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A Rare Convergence: Managing Partial Hydatidiform Mole with Coexisting Ovarian Hyperstimulation Syndrome (Case Report)

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Abstract: round:*Partial hydatidiform mole with a coexisting viable fetus is rare. Even more uncommon is the development of spontaneous ovarian hyperstimulation syndrome (OHSS) without fertility treatment.* ***Presentation:*** *A 29-year-old woman at 14 weeks' gestation presented with abdominal distention, mild pain, and spotting. Ultrasound showed a partial mole with a live fetus, bilateral ovarian cysts, and pelvic ascites. Beta-hCG levels were markedly elevated.****Management:*** *The patient was closely monitored with serial hCG measurements and imaging. Four weeks later, she had a spontaneous abortion. Follow-up showed a normal decline in hCG levels, resolution of ovarian cysts, and no ascites, with no signs of malignant transformation.****Conclusion:*** *This case illustrates a rare occurrence of OHSS triggered by high endogenous hCG in a partial molar pregnancy. Careful follow-up is essential to monitor for complications and ensure complete resolution.*

Keywords: Partial Hydatidiform Mole, Ovarian Hyperstimulation Syndrome, Ascites in Pregnancy, Ovarian Cysts, Molar Pregnancy.

1. INTRODUCTION

Ovarian Hyperstimulation Syndrome (OHSS) is a complication commonly associated with fertility treatments that involve the stimulation of the ovaries, particularly during **in vitro fertilization (IVF)** cycles. The condition results from excessive ovarian response to stimulation, causing ovarian enlargement, ascites, and in some cases, severe complications like pleural effusion, deep vein thrombosis, or renal failure.

While **OHSS** is typically diagnosed in the early stages of fertility treatment, in this case, the patient had undergone **spontaneous conception** and presented with symptoms suggestive of hyperstimulation during the first trimester of pregnancy. Coincidentally, she was also diagnosed with a **partial hydatidiform mole**, a form of gestational trophoblastic disease (GTD) that complicates pregnancy and challenges diagnosis and management. [1]

This report explores a **Grade 1 OHSS** in the context of an ongoing pregnancy and partial molar pregnancy, highlighting diagnostic approaches, clinical management, and treatment approaches.

2. CLINICAL CASE

2.1 Case presentation:

A **29-year-old woman**, gravida 2, para 1, with a history of a normal previous pregnancy, presented to the obstetrics clinic at **14 weeks of gestation**. She reported mild abdominal discomfort and swelling, along with **vaginal spotting** that had started a few days earlier. Although the pregnancy had initially been uneventful, the patient noted an increasing **abdominal distention** and slight nausea.

On physical examination, the patient appeared comfortable but had **mild abdominal bloating** and **slight tenderness** on palpation of the lower abdomen. Her **blood pressure** was normal, and there was no active vaginal bleeding. No signs of acute distress were present, but the uterine size was larger than expected for the gestational age.

Given the unusual symptoms and abdominal discomfort, a **transabdominal ultrasound** was performed, revealing an abnormal placental appearance (Fig.2), consistent with a **partial hydatidiform mole** characterized by cystic changes in the placenta and a **viable fetus** (Fig.1). The fetus appeared to be developing normally for gestational age, with a visible heartbeat. [1]

However, in addition to the placental abnormalities, the ultrasound also showed **enlarged ovaries** with multiple cysts (Fig.3) and **ascitic fluid** in the pelvis, raising suspicion for **Ovarian Hyperstimulation Syndrome (OHSS)**. [1,2]

The patient's **hCG levels** were markedly elevated, which is typical in cases of molar pregnancy, but this also contributed to the diagnostic complexity. In this case, **hCG** was closely monitored to assess any possible correlations between the **OHSS** and the molar tissue. **Serum electrolytes** and liver and kidney function tests were normal, confirming no acute organ failure. [3]

