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Clinical outcome in a neonate born from a coexisting pregnancy with a molar pregnancy

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ABSTRACT

Introduction: The coexistence of a live fetus in a molar pregnancy is extremely rare and represents a challenge for the maternal-perinatal team. Obstetric aspects have been described previously, but it's possible effects on the newborn have not been detailed. The case that we present to our knowledge is the first to describe such outcomes. Aim of this case report is to describe the clinical events that occur in a neonate born from the previous coexistence of a molar pregnancy with a live fetus.

Case Report: We present the case of a 35-week preterm neonate born by cesarean section due to loss of fetal well-being, who presented with severe intrauterine growth restriction and a high suspicion of intrauterine flow redistribution, with mild hyaline membrane disease. At 48 h after birth, enteral nutrition with infant formula was started in the absence of breast milk, reaching an oral volume of 75 cc/kg/day, after which he presented porraceous residues, abdominal distension, absence of hydroaerial noises, and deterioration. The diagnosis of necrotizing enterocolitis was considered, responding to medical management without the need for a surgical approach. The patient was discharged at 19 days of life with outpatient follow-up.

Conclusion: The outcome of complications in a newborn of this rare coexistence is similar to those associated with prematurity and intrauterine growth restriction, the latter being more severe. It is important to focus on the mother-child binomial from the antenatal stage, as well as family-centered care in such a way that modifiable factors such as the degree of acceptance support and availability of autologous milk turn out to be important allies in the context of places with limited resources.

Keywords: Hydatidiform mole; newborn; premature newborn; fetal growth retardation; necrotizing enterocolitis

INTRODUCTION

Hydatidiform mole is a spectrum of abnormal trophoblastic proliferation, originates in the placenta, and is mostly benign. Likewise, a higher incidence has been described in young women under 20 years of age (10.52/1000 births), and then, it increases again, although in smaller numbers after 39 years of age (5.95/1000 births), thus following a bimodal distribution (1,2). In general, the incidence is variable depending on the population studied, ranging from 0.6 to 8/1000 births, with an average of 4.17/1000 live births (3).

They are classified as complete or partial and although they are not serious, they have premalignant potential and can become invasive. The complete mole is the most common type and contains no fetal parts, occurs when an enucleated egg is fertilized by two spermatozoa or one haploid duplicating spermatozoon. In partial moles, this karyotype arises when a normal sperm subsequently fertilizes haploid ovum duplicates and or when two sperms fertilize a haploid ovum. (4).

In both conditions, due to a defect in gametogenesis or fertilization, the placental villi become edematous, forming small grape-like structures. The most frequent clinical manifestation is metrorrhagia and larger uterus with an abnormal human chorionic gonadotropin hormone level for gestational age. Histological analysis is the gold standard for diagnostic purposes (4,5).

Molar pregnancy rarely coexists with a normal fetus, and although the risk of miscarriage is high, live births have been described between 40% and 60%, which is why if there are no abnormal ultrasound and genetic findings in the prenatal check-ups and treatment is continued (6). Within this group of live births, as far as we know, the outcome or course of clinical evolution in the neonatal period has not been detailed, which justifies this review.

CASE REPORT

This is a case of a 28 year old nulliparous woman. She has no past medical history, negative antenatal serology, and

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limited antenatal care. She was diagnosed with a molar pregnancy with a live fetus at 31 weeks by ultrasound in a private clinic, irregular follow-up. She went to the hospital at 35 weeks because she perceived a decrease in fetal movements, coexistent molar pregnancy was confirmed in addition to severe pre-eclampsia, and fetal monitoring highlighted the decrease in cardiac variability, fetal bradycardia, and late decelerations. She was admitted for a caesarean section due to loss of fetal well-being, and a 35-week premature baby was born with a weight of 1720 g, head circumference: 32.2 cm, abdominal circumference: 31.2 cm, chest circumference: 31 cm, height: 45.5 cm, and APGAR score: 8^{1}-9^{5}.

