Twin pregnancy of hydatidiform mole and viable fetus: a late diagnosis - case report

Gestação gemelar de mola hidatiforme e feto viável: um diagnóstico tardio - relato de caso

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ABSTRACT
Twin pregnancy with hydatidiform mole and viable fetus is a rare event, evolving, in most cases, to abortion or medical interruption due the associated risks. Prenatal diagnosis allows individualized, rigorous and specialized monitoring, favoring the early identification of complications. We report, based on information obtained through medical record review, interviews with patient and professionals involved and literature review, a case of twin pregnancy with hydatidiform mole and healthy newborn diagnosed at delivery. Although the uncomplicated outcome that was presented suggests the possibility of expectant conduct, it is important to recognize the rarity of the case and the associated risks, both during pregnancy, after uterine emptying and in future pregnancies, and a follow-up after molar pregnancy is essential, which is interrupted approximately half of the patients. Adherence to follow-up is favored by the correct guidance to pregnant women, and prenatal diagnosis is fundamental for ensuring better doctor-patient dialogue. Therefore, it is important to highlight that, in order to properly manage hydatidiform mole pregnancies, due attention should be paid to the early diagnosis.

Keywords: hydatidiform mole, pregnancy, twinning, gestational trophoblastic disease.

RESUMO
Gestação gemelar com mola hidatiforme e feto viável é um evento raro evoluindo, na maioria dos casos, para aborto ou interrupção médica devido aos riscos associados. O diagnóstico pré-natal possibilita acompanhamento individualizado, rigoroso e especializado, favorecendo a identificação precoce de complicações. Relatamos, a partir de informações obtidas por meio de revisão de prontuário, de entrevistas com paciente e profissionais envolvidos e de revisão de literatura, um caso de gestação gemelar com mola hidatiforme e recém-nascido saudável diagnosticado ao parto. Apesar de o desfecho sem complicações apresentado sugerir a possibilidade de conduta expectante, é importante reconhecer a raridade do caso e os riscos associados, tanto durante a gestação, quanto após esvaziamento uterino e em gestações futuras, sendo imprescindível seguimento pós-molar, que é interrompido por aproximadamente metade das pacientes. A adesão ao seguimento é favorecida pela correta orientação às gestantes, sendo o diagnóstico pré-natal fundamental por garantir melhor diálogo médico-paciente. Portanto, é importante destacar que, visando manejo adequado de gestações de mola hidatiforme, deve-se dar devida atenção ao diagnóstico precoce.

Palavras-chave: Mola hidatiforme, gestação, gemelar, doença trofoblástica gestacional.

1 INTRODUCTION

The twin gestation of Hydatidiform mole (HM) coexisting with living fetus is a rare entity and the incidence varies from one in 22 thousand to one in 100,000 pregnancies. (YELA *et. al.*, 2011) The delivery of a viable newborn in these cases is extremely rare, as most pregnancies result in abortion or extreme preterm delivery and the associated risks usually lead to the maternal option of terption. (OLIVEIRA, et al, 2013)

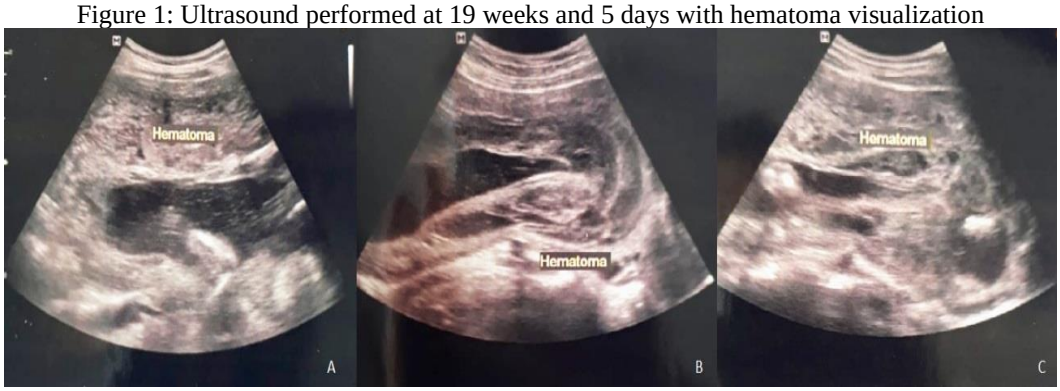
There are four possible types of pregnancy that result in the coexistence of a living fetus and molar gestation: dizygotic twins with Complete Hydatidiform Mole (CHM) and normal fetus (diploid with normal placenta); dizygotic twins with Partial Hydatidiform Mole (PHM) and normal fetus; single pregnancy with triploid fetus and partial hydatidiform molar placenta; and twin gestation in which one fetus is normal diploid with normal placenta and the other is triploid with partial hydatidiform molar placenta. (OLIVEIRA, et al, 2013)

The report presented, prepared according to information obtained through analysis of medical records, interviews with professionals involved in the case and review of the literature, illustrates an unusual occurrence of twin gestation with HM and a viable fetus diagnosed during delivery.