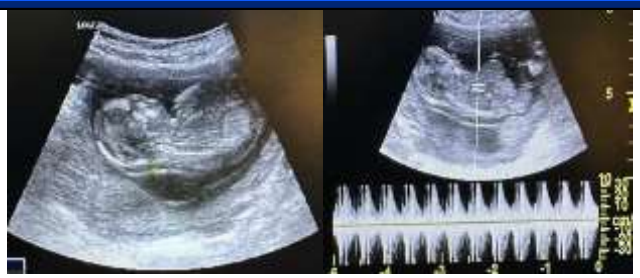

Fig 1: Transabdominal ultrasound: viable fetus

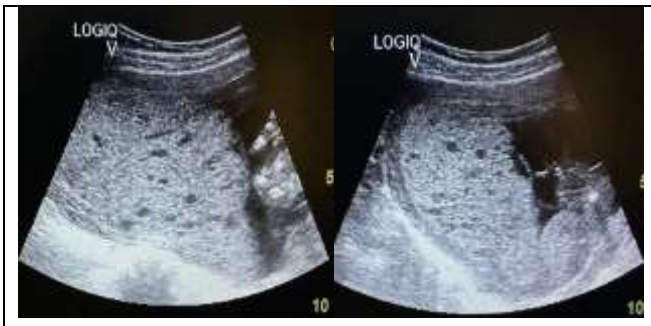

Fig 2: Transabdominal ultrasound: abnormal placental appearance

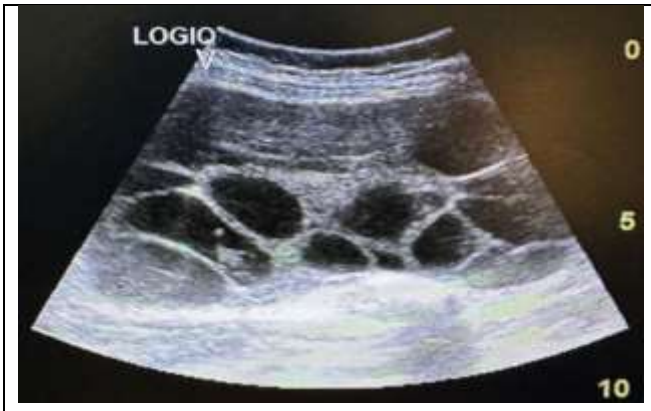

Fig 3: Transabdominal ultrasound: ovarian cysts

2.2 Physiopathology:

In **Grade 1 OHSS**, ovarian enlargement and fluid accumulation in the peritoneal cavity can occur due to the hormonal influences from the elevated levels of **hCG**, commonly seen in molar pregnancies. In this case, the elevated **hCG** contributed to **ovarian hyperstimulation**, leading to **mild ovarian cysts** and **pelvic ascites**, but without the life-threatening complications associated with more severe forms of OHSS. [3]

A **partial hydatidiform mole** occurs when two sperm fertilize a single egg, resulting in a **triploid** chromosomal pattern. This condition leads to abnormal placental tissue growth, but some partial moles can also present with a **viable fetus**. [2] The **placenta** in this case exhibited typical **cystic changes**, which were closely monitored as part of the clinical management.

2.3 Diagnostic workup:

Given the dual concerns of **partial molar pregnancy** and **OHSS**, the following diagnostic steps were taken:

1. **Serial Ultrasounds**: The presence of **multiple ovarian cysts**, with diameters ranging from 3 to 6 cm, and the presence of **ascites** led to the diagnosis of **Grade 1 OHSS** (mild form), which is characterized by mild ovarian enlargement without severe symptoms or life-threatening complications. [4]
2. **Human Chorionic Gonadotropin (hCG) Monitoring**: The patient's **hCG levels** were elevated at 100,000 IU/L, consistent with the diagnosis of **partial hydatidiform mole**. Serial measurements of hCG were performed every 2 weeks to monitor the resolution of trophoblastic tissue and to detect any signs of progression toward more severe trophoblastic disease (**choriocarcinoma**). [3,4]
3. **Blood Tests**: **Serum electrolytes**, liver function, and **kidney function tests** were performed regularly, revealing no significant abnormalities, which indicated that the patient was not progressing to severe OHSS.
4. **Genetic Counseling**: Genetic testing was offered to assess the risk of chromosomal anomalies in the fetus due to the presence of a partial mole. However, due to the absence of fetal malformations on ultrasound, the patient declined invasive testing such as amniocentesis. [4]

