MedPeer Publishers
Empowering Evidence-Based Medicine Through Peer-Reviewed Excellence

Open Access Original Article DOI : 10.70780/medpeer.000QGM4

Vaginal Hydatidiform Mole: A Rare and Uncommon Presentation

Author and Affiliation

Zakaryae Essouni, Chakir Mahfoud ,Ali Haidar ,Fatima Zohra Benbrahim ,Lina Belkouchi , Nazik Allali , Siham El Haddad , Latifa Chat .

[1] Mother and Child Radiology Department, Children's Hospital, Mohammed V University, Rabat, Morocco.

Corresponding author: Zakaryae Essouni. , Email: zikoess1993@gmail.com

Abstract

Hydatidiform mole is a form of gestational trophoblastic disease characterized by the proliferation of abnormal trophoblastic tissue within the uterine cavity, typically presenting with symptoms such as abnormal bleeding and uterine enlargement. The condition is commonly associated with the formation of a mass of hydropic villi. However, the localization of a hydatidiform mole in the vaginal area is an extremely rare phenomenon, and its atypical presentation can pose significant diagnostic challenges.

In this report, we describe a case involving a woman who presented with severe metrorrhagia. Diagnostic imaging, including transabdominal ultrasound and magnetic resonance imaging (MRI), was essential in detecting the rare vaginal mass. The imaging findings guided further investigation, and histological analysis was ultimately performed to confirm the presence of a hydatidiform mole. This case underscores the importance of thorough evaluation using advanced imaging techniques in the diagnosis of rare manifestations of hydatidiform mole.

Keywords:

Hydatiform mole; Vaginal localization ; MRI

Open Access Original Article DOI : 10.70780/medpeer.000QGM4

Main Article

Introduction:

Vaginal localization of hydatidiform mole is an exceedingly rare phenomenon, with few cases reported in the medical literature. Typically, hydatidiform mole is confined to the uterine cavity, where it presents with symptoms such as abnormal uterine bleeding and an enlarged uterus. When occurring in the vaginal canal, it can manifest as profuse vaginal bleeding and pelvic discomfort, symptoms that are challenging to differentiate from other gynecological conditions.

Case report:

A 50-year-old woman with an unremarkable medical history came in with persistent pelvic pain and unusually heavy vaginal bleeding. Laboratory tests showed an exceptionally high beta-hCG level of 250,000 IU/L.

Following this, ultrasound and histological examination revealed that she had a hydatidiform mole. To manage her condition, the gynecologists performed an aspiration procedure, which was crucial for her treatment.

A month after initial presentation, with persistent elevated beta-hCG levels and ongoing vaginal bleeding, an MRI was conducted to further investigate the condition. The MRI revealed an enlarged uterus, measuring 130x90x116 mm (HxAPxT). Within the uterine cavity, a poorly defined, irregularly contoured, circumferential lesion was observed, occupying the entire uterine space. This lesion appeared predominantly tissue-like, with low signal intensity on T1-weighted images and high signal intensity on T2-weighted images, containing liquid-filled areas. There was no diffusion restriction, and the lesion exhibited heterogeneous enhancement following gadolinium injection, extending approximately 19 cm in height. Additionally, vascular ectasias were noted both intra-lesional and peri-lesional, appearing as signal voids. The lesion infiltrated the myometrium and extended to the serosa without breaching it, reaching the lower third of the vagina, disrupting the T2 hypointensity of the vaginal wall, and infiltrating the adjacent fat (figure 1).

Further examination through ultrasound confirmed the presence of a heterogeneous echogenic mass with a "snowstorm" appearance, absence of a fetal pole and an enlarged

uterus which was notably vascularized on Doppler imaging(figure 2). This vascularity likely contributed to the significant bleeding observed in the patient. A TAP scan was performed to assess for metastatic spread and revealed characteristic images of pulmonary metastases, displaying a balloon-like appearance indicative of advanced disease (figure 2).

In light of these findings, the patient was scheduled for a hysterectomy to manage the extensive disease and address the associated symptoms

Discussion:

Hydatidiform mole (gestational trophoblastic disease) is a trophoblastic disease that usually occurs in pregnancy, characterized by the growth of abnormal trophoblast tissue. This disease can appear as a benign or malignant disease [1].

