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Invasive Mole of the Uterus: A Case Report

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Abstract

Invasive mole is a rare subgroup of gestational trophoblastic disease characterized by the invasion of molar tissue into the myometrium or uterine vasculature. In this paper, we report the third case of invasive mole described in the Malagasy literature. A 33-year-old woman was referred to the Soavinandriana Hospital, her complaint was persistent vaginal bleeding during 2 months, occurring at 3 months of pregnancy with biological anemia without hemodynamic repercussions. The human chorionic gonadotropin (HCG) level was 385,931 mIU/ml. A haemostasis hysterectomy was performed. Histological examination showed an enlarged uterus and endometrial cavity containing edematous chorionic villi with trophoblastic proliferation invading the myometrium. The diagnosis was an invasive mole, stage I, FIGO score 6. Chemotherapy was prescribed but was not honored. After 45 days of follow-up, the serum βHCG level decreased to 1803 mIU/ml, without clinical symptoms. The patient then lost sight. Persistent vaginal bleeding after pregnancy may be the only clinical symptom of an invasive mole and should raise suspicion. Histological examination establishes the diagnosis. As this is an unusual cause of vaginal bleeding, our case should remind physicians that when faced with this symptom, the possibility of an invasive mole should be considered in order to make an early diagnosis for less aggressive treatment.

Keywords

Hydatiform Mole, Gestational Trophoblastic Disease, Invasive Mole, Madagascar

1. Introduction

Invasive mole is a rare subgroup of gestational trophoblastic disease, usually seen in women of childbearing age [1]. It is characterized by the invasion of the

myometrium or the uterine vessels by molar tissue composed of hydropic villi with hyperplasia of the trophoblastic elements [2]. Invasive mole was first described in Madagascar in 1965 [3]. Another case was diagnosed in 2018 [4]. We report a third case of invasive mole diagnosed at a relatively early stage and whose short-term clinical and biological follow-up was favorable after surgical treatment.

2. Case Report

A woman 33 years old, P3A1, was admitted to the gynecology department of the Soavinandriana Hospital Center for metrorrhagia. In her history, there was a spontaneous abortion in December 2016, after a 3-month amenorrhea. Currently, she complained for genital bleeding during 2 months and presented a profuse vomiting on admission with a good general state of health. The blood pressure was 12/8 and 37.2˚C of body temperature. The conjunctivae were pale. There was no cough or dyspnea. The abdomen was soft. On speculum examination, the cervix was inflamed, with active bleeding. The vagina was macroscopically normal. On vaginal examination, the uterus was of normal volume and the fornices of the vagina were free.

The patient had received symptomatic treatment with analgesics, antihaemorrhagics and antibiotic therapy.

The initial biological assessment showed on the blood count a microcytic hypochromic anemia with a hemoglobin level of 4.20 g/100ml. The hematocrit was 14.6% and the platelet count was 396,000 platelets per µl of blood, with O positive blood type. The patient benefited from a bloods transfusion iso-group iso-rhesus.

The level of βHCG was initially high, up than 385.931 mIU/ml. The C-Reactive Protein test was normal.

The pelvic ultrasound objectified a uterus increased in volume, 72.3 mm × 75.2 mm × 75.7 mm, with an echogenic, heterogeneous and intracavity formation, with regular border, measuring 60 mm × 36 mm × 55 mm, associated with multiple cavities. The right and left adnexa were no special features. The posterior fornix contained a small effusion. A mole or choriocarcinoma was suspected.

On laparotomy, the uterus was soft and globular. An hysterectomy for hemostasis with left oophorectomy was performed. The postoperative care was simple.

On gross findings, the uterus measured 10 × 8 × 4 cm, the diameter of the cervix was 1.5 × 1.5 cm. There were multiple graplike vesicles measuring in clusters 6 cm in the uterine cavity and the largest of which measured 2 × 2 cm. The molar vesicles infiltrated the myometrium. The serosa was smooth. The ovary was no particularity.

On histological examination, the cervix was normal. The endometrium was decidualised, with endometrial glands in secretory phase. The chorionic villi

were hydropic, avascular, lined by hyperplastic, exuberant cytotrophoblastic and syncitiotrophoblastic cells. The molar villi, the cytotrophoblastic and syncitiotrophoblastic cells infiltrate the internal (2/3) part of the myometrium up to the external arcuate vessels (**Figure 1**). The serosa was preserved. There was no vascular invasion or excessive mitosis. The histological diagnosis was an invasive hydatidiform mole, stage I, score 6 according to the FIGO staging system.

3. Discussion

Hydatidiform mole is a benign tumor with malignant potential [5]. The risk of progression to invasion is greater in multiparous patients than in those with a history of spontaneous abortion or an anterior mole [6]. To our knowledge, this is the third case of invasive mole reported in the Malagasy literature. The first case was described by Rajaonera [3] in 1965 and the main differential diagnosis mentioned was then choriocarcinoma [3]. Indeed, choriocarcinomas differ from invasive moles by the presence of chorionic villi [5]. The second case, described by Rabarikoto in 2018 [4], was observed at the complication stage with acute abdominal pain, significant metrorrhagia, and cardiovascular collapse in the context of uterine perforation 2.5 cm in diameter. In our observation, the symptom occurred after a notion of spontaneous abortion, 3 months of amenorrhea, without medical follow-up, without histological examination of the products of conception. No biological or ultrasound examination was done during the previous pregnancy. The patient only came to consult after the persistence of metrorrhagia 2 months later after the abortion. This observation shows the interest of a systematic anatomo-pathological examination of the products of conception

