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RESEARCH ARTICLE

RECURRENT MOLAR PREGNANCY: MANAGEMENT APPROACH FOR A WOMAN WITH AN EIGHTH MOLAR PREGNANCY AND A DESIRE FOR CONCEPTION - A RARE CASE REPORT

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Abstract

Molar pregnancy belongs to the group of gestational trophoblastic diseases. It is a relatively rare condition, with recurrent forms being exceptional. In most cases, treatment consists of simple aspiration of the conception product followed by biological monitoring; however, chemotherapy or even hysterectomy may be required in some cases. Proper and rigorous management is crucial for prognosis. We report the case of a young woman treated for an eighth molar pregnancy without a living child. The objective of this study is to investigate the risk factors associated with recurrent molar pregnancies and to discuss the management of this extremely rare case through our clinical observation and a literature review.

Introduction:

Ahydatidiform mole is a gestational product without a fetus (complete mole) or with an abnormalfetusundergoingresorption (partial mole), characterized by edematous, cysticchorionic villi lackingblood vessels [3,4]. A partialhydatidiform mole istriploid (with bothmaternal and paternalorigin), while a complete mole isdiploid (exclusively of paternalorigin) [5].

Gestationaltrophoblasticdiseasesencompass a spectrum of abnormalities, ranging from a simplefertilization disorder—hydatidiform mole—to malignantlesionsknownasgestationaltrophoblastic tumors (GTT) [1,2].

Recurrenthydatidiform mole isoftenreportedassporadiccases, with familialrecurrentformsbeingextremely rare [6,7]. Sporadicrecurrentcaseshavebeendocumented [4]. We report an exceptional case of a young woman managed for an eighth molar pregnancy.

Case Report:

Mrs. S.T., a 23-year-old woman, presented with eight pregnancies and no live births. She had previously undergone seven aspirations for molar pregnancies. Her seventh pregnancy was complicated by a gestational trophoblastic tumor, for which she received four cycles of methotrexate-based monochemotherapy with good clinical evolution.

She was admitted to the gynecological emergency department for the management of metrorrhagia following ten weeks and two days of amenorrhea. General examination was unremarkable. Gynecological examination revealed a macroscopically normal cervix with bleeding stigmas on speculum examination. On vaginal examination, the cervix was closed, with no tenderness or latero-uterine mass detected.

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Pelvic ultrasound revealed a heterogeneous ”honeycomb” appearance, suggestive of a hydatidiform mole (Figure 1).

Biological workup:
Hemoglobin level was 11.5 g/dL, blood type A+, and β-hCG level was positive at 458,005 mIU/mL. Emergency aspiration was performed without complications. A follow-up ultrasound one week after the aspiration showed a 19 mm retained tissue, for which she underwent a second aspiration. Histological examination confirmed a complete hydatidiform mole, and the patient was placed under close surveillance.

An etiological workup was conducted, including a cytogenetic study of the couple. Maternal karyotype: 46,XX; no chromosomal abnormalities observed in the analyzed mitoses. Paternal karyotype: 46,XY; no chromosomal abnormalities observed in the analyzed mitoses. However, due to financial constraints, the patient did not undergo genetic testing for NLRP7 mutations.