2 CASE REPORT

A 17-year-old, primigravida, single, Brazilian patient presented an episode of transvaginal bleeding during the first trimester of pregnancy, which was reported as "similar to menstruation", but with some vesicles "similar to grape clusters". Obstetric ultrasound was performed, evidencing ectopic pregnancy, with gestational age of 19 weeks and 5 days and presence of chorionic hematoma. The sonographic findings of the same date suggested good evolution and fetal morphology without gross structural anomalies (Figure 1). The episode of vaginal bleeding was attributed to the chorionic hematoma and the patient was instructed not to perform intense physical efforts, without other care, following routine prenatal care.

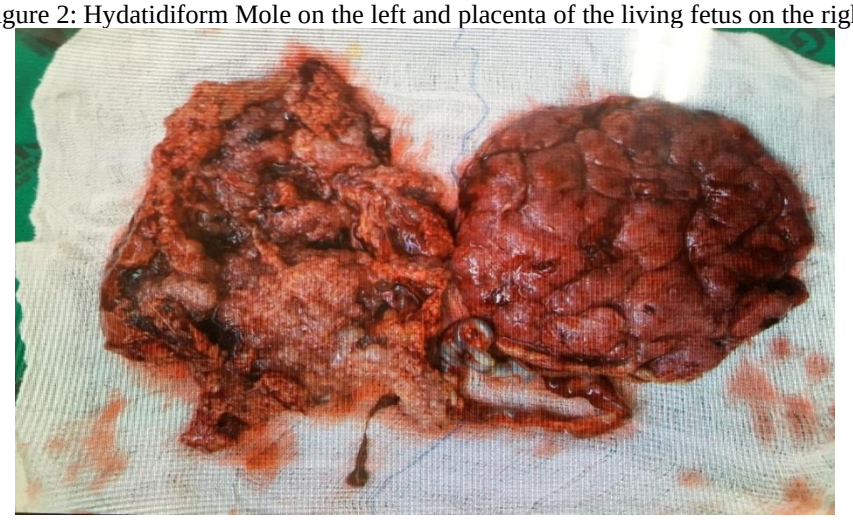
Figure 1: Ultrasound performed at 19 weeks and 5 days with hematoma visualization



At the 28th week of pregnancy, she was admitted to public maternity in spontaneous delivery. The amniotic fluid presented yellowish appearance, without foul odor. Magnesium sulfate was initiated for fetal neuroprotection, antibiotic therapy for the treatment of chorioamnionitis and betamethasone. The day after admission, the patient presented hemoglobin of 6.8 g/dL and was submitted to red blood cells concentrate transfusion. The pregnancy was completed by vaginal delivery, without maternal complications, with healthy female neonates, weighing 1,290 kg and APGAR 7/8.

During discharge, a second placenta with molar aspect was verified. Uterine curettage was performed and the material was referred for pathological analysis, confirming diagnostic suspicion of CHM and chorioamnionitis (Figure 2).

Figure 2: Hydatidiform Mole on the left and placenta of the living fetus on the right



Newborn evolved with good neuropsychomotor performance and no sequelae. The patient underwent abdominal ultrasound without alterations and was instructed to perform fortnightly hCG dosages. The hCG level verified at the date of delivery was 134,890 mIU/ml and the first result below the reference value (5mIU/mL) occurred in the third month after uterine emptying, when the last dosage was performed, considering that

the patient interrupted the follow-up before the previously established six-month deadline.

3 DISCUSSION

HM is a placental pathology of androgenetic origin. (CANDELIER, 2015) It is part of the group called Gestational Trophoblastic Diseases, being an infrequent complication of pregnancy with potential malignant evolution. Among the risk factors associated with the occurrence of HM, we highlight: pregnancy at extremes of maternal age (less than 20 years or older than 35 years), smoking and previous events of molar pregnancy, miscarriage or infertility. (GHASSEMZADEH; KANG 2020)

Two types of HM are recognized, differentiated from clinical, histopathological and karyotype characteristics: complete hydatidiform mole and partial or incomplete hydatidiform mole, the first being more frequent. (ANDRADE, 2009) As for histopathology, HM is formed by excessive proliferation of chorionic villi associated with edema, resulting in high levels of human chorionic gonadotropin (hCG) production. CHM has no fetal elements and shows more pronounced proliferation of trophoblast and higher frequency of atypia when compared to PHM, in which it is possible to verify a fetus, usually unfeasible. (GHASSEMZADEH; KANG 2020).

Karyotype analysis may also be useful in differentiating between PHM and CHM. CHM is the result of fertilization of an egg without an active nucleus and, therefore, with all genes of paternal origin, being the karyotype usually female diploid (46 XX) and, in 10% of cases, karyotype (46 XY) is verified. PHM, in turn, is formed when a normal egg is fertilized by two sperm or by a diploid sperm, thus, it is associated with triploid (69XXY) or more rarely tetraploid (92XXXY), with the set of extra haploid chromosomes of paternal origin (ANDRADE, 2009).