The diagnosis of hydatidiform mole is established through history taking, physical examination, and investigations (quantitative beta-hCG examination, pelvic ultrasound, and histopathology examination). Clinically, hydatidiform mole is difficult to diagnose because the signs and symptoms are not specific. Patients usually come in pregnant with complaints of irregular vaginal bleeding, severe nausea and vomiting, expulsion of vesicles resembling grapes, uterine enlargement, clinically resembling preeclampsia, anemia, or hyperthyroidism [2], [3]. The previous case reports of hydatidiform mole also complained of heavy vaginal bleeding, which lasts 1–2 months, and mainly occurs after curettage [4], [5].

Beta-hCG is a key biomarker in gestational trophoblastic diseases, with elevated levels supporting the diagnosis of hydatidiform mole. However, other conditions like choriocarcinoma and certain bimorphic tumors can also produce beta-hCG, albeit at lower levels [6], while placental site trophoblastic tumors (PSTTs) demonstrate intermediate proliferation [7]. The initial beta-hCG level in this case was 250,000 IU/L, significantly higher than typical levels observed in normal early pregnancies. This elevated level, coupled with the patient's clinical presentation of profuse metrorrhagia and pelvic pain, raised strong suspicion for a gestational trophoblastic disease, which was later confirmed by histological analysis.

Ultrasound is crucial for diagnosing hydatidiform mole, especially when there is

clinical suspicion and elevated beta-hCG levels. Transvaginal ultrasound is particularly effective for examining myometrial invasion due to its superior visualization of the interface between trophoblastic tissue and myometrium [3]. Hydatidiform mole typically appears as a heterogeneous endometrial mass with variable echogenicity, often described as a "snowstorm" pattern due to multiple echogenic foci [8]. The fluid-filled vesicles within the mole vary in size and increase with gestational age [2], [6]. In this case, ultrasound revealed a large, irregularly contoured mass occupying the uterine cavity and extending to the lower third of the vagina.

While ultrasound is valuable, it cannot definitively assess malignancy levels. Computed tomography (CT) scans are usually employed to detect metastases, revealing enlarged uterine and ovarian structures with potential vascular malformations (8). MRI was pivotal in revealing a lesion occupying the entire uterine cavity and extending into the lower third of the vagina. This advanced imaging not only confirmed myometrial infiltration but also highlighted the involvement of adjacent fat and associated vascular ectasias, which are crucial for assessing the severity and planning the therapeutic intervention.

The primary treatment for hydatidiform mole is suction curettage, with medical management as an alternative. Sharp curettage is avoided to prevent uterine perforation [9]. If histological examination of tissue is not performed, pregnancy testing should occur three weeks after management [9], [10]. Suction curettage has a high success rate, with 84% for complete moles and 99.5% for partial moles. Preparedness for potential massive bleeding is essential [8].

CONCLUSION

In summary, this case highlights the rare and unusual localization of a hydatidiform mole in the vagina, emphasizing the complexity of its diagnosis. The elevated beta-hCG levels and advanced imaging techniques, including MRI, were crucial in revealing the extent of the lesion and its invasion. Histological confirmation was essential for a definitive diagnosis. The findings underscore the importance of considering atypical presentations of hydatidiform moles and using comprehensive diagnostic approaches to manage such cases effectively.

Open Access Original Article DOI : 10.70780/medpeer.000QGM4

FIGURES :