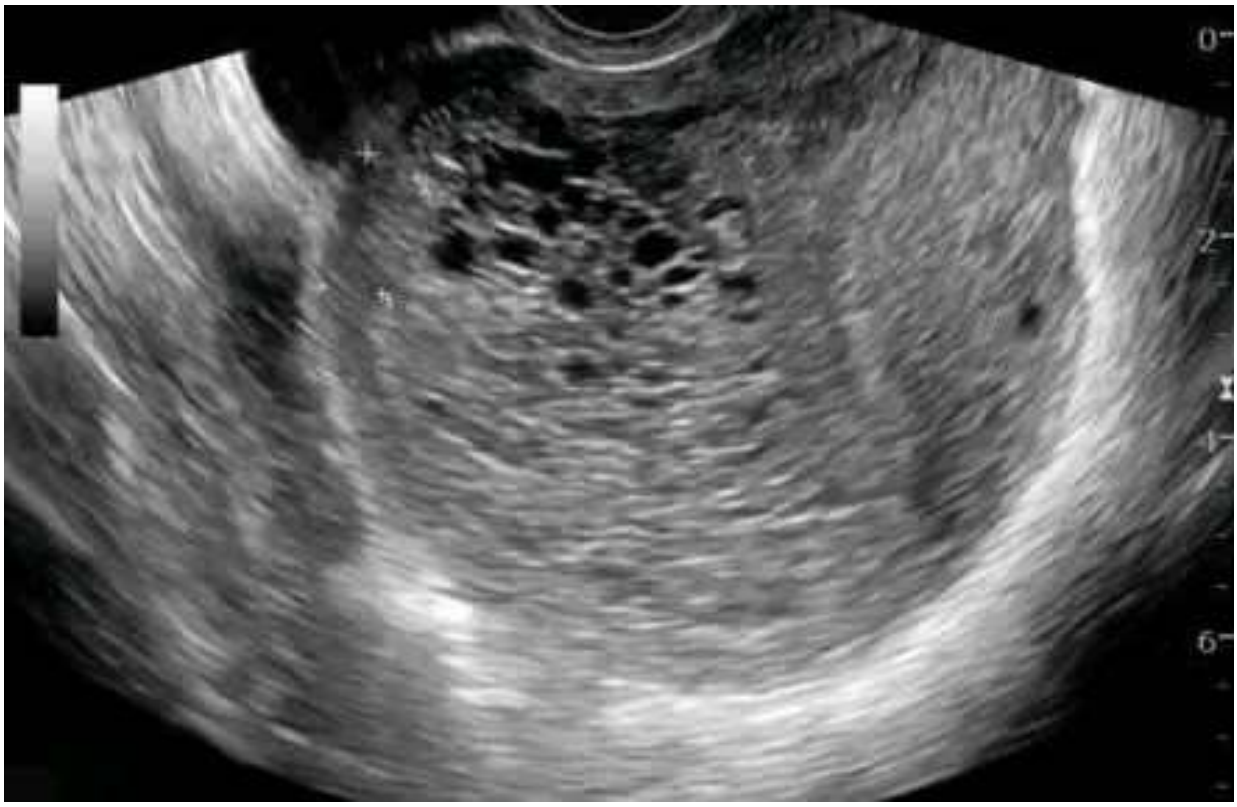

Figure 1: Ultrasound image showing a ”grape-like” appearance filling the uterine cavity, suggestive of a complete hydatidiform mole.

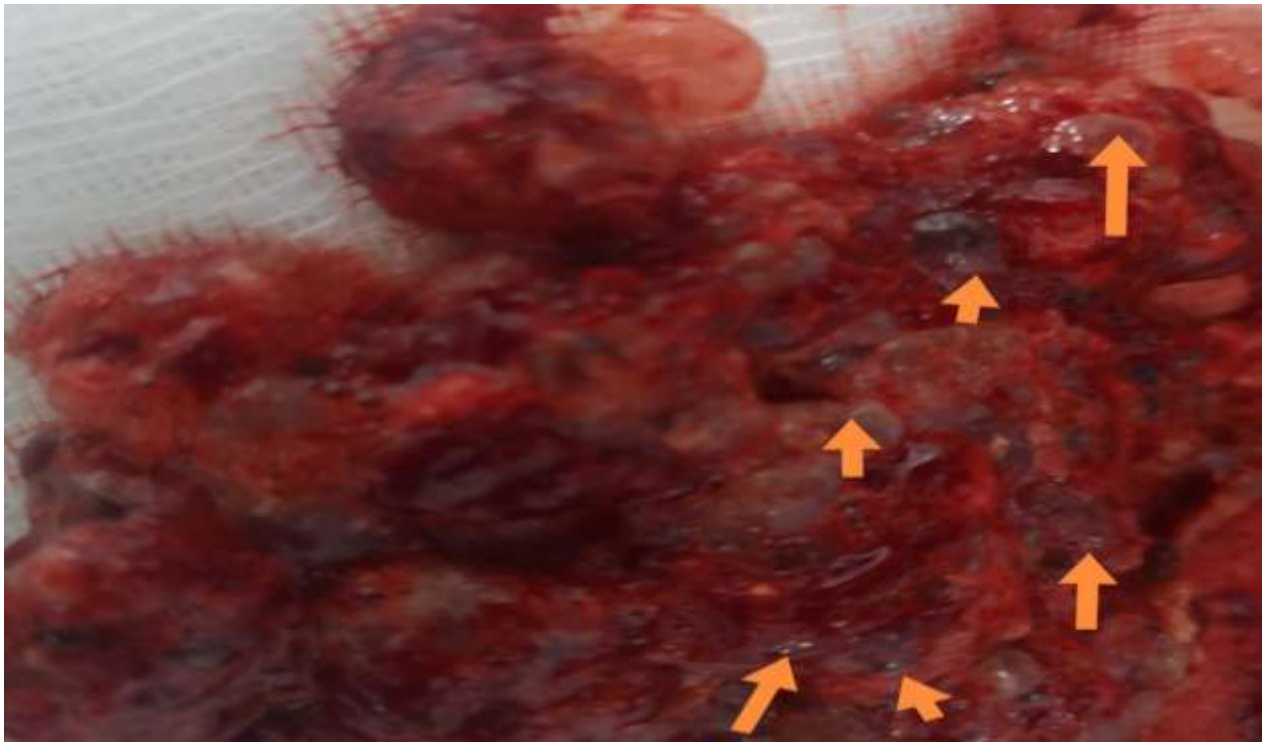

Figure 2 :Image showing the appearance of molar vesicles after ultrasound-guided aspiration.