The neonate was hospitalized in the intensive care unit for moderate respiratory distress, Silverman-andersen score: 6 points, HR: 148 bpm, RR: 65 rpm, T°: 36.9 °C, blood pressure.: 56/38 mmHg, SatO2: 89%, $FiO_{2:}$ 0.50 received 01 dose of exogenous surfactant through INSURE, to then stay on nasal CPAP, arterial blood gas analysis is obtained with results: pH: 7.25, $pO_{2:}$ 55, pCO2: 32, HCO3-: 19.2, lactate: 4.2, Na+: 134, K+: 4.5, Cl-: 104, BE: −4.2, and umbilical catheters were placed and due to poor positioning of the umbilical venous catheter, a peripherally inserted central catheter was placed with verification by radiography (Figure 1). Likewise, an ultrasound assessment of intestinal perfusion is performed at the level of the mesenteric artery with poor diastolic flows; for this reason, it is decided to maintain NPO and intravenous hydration, the mother was informed, and an attempt at expressing breast milk was made with little success. At 24 h, he was a complete blood count with leukocytes: 17,500, hemoglobin: 18.5 g/dL, platelets: 165,000, rod-shaped: 0%, segmented: 79%, eosinophils: 2%, basophils: 2%, monocytes: 5%, and lymphocytes: 12%. Given this, at 48 h of life, it was decided to start oral feeding with infant formula for premature infants, since there was no milk bank either. It is started at a volume of 15 cc/kg/day in boluses every 3 h through a nasogastric tube with adequate response that allows a rise to 45 cc/kg/day and later on the 5th day of birth 75 cc/kg/day, after which in the third feeding of milk it presents bilious residue – porraceous in volume of 15 cc, increase of abdominal perimeter +2.3 cm, and decreased air-fluid noises and irritability. The oral route is suspended and laboratory and imaging studies are extended; complete blood count leukocytes: 8500 hemoglobin: 14.2 g/dL Platelets: 92,000 rods: 0%, segmented: 80%, eosinophils: 2%, basophils: 2%, monocytes: 4%, lymphocytes: 12%, C-reactive protein: 12 mg/L time prothrombin: 20 s, thromboplastin time: 35.5 s, Thevenon in feces: ++, and frontal and lateral incidence X-ray of the abdomen with pneumatosis intestinalis (Figure 2).

Enteral feeding was suspended, parenteral nutritional support was given, and antibiotic coverage was started with Imipenem 25 mg/kg/dose every 12 h and Vancomycin 15 mg/kg/dose every 12 h for 10 days, with clinical and radiological improvement. After that, enteral nutrition with breast milk and infant formula with adequate tolerance was restarted; being discharged at 20 days of life and outpatient follow-up.

DISCUSSION

The coexistence of a partial molar pregnancy with a live fetus is an infrequent and complex condition and occurs in 0.005-0.01% of all pregnancies. Molar pregnancy with the presence of a coexisting fetus means a risk for both the mother and the fetus. The most common risks are pre-eclampsia that occurs in up to 30%, followed by eclampsia, gestational hemorrhage, anemia, trophoblastic disease persistent gestation, placental abruption, and premature delivery (6,7). In our case, the pathological study detailed a placenta and placental disk of 20 × 10 × 4 cm and eccentric umbilical cord of 11 × 2 cm. On cut, hemorrhagic parenchyma and tissue with a multicystic appearance, cistern formations with hydropic changes and peripheral trophoblastic hyperplasia compatible with hydatidiform mole. Is also observed, placental disk with eccentric umbilical cord with 02 arteries and 01 vein, adjacent vesicle-like multicystic tissue, if evidence of fetal remains. (Figure 3). Microscopy also found findings compatible with coexisting pregnancy with hydatidiform mole (Figure 4). These findings were similar to other reported cases (8). In terms of fetal complications, they include: miscarriage, stillbirths, and congenital anomalies, while pathologies that are detrimental to neonatal morbidity and mortality are prematurity and intrauterine growth restriction (9). However,

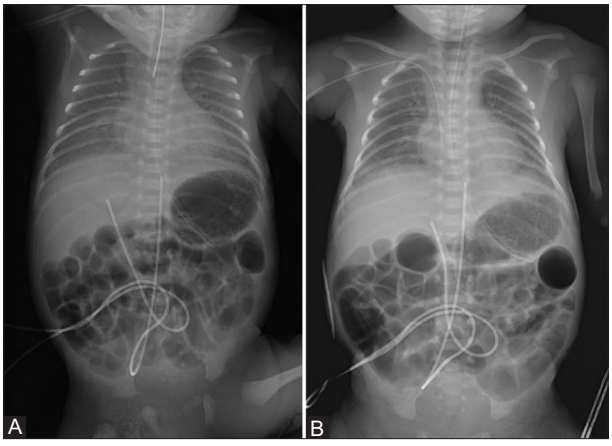

FIGURE 1. (A) Frontal thoracoabdominal X-ray, previous dose of surfactant, and verification of the umbilical venous catheter in the liver. (B) Post-INSURE thoracoabdominal X-ray and verification of the peripherally inserted central catheter, for the removal of the umbilical venous catheter.

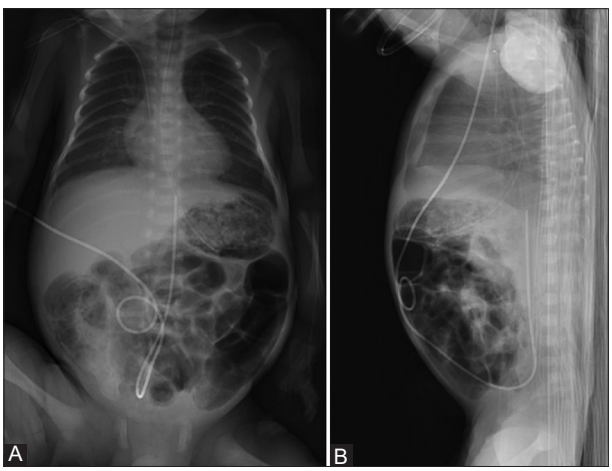

FIGURE 2. (A) Frontal thoracoabdominal X-ray with pneumatosis intestinalis in the lower right quadrant. (B) Lateral incidence, pneumatosis intestinalis seen in frontal incidence, is corroborated.

