR 1.20), diabetes (HR 1.16), dementia (HR 1.70) and depression (HR 1.39). According to Ouldamer *et al* (5), oophorectomy before age 65 should be individualized, weighing benefits against long-term health consequences. For our 55-year-old patient with normal ovaries and no genetic predisposition (baseline ovarian cancer risk ~1.3%), both options were discussed. After balancing benefits and risks, she chose prophylactic BSO. This shared decision-making was documented in informed consent.

The risk of malignant transformation is high in postmenopausal CHM (8-20%) (4). Therefore, rigorous postoperative surveillance is essential even after hysterectomy, as occult metastatic trophoblastic cells may persist. Although the patient was treated prior to the publication of the 2025 FIGO update, the follow-up protocol employed (weekly β-hCG until negative for 3 consecutive weeks, then monthly for 6 months) is fully consistent with the subsequent 2025 recommendations (9). After completing this standardized protocol, the patient's durable remission was confirmed at the final follow-up in December 2025. This case thus represents one of the few postmenopausal CHM reports with comprehensive p57 confirmation and a follow-up strategy that prospectively aligned with the 2025 FIGO guidelines.

This case presents several novel aspects that distinguish it from previously reported postmenopausal CHM cases. First, it includes p57 IHC confirmation of the diagnosis, which is lacking in numerous earlier reports and definitively confirms the androgenetic origin of the molar tissue (9). Second, although the patient was treated prior to the publication of the 2025 FIGO update, the follow-up protocol employed (weekly β-hCG until negative for 3 consecutive weeks, then monthly for 6 months) is fully consistent with the subsequent 2025 recommendations, demonstrating that optimal, guideline-driven care was achievable even before the formal update (7). Third, alternative diagnoses often overlooked in case reports were systematically excluded, including phantom hCG (10), non-gestational choriocarcinoma (6), and primary ovarian tumors (6). Fourth, the psychological impact of a pregnancy-related diagnosis in a postmenopausal woman and the shared decision-making process regarding BSO were documented, including individualized risk assessment (~1.3% ovarian cancer risk) (10) and patient preference, adding a patient-centered dimension rarely addressed in previous reports. Collectively, these features position this case as a contemporary model for the management of postmenopausal CHM, aligning with 2025 FIGO guidelines and emphasizing comprehensive diagnostic evaluation and individualized care.

In postmenopausal women with abnormal bleeding and elevated β-hCG, CHM should be considered in differential diagnosis. Early diagnosis requires USG, β-hCG measurement, and endometrial sampling. Hysterectomy may be preferred in this age group due to the high risk of malignancy. However, even after hysterectomy, serum β-hCG monitoring is essential, as per the FIGO guidelines. The unexpected diagnosis of a pregnancy-related condition postmenopause may cause transient psychological distress, which should be addressed through counselling. This case highlights the importance of

a comprehensive diagnostic approach, including p57 IHC, and individualized surgical planning considering patient preferences and risk factors.

Acknowledgements

The author would like to thank Dr Zekiye Mavi (Department of Pathology, Ereğli State Hospital, Konya, Turkiye) for capturing the microscopic images.

Funding

No funding was received.

Availability of data and materials

The data generated in the present study may be requested from the corresponding author.

Authors' contributions

EU conceptualized and designed the study, collected and analyzed data, and wrote, reviewed and edited the manuscript. The author read and approved the final manuscript, and confirms the authenticity of all the raw data.

Ethics approval and consent to participate

The present study was conducted in accordance with the Helsinki Declaration and its revisions. According to the Code of Ethics for Medical and Health Research on Human Subjects in Turkiye, ethics approval is not required for case reports.

Patient consent for publication

Informed, voluntary, written consent was obtained from the patient and their family for publication.

Competing interests

The author declares that he has no competing interests.

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