Discussion:

Molar pregnancy is the most frequent gestational trophoblastic disease, with an incidence of 1–2 per 1,000 pregnancies in Europe and Asia [1]. At CHU Marrakech, its incidence is reported at 4.34% of all pregnancies recorded over five years [4].

The World Health Organization (WHO) classifies trophoblastic diseases into three groups:

Tableau 1. Classification des maladies trophoblastiques gestationnelles selon l'Organisation mondiale de la santé (OMS) [2]

Grossesses môlaires (lésions trophoblastiques intermédiaires de pronostic incertain) • Môle hydatiforme complète • Môle hydatiforme invasive • Môle hydatiforme partielle • Môle hydatiforme métastatique
Tumeurs trophoblastiques • Choriocarcinome gestationnel • Tumeur trophoblastique du site placentaire • Tumeur trophoblastique épithélioïde
Lésions trophoblastiques non néoplasiques et non môlaires • Nodule ou plaque du site placentaire • Site d'implantation placentaire exagéré

Sebire et al. reported that 69% of recurrences after a partial hydatidiform mole (PHM) are also PHMs, while 23% become complete hydatidiform moles (CHM). Conversely, 77% of recurrences after a CHM remain CHMs, with 23% evolving into PHMs [8]. Our patient alternated between complete and partial molar pregnancies.

Clinical Presentation:
Molar pregnancy typically presents as a threatened abortion or first-trimester miscarriage, with vaginal bleeding in over 90% of cases [4]. Our patient presented to the emergency department with the same symptoms. She underwent two aspiration procedures, achieving uterine evacuation, followed by biological monitoring.

The risk of malignant transformation of a complete hydatidiform mole is approximately 15–20%, with persistent β-hCG elevation, and 3% of cases progress to choriocarcinoma [1,4]. Among our patient's eight molar pregnancies, one progressed to gestational trophoblastic tumor (GTT).

Choriocarcinoma is a malignant tumor of the trophoblastic epithelium, characterized by invasion of uterine muscle and blood vessels, with areas of hemorrhage and necrosis. It lacks villi, and the trophoblastic tissue proliferates in sheets or columns, invading normal tissues and potentially causing distant metastases. The most common metastatic sites include the lungs, brain, liver, pelvis, vagina, spleen, intestines, and kidneys [9]. Choriocarcinoma is monitored using β-hCG levels and responds well to chemotherapy [1]. However, 25% of cases show resistance or recurrence [10]. Other types of GTT, associated with low β-hCG elevation, exhibit poor treatment response and often require hysterectomy [1].

Diagnostic Approach:
Molar disease diagnosis relies on identifying abnormal trophoblastic hyperplasia, which is typically more pronounced and circumferential in CHMs. Villous edema (hydrops) can be focal and mild in early first-trimester molar pregnancies.

Most CHMs are of androgenetic origin, with all 46 chromosomes inherited from the father. Immunohistochemical staining for p57KIP2, a product of the CDKN1C gene (paternally imprinted and maternally expressed), differentiates CHMs from PHMs or hydropic abortions of androgenetic origin [11].

Genetic Analysis:
Molecular diagnosis primarily involves quantitative fluorescent polymerase chain reaction (QF-PCR). DNA extracted from chorionic villi undergoes PCR amplification, and capillary electrophoresis identifies copy numbers of 20 microsatellites across chromosomes 13, 18, and 21, as well as sex chromosomes. This method detects trisomies 13, 18, and 21, triploidy, and sex chromosome aneuploidies [12].

Although most molar pregnancies result from isolated genetic abnormalities, studies on recurrent molar pregnancies have recently identified mutations in the NLRP7 gene, located at chromosome 19q13.4. These mutations are associated with an increased risk of recurrent molar pregnancy and may also lead to recurrent miscarriage. Therefore, the reproductive and familial history of affected patients could justify NLRP7 genetic analysis [12].

Although our patient underwent genetic testing, specific NLRP7 analysis was not performed.
Alternative Approaches: Assisted Reproductive Techniques

Several strategies have been explored to reduce the risk of recurrent molar pregnancy, including in vitro fertilization (IVF) using donor sperm or preimplantation embryos selected for diploid karyotypes [13]. Deveault et al. [14] proposed that the best strategy for achieving a normal pregnancy in these patients is preimplantation genetic screening (PGS) to select diploid embryos. However, we believe that these attempts have been unsuccessful, as they fail to account for underlying genetic phenotypes in affected women [14].

Conclusion:

Hydatidiform mole is the most common trophoblastic disease, and its diagnosis is straightforward. Aspiration alone is often sufficient for treatment. However, for recurrent cases, additional specific examinations, particularly genetic testing, are necessary. It is essential to emphasize the prognostic importance of rigorous management and prolonged follow-up.

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