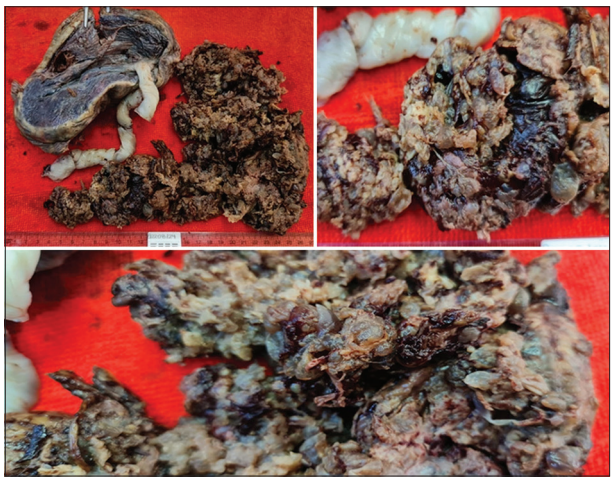

FIGURE 3. Placental disk with eccentric umbilical cord with 02 arteries and 01 vein. Adjacent vesicle-like multicystic tissue, if evidence of fetal remains.

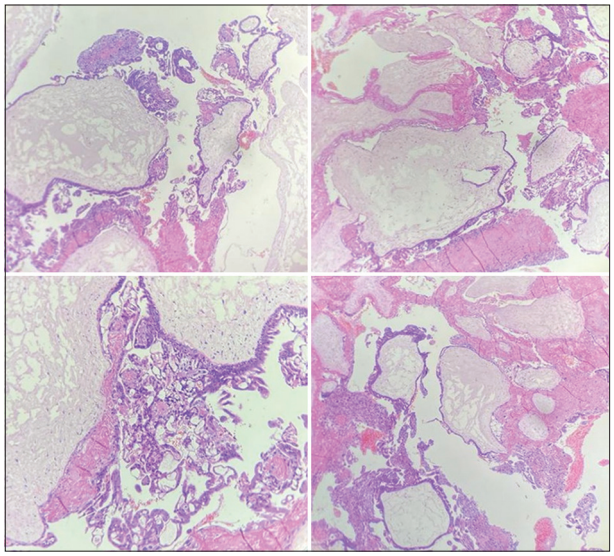

FIGURE 4. Chorionic villi with intracellular fibrin deposits and foci of fibrinoid necrosis in the vessel wall; likewise, cistern formations with hydropic changes and peripheral trophoblastic hyperplasia in relation to hydatidiform mole.

no further reference is made to aspects of the evolutionary course and neonatal approach.

In the case, we present, the mother had pre-eclampsia, and the neonate had late prematurity, having been born at 35 weeks of gestational age, hyaline membrane disease, as well as severe intrauterine growth restriction ($p < 3$: 3rd percentile, weight in relation to gestational age). Oral intake was prescribed according to the recommended guidelines for minimal enteral nutrition, to mitigate the risk of developing necrotizing enterocolitis (10). However, the lack of availability of autologous breast milk and a milk bank conditioned the use of infant formula. The implementation of this medical indication was prior evaluation of the clinical status, internal environment through arterial blood gases, and abdominal ultrasound with assessment of intestinal perfusion (11-12).

However, during the medical reports, denial behavior was observed on the part of the mother; thus, the collected volumes of breast milk were almost nil, which over time made the progress of volumes of the oral route be of full infant formula, reaching a critical volume of 75 cc/kg/day on the 5th day of life and with this, the patient showed symptoms compatible with necrotizing enterocolitis stage II-A according to Bell criteria. It is clear that, in our patient, there are many factors involved in this outcome.

However, modifiable factors such as the degree of acceptance and coping with a "different" pregnancy were possibly not addressed in advance due to a late diagnosis.

CONCLUSION

The coexistence of a molar pregnancy with a live fetus is rare and, if it occurs, it has a high possibility of ending prematurely; these conditions can lead to the development of hyaline membrane disease, sepsis, and necrotizing enterocolitis, these being the most representative causes of neonatal morbidity and mortality. In our case, the evolution of the hyaline membrane disease was favorable, while the degree of intrauterine growth restriction was severe with repercussions on organ perfusion, specifically at the intestinal level, evolving to necrotizing enterocolitis requiring broad antibiotic coverage. Spectrum and prolonging hospital stay. As has been seen, these pregnancies are associated with the development of a fetus with intrauterine growth restriction with marked redistribution of blood flow, therefore, a late diagnosis of the type of pregnancy and information to the parents can affect their expectations, acceptance and subsequent follow-up., as well as breast milk production, as in hospitals where there is no milk bank, which can affect patient outcomes.

ETHICAL CONSIDERATIONS

This study is a case report, and the identity of the patient has not been used.

INFORMED CONSENT

This manuscript does not contain any personal information that allows the identification of the patient.

CONFLICT OF INTEREST

Authors declare no conflict of interest.

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