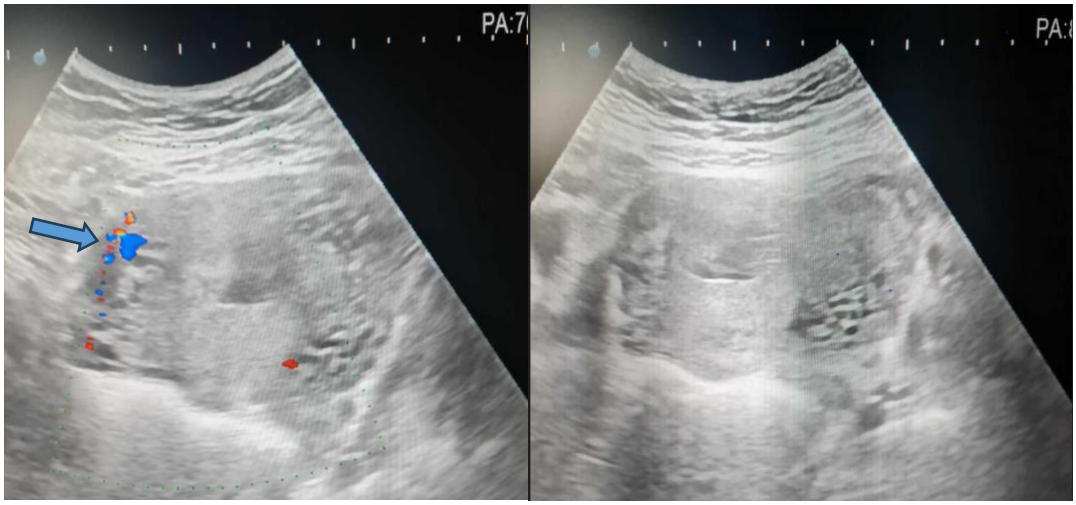

Figure 1: Ultrasound showing a large, irregular, heterogeneously echogenic mass within the uterine cavity with rich vascularization on Doppler, consistent with a hydatidiform mole.

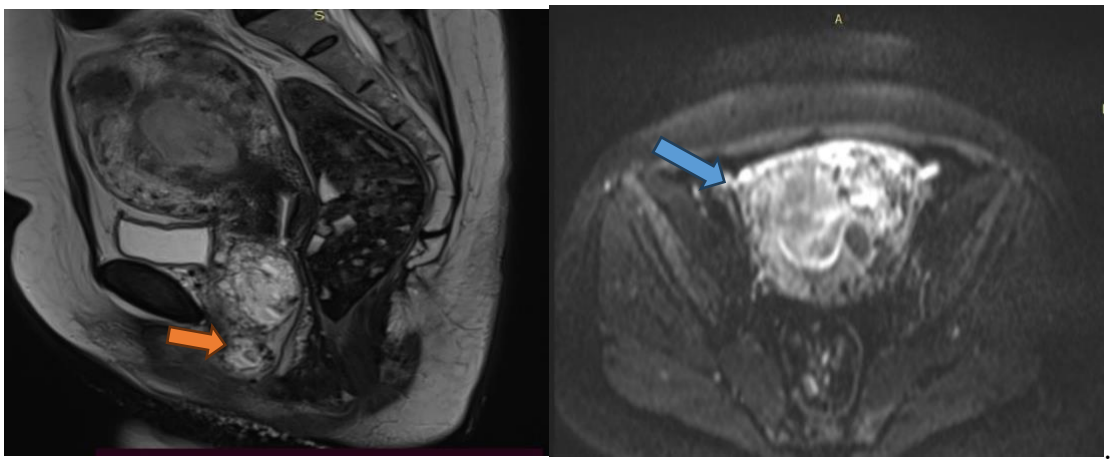

Figure 2 Pelvic MRI (T2-weighted) showing a heterogeneously hyperintense mass occupying the uterine cavity, extending to the lower third of the vagina. Diffusion-weighted imaging (DWI) shows restricted diffusion, with corresponding low ADC values, confirming the presence of a highly cellular lesion consistent with a vaginal hydatidiform mole.