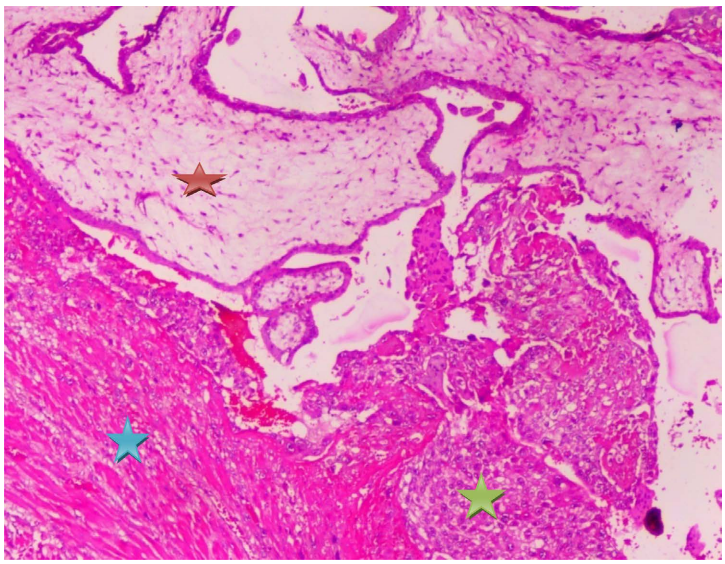

Figure 1. Uterus. Invasion of the myometrium (blue star) by hydropic molar villi (red star) associated with hyperplastic trophoblast cells (green star), corresponding to an invasive mole (HE × 100). Source: Department of Pathology, Soavinandriana University Hospital (CENHOSOA), Antananrivo Madagascar.

after abortion, because it would have made it possible to detect early the existence of a molar pregnancy.

Indeed, in Madagascar, contrary to the customs in certain countries, the analysis of the placenta and the products of conception is not common, whereas several pathologies could be diagnosed at the end of the examinations of the placenta and/or the products of conception, among them, placental pathology, maternal-fetal infection, fetal malformation or even chromosomal abnormalities [7].

Spontaneous presentation of an invasive mole is extremely rare, and it is preceded by a hydatidiform mole in approximately 95% of cases, with a usual interval of less than 6 months between presentation of the case and diagnosis of molar invasion [5]. In the 2 observations of Rahaoui, the invasive mole progressed after the evacuation of the complete mole with intervals of 3 months and 3 years [5].

An invasive mole is a form of gestational trophoblastic neoplasia (GTN) that results from abnormal proliferation of the placental trophoblast. Generally, NTGs appear when the mechanisms for the regulation of proliferation control and trophoblastic invasion are lost [5].

Ultrasound is the gold standard for the diagnosis of invasive mole [5]. B-mode ultrasound is useful for detecting the presence of an abnormal uterine mass. On ultrasound, invasive mole, implantation site tumors and choriocarcinomas usually present as a heterogeneous, hyperechogene solid mass with cystic vascular spaces, located in the myometrium [8].

According to the FIGO 2000 classification, there are four anatomical stages (see **Table 1**). Based on this classification and the FIGO 2000 prognostic score (see **Table 2**), our case was classified as stage I, FIGO score 6.

If complete mole can transform into a persistent trophoblastic tumor, it will be essential to detect them early to avoid very serious life-threatening complications in women of childbearing age.

The risk of recurrence of trophoblastic disease treated with chemotherapy is 3% [10]. A follow-up of at least 12 months with monthly determination of the beta-HCG level is recommended, starting from the first two weeks of consecutive negative beta-HCG levels [10] [11]. In our observation, the short-term evolution was favorable with normalization of the clinical examination and drop in the level of βHCG at D45 postoperatively. But the patient was lost to follow-up after this last follow-up and the monthly control of the beta-HCG level could not

Table 1. Anatomical staging according to FIGO 2000 [9].

Stade I	Disease confined to the uterus
Stade II	GTN extends outside of the uterus, but is limited to the genital structures (adnexa, vagina, broad ligament).
Stade III	GTN extends to the lungs, with or without known genital tract involvement.
Stade IV	All other metastatic sites.

Table 2. Prognostic scoring system by FIGO 2000 [9].

Prognostic variables/Score	0	1	2	4
Age	<40	≥40	-	-
Antecedent pregnancy	mole	abortion	term	-
Interval months from index pregnancy*	<4	4 - <7	7 - <13	≥13
Pretreatment serum hCG (IU/ml)**	$<10^3$	10^3 - $<10^4$	10^4 - $<10^5$	$\geq 10^5$
Largest tumor size (including uterus)	<3 cm	3 - <5 cm	≥5 cm	
Site of metastases	lung	spleen, kidney	Gastro-intestinal	brain, liver
Number of metastases***	0	1 - 4	5 - 8	>8
Previous failed chemotherapy	-	-	Single drug	2 or more drugs

*Interval between the date of termination of the previous pregnancy and the date the start of treatment of the trophoblastic tumor; **Total hCG; ***Lung metastases are diagnosed by chest x-ray.

be carried out.

Although a mole and choriocarcinoma were suspected clinically and on ultrasound, histological examination established the diagnosis. It is important to distinguish choriocarcinomas from invasive moles, which have a more favorable prognosis [5]. In our observation, the histological examination easily made the diagnosis of invasive mole and eliminated the possibility of choriocarcinoma.

4. Conclusion

Through our observation, we would like to remind that persistent vaginal bleeding after pregnancy may be the only clinical symptom of an invasive mole and should lead to suspecting it in order to make an early diagnosis for less aggressive treatment. Histological examination establishes the diagnosis. Multidisciplinary management helps to optimize the prognosis of these rare pathologies.

Conflicts of Interest

The authors declare no conflict of interest.

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