2.4 Management and treatment:

Management of OHSS and partial molar pregnancy required a multidisciplinary approach involving obstetrics, gynecology, and anesthesia teams, with the following strategies implemented:

1. **Close Monitoring**: The patient was closely followed with serial ultrasounds to monitor both **placental health** (for signs of potential molar tissue progression) and **ovarian size** (to assess OHSS severity). Ultrasounds showed no significant worsening of ovarian enlargement or ascites, suggesting that the OHSS was mild (Grade 1).
2. **Fluid Management: Oral rehydration** and **electrolyte balance** were maintained to manage the mild fluid retention seen in the OHSS.
3. **Surveillance of Fetal Development**: Serial fetal monitoring, including ultrasound to assess **growth parameters**, and **doppler studies** to evaluate

placental blood flow, were performed regularly to monitor fetal well-being.

4. **Laboratory Tests**: **hCG levels** were measured every 2 weeks, gradually decreasing as the pregnancy progressed, which suggested that trophoblastic tissue was regressing and not developing into more serious forms of **gestational trophoblastic disease**.

2.5 Follow-Up and Resolution of Complications:

Four weeks later, the patient experienced a spontaneous abortion.

Serial monitoring of serum beta-hCG levels showed a progressive and appropriate decline, eventually returning to undetectable levels. This trend was reassuring and did not suggest malignant transformation such as gestational trophoblastic neoplasia.

Follow-up pelvic ultrasound revealed normalization of ovarian size with resolution of the previously noted cystic changes. Additionally, there was no longer any evidence of ascitic fluid in the pelvis, indicating complete resolution of the Ovarian Hyperstimulation Syndrome.

The patient remained clinically stable, and no further intervention was necessary. [5,6]

3. DISCUSSION

This case highlights a rare and complex presentation involving a partial hydatidiform mole coexisting with a viable fetus, complicated by secondary ovarian hyperstimulation syndrome (OHSS). Although partial molar pregnancies are more frequently associated with triploid fetuses and early pregnancy loss, the presence of a structurally normal fetus with a heartbeat added a layer of diagnostic and management complexity.

One of the most striking features in this case was the development of OHSS in the absence of assisted reproductive techniques, which are the most common risk factor.

In rare instances, extremely elevated levels of endogenous human chorionic gonadotropin (hCG), such as those seen in molar pregnancies, can trigger OHSS. [3,5]

The pathophysiology is thought to involve increased vascular permeability mediated by hCG-induced vascular endothelial growth factor (VEGF), leading to fluid extravasation and cystic ovarian enlargement. In this patient, the presence of ascites and enlarged, multicystic ovaries was consistent with this mechanism.

Management of such cases requires a careful balance between maternal safety and monitoring for potential malignant transformation of trophoblastic tissue.

In this patient, close hCG monitoring was essential, both as a marker for regression of molar tissue and for resolution of OHSS. The spontaneous abortion that occurred four weeks later, while unfortunate, allowed for natural resolution of the molar tissue, as evidenced by the normalizing hCG levels and follow-up imaging. [4]

The decline of hCG to undetectable levels, along with normalization of ovarian morphology and resolution of ascites, confirmed a benign course and excluded persistent gestational trophoblastic disease. This reinforces the importance of vigilant follow-up in similar presentations, as early detection of complications such as choriocarcinoma or invasive mole is crucial. [5,6]

This case also underscores the necessity of considering OHSS in the differential diagnosis of abdominal distention and ascites in early pregnancy, even in the absence of fertility treatments. Furthermore, it emphasizes the utility of ultrasound and serial hCG monitoring in guiding diagnosis and follow-up in complex gestational conditions. [7]

5. CONCLUSION

A partial hydatidiform mole with coexisting Grade 1 OHSS represents a rare and complex clinical scenario.

Although this case resulted in a spontaneous abortion, proper diagnostic evaluation and close monitoring allowed for the safe resolution of both the molar tissue and OHSS without further complications.

Regular follow-up, individualized care, and a multidisciplinary approach remain essential in managing such cases to ensure maternal safety and to detect any signs of malignant transformation early.

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