Regarding clinical manifestations, most PHM are diagnosed as spontaneous abortions and the diagnosis is only clarified after histopathological report of fetal tissue. HHC, however, because it does not have fetal tissues, is usually diagnosed in early stages of pregnancy by ultrasound, and the most frequent complaints are hyperemesis and vaginal bleeding in the first trimester, which is characterized as similar to "grape clusters" (ANDRADE, 2009).

Late findings (after the first trimester of pregnancy) are also associated with CHM, such as signs and symptoms of hyperthyroidism, including shorthand and tremors, caused by the high level of hCG. The incidence of malformations and fetal complications is

higher in pregnancies with PHM. However, the risk of maternal complications such as pre-eclampsia, trophoblastic embolization, hyperemesis gravidarum, vaginal bleeding, and malignant trophoblastic disease is significantly higher in CHM. (ANDRADE, 2009; GHASSEMZADEH; KANG, 2020) The risk of malignancy in the case of CHM that coexists with normal fetus is 56% to 62%, being much higher than that of PHM with viable fetus, which is 4%. (OLIVEIRA; *et al*, 2013)

The complaint of vaginal bleeding in pregnant women should lead to the investigation of the quantitative level of hCG. In cases of CHM, this level is expected to be considerably elevated, usually higher than 100,000 mIU/Ml. However, for cases of PHM, only 10% have hCG values greater than 100,000. (ANDRADE, 2009)

Pelvic ultrasonography is the imaging exam of choice in the face of a suspicion of HM, although only half of the first trimester molar pregnancies present themselves classically on the examination. (CANDELIER, 2015). In CHM, ultrasonographic findings include a heterogeneous mass in the uterine cavity with uterine cavity with anechoic chambers and the absence of amniotic fluid and embryo or fetus. On the other hand, in PHM the presence of amniotic fluid and fetus (which may or may not be feasible) can be verified, which makes ultrasound diagnosis difficult (GHASSEMZADEH, KANG, 2020).

When there is an ultrasound or clinical suspicion of CHM or PHM, the pregnant woman should be guided regarding the risks associated with the pathology, the need to empty the contents of the uterine cavity, preferably by vacuum-aspiration, and the need for a follow-up.

Follow-up after molar pregnancy is essential for the early detection of which patients will progress to Gestational Trophoblastic Neoplasia. Its fundamental principle is the weekly sea dosage of hCG until three consecutively normal dosages (less than 5mIU/mL) and, subsequently, weekly dosages for six months from the first negative value, thus achieving the remission of HM. During the follow-up, it is essential that the patient makes use of a contraceptive method, and the intrauterine devices are contraindicated (FERRAZ; *et al*, 2015).

The great challenge of a follow-up after molar pregnancy is to ensure the adhering to hormonal surveillance of hCG. This can be especially difficult in underdeveloped countries or with large territorial distances (FERRAZ; *et al*, 2015).

The prenatal service performed throughout pregnancy and the puerperium favors the good development of the fetus and a healthy pregnancy for the woman. With follow-

up, it is possible to identify early problems in the course of pregnancy, allowing medical interventions and proper guidance to pregnant women to be carried out in a timely manner. (MEDEIROS, 2020)

In the case reported, the patient's age, 17 years, is considered a risk factor for the condition. However, even in view of this fact and vaginal bleeding in the aspect of "grape cluster" that occurred in the first gestational trimester, the clinic and ultrasound findings were not sufficient for the early diagnosis of HM. In addition to not always presenting HM in a typical way on ultrasound and the low prevalence of this pathology, being a twin gestation of HM and a viable fetus, ultrasound analysis may have been hampered by the presence of the fetus.

The non performing the prenatal diagnosis of HM is associated with a higher incidence of fetal and maternal complications during and after pregnancy. The fact that HM was diagnosed only during delivery made it impossible to adequately and specialized gestational follow-up, a better orientation of the mother regarding the risks, the need for uterine emptying and the importance of adhering to a follow-up.

Studies suggest that most patients are adhering to a follow-up after the molar pregnancy, (SILVEIRA, 2019; MENDONÇA, *et al*, 2016) as was the case of the patient in question. The adoption of a follow-up after molar pregnancy is favored by the correct orientation to pregnant women, and prenatal diagnosis is fundamental because it ensures better doctor-patient dialogue, providing a greater understanding of patients about the pathology. Therefore, it is important to highlight that, aiming at proper management of the case, due attention should be paid to early diagnosis of HM. This should be performed not only by ultrasound analysis, but also through a thorough clinical evaluation and scheduled beta-hCG dosage, especially when vaginal bleeding occurs during the first trimester.

Although the uncomplicated outcome presented in the case, what suggests the possibility of expectant conduct, it is important to recognize the risks associated with the condition, both during pregnancy and after uterine emptying, in which a follow-up after molar pregnancy is fundamental. Thus, prenatal diagnosis of HM should be a priority.

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