Open Access Original Article DOI : 10.70780/medpeer.000QGM4

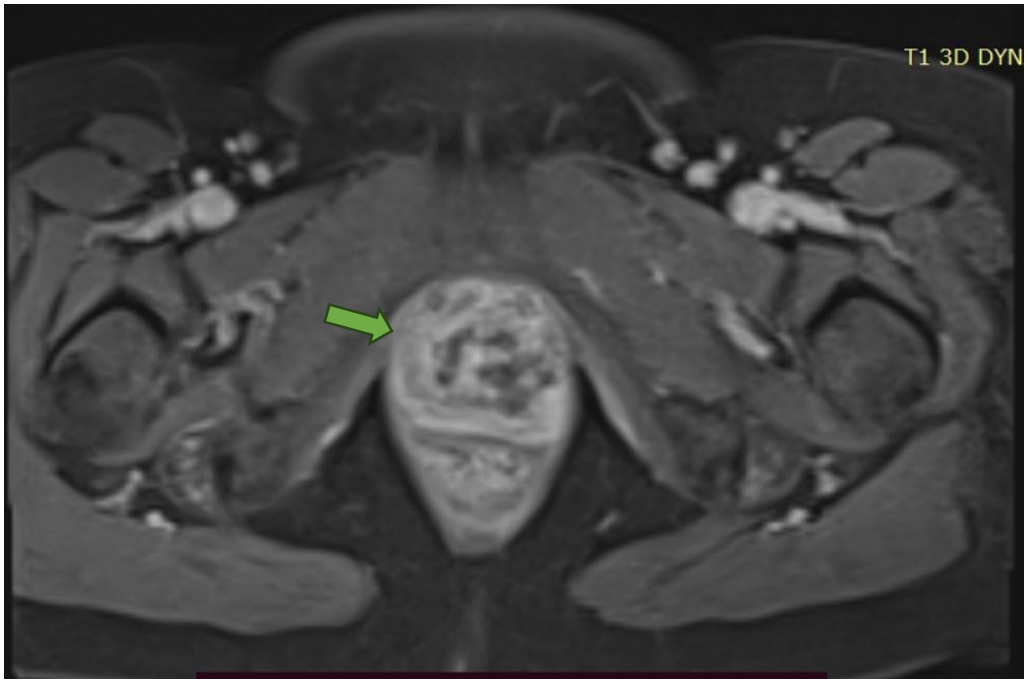

Figure 3 : Pelvic MRI (T1 dynamic fat-sat) demonstrating heterogeneous enhancement of a lesion occupying the uterine cavity, with notable post-contrast enhancement extending to the lower third of the vagina.

Figure 4 Axial CT scan of the chest revealing multiple metastatic lesions in the lungs, displaying the characteristic "balloon-like" appearance, consistent with pulmonary metastases from the hydatidiform mole.

Acknowledgements

None

References :

1. Hui P, Buza N, Murphy KM, Rennett BM. Hydatidiform moles: Genetic basis and precision diagnosis. Annu Rev Pathol. 2017;12:449-85. https://doi.org/10.1146/ annurev-pathol-052016-100237 PMid:28135560
2. Elsayes KM, Trout AT, Friedkin AM, Liu PS, Bude RO, Platt JF, et al. Imaging of the placenta: A multimodality pictorial review. Radiographics. 2009;29(5):1371-91. https://doi.org/10.1148/ rg.295085242 PMid:19755601
3. Betel C, Atri M, Arenson A, Khalifa M, Osborne R, Tomlinson G. Sonographic diagnosis of gestational trophoblastic disease and comparison with retained products of conception. J Ultrasound Med. 2006;25(8):985-93. https://doi.org/10.7863/ jum.2006.25.8.985 PMid:16870892
4. Aytan H, Caliskan AC, Demirturk F, Koseoglu RD, Acu B. Cervical partial hydatidiform molar pregnancy. Gynecol Obstet Invest. 2008;66(2):142-4. https://doi.org/10.1159/000141647 PMid:18583920
5. Schwentner L, Schmitt W, Bartusek G, Kreienberg B, Herr D. Cervical hydatidiform mole pregnancy after missed abortion presenting with severe vaginal bleeding: Case report and review of the literature. Eur J Obstet Gynecol Reprod Biol. 2011;156(1):9-11. https://doi.org/10.1016/j.ejogrb.2010.12.029 PMid:21272989
6. . Hancock BW. Staging and classification of gestational trophoblastic disease. Best Pract Res Clin Obstet Gynaecol. 2003;17(6):869-83. https://doi.org/10.1016/ s1521-6934(03)00073-7 PMid:14614886
7. Allen SD, Lim AK, Seckl MJ, Blunt DM, Mitchell AW. Radiology of gestational trophoblastic neoplasia. Clin Radiol. 2006;61(4):301-13. https://doi.org/10.1016/j.crad.2005.12.003 PMid:16546459
8. Dhanda S, Ramani S, Thakur M. Gestational trophoblastic disease: A multimodality imaging approach with impact on diagnosis and management. Radiol Res Pract. 2014;2014:842751. https://doi.org/10.1155/2014/842751 PMid:25126425
9. Sebire NJ, Seckle MJ. Gestational trophoblastic disease: Current management of hydatidiform mole. BMJ. 2008;337:a1193. https://doi.org/10.1136/bmj.a1193 PMid:18708429
10. Qian J, Deveault C, Bagga R, Xie X, Slim R. Women heterozygous for NALP7/NLRP7 mutations are at risk for reproductive wastage: Report of two novel mutations. Hum Mutat. 2007;28(7):741. https://doi.org/10.1002/humu.9498 PMid:17579354