



A CASE REPORT ON SPONTANEOUS OVARIAN HYPERSTIMULATION SYNDROME

Obstetrics & Gynaecology

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ABSTRACT

Ovarian Hyperstimulation Syndrome (OHSS) is a well-known complication of assisted reproductive technologies. However, the occurrence of OHSS in the absence of ovulation induction or fertility treatments, particularly during early pregnancy, is extremely rare. We present a case report of spontaneous OHSS manifesting in the first trimester of pregnancy, emphasizing the clinical presentation, diagnostic challenges, and management strategies employed and outcome. Here we report a case of A 28-year-old primigravida in her first trimester, with spontaneous conception, presented with nausea, vomiting. she was conservatively managed and sent home. After a few days presented with abnormal weight gain, abdominal discomfort and respiratory distress. Diagnostic workup including ultrasound imaging, laboratory investigations, and clinical examination confirmed the diagnosis of spontaneous OHSS. Patient exhibited enlarged ovaries with multiple cysts, ascites, and pleural effusion. The patient was closely monitored and managed conservatively with intravenous fluid therapy, analgesics, and respiratory support and cabergoline. Over the course, patient was closely monitored with a series of blood and imaging investigations to assess the progress, she experienced gradual improvement in symptoms, with a subsequent reduction in ovarian size and resolution of ascites and pleural effusion. The remainder of pregnancy proceeded uneventfully with regular antenatal visits.

KEYWORDS

OHSS, abdominal pain, high risk obstetrics

INTRODUCTION

Spontaneous Ovarian Hyperstimulation Syndrome (SOHSS) is a rare but potentially serious condition that affects the ovaries, leading to an abnormal and excessive response to hormonal stimulation. While ovarian hyperstimulation syndrome (OHSS) is commonly associated with fertility treatments such as in vitro fertilization (IVF), the spontaneous form occurs without any external hormonal interventions. This phenomenon poses a unique set of challenges for both clinicians and affected individuals, as its etiology, diagnosis, and management differ from the more familiar induced OHSS. Understanding the underlying mechanisms of SOHSS requires delving into the normal ovarian function and hormonal regulation. The ovaries play a central role in the female reproductive system, orchestrating a complex interplay of hormones to regulate the menstrual cycle and facilitate fertility. One key hormone involved in this process is human chorionic gonadotropin (hCG), which is produced during pregnancy and can stimulate the ovaries to produce more eggs. In spontaneous cases, aberrations in this delicate hormonal balance can trigger an excessive response, resulting in the development of OHSS.

The clinical presentation of SOHSS shares similarities with the induced form but manifests without the intentional administration of fertility medications. Common symptoms include abdominal pain, bloating, nausea, and, in severe cases, fluid accumulation in the abdominal and thoracic cavities. These symptoms often emerge during or after the ovulatory phase of the menstrual cycle, with the potential for rapid onset and progression. Clinicians must maintain a high index of suspicion, as the spontaneous nature of the condition may catch both patients and healthcare providers off guard.

Diagnosing SOHSS involves a combination of clinical evaluation, hormonal assays, and imaging studies. An ultrasound examination is a valuable tool for assessing ovarian enlargement and the presence of fluid in the abdominal cavity. Laboratory investigations can confirm hormonal imbalances, such as elevated levels of estradiol and hCG. However, distinguishing between spontaneous and induced OHSS can be challenging, necessitating a comprehensive clinical assessment and a thorough understanding of the patient's medical history.

Management of SOHSS requires a multi-faceted approach aimed at alleviating symptoms, preventing complications, and addressing the underlying hormonal dysregulation. Mild cases may be managed conservatively with supportive measures, including pain control, intravenous fluids to maintain hydration, and close monitoring of symptoms. However, severe cases may necessitate hospitalization for more intensive interventions, such as paracentesis to remove accumulated fluids and close monitoring of vital signs.

The long-term implications of SOHSS remain an area of ongoing research, as the rarity of the condition limits the available data. However, it is crucial to recognize that affected individuals may face increased risks of complications such as thromboembolism, renal impairment, and respiratory distress. Follow-up care should include a comprehensive assessment of these potential complications and consideration of future fertility implications.

Preventing the recurrence of SOHSS involves careful consideration of reproductive options, as the condition's underlying hormonal dysregulation may persist. Patients with a history of SOHSS should collaborate closely with their healthcare providers to explore alternative fertility treatments or family planning strategies that minimize the risk of recurrence. This may involve the use of alternative medications or more conservative approaches to ovarian stimulation.

CASE STUDY

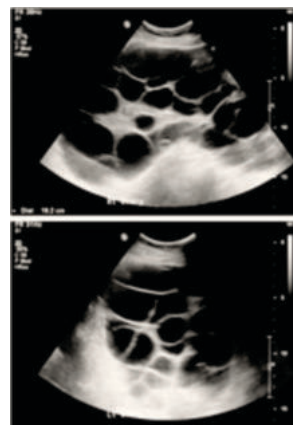


Figure 1: Ultrasound of ovaries in ohss

A 28-year-old primigravida with spontaneous conception without any history of ovulation induction or other fertility treatment presented with nausea and vomiting since 2 days at her 8 weeks of gestation. On examination vitals were stable, mild dehydration was noted, ultrasound abdomen revealed SLIUG of 8 weeks gestation and ovaries 4.4*3*2.4 cm on right and 4.2*2.8*1.5cm in left side. Other investigations were within normal limits. Patient was conservatively managed and was discharged. Patient again presented at 9 weeks with complaints of abnormal gain, abdominal discomfort and difficulty in breathing, on examination PR-98/m, BP- 100/60mm hg, RR- 21/m, SPO2-96%, RS- decreased air entry and basal crepts present

bilaterally. P/A-Mild distention noted. hb-17.7g/dl, HCT -52%, Ultrasound revealed Single live intrauterine gestation of 9weeks with cardiac activity, right ovary -12.4*14.8*13.1 and 16.5*12.8*12.3. moderate ascites, mild right pleural effusion, serum electrolytes, renal function tests, liver function tests, coagulation profile were within normal limits. Patient was managed with thoracocentesis 400cc was drained initially which was serosanguinous. IV crystalloids for electrolyte imbalance, thromboprophylaxis started with low molecular weight heparin, cabergoline 0.5 mg started. investigations were repeated the next day and showed improved parameters – electrolytes return to normal limits, hemoconcentration reduced to 40%, hemoglobin- 15g/dl. Patient was closely monitored and conservatively managed with series of thoracocentesis over 3 weeks.

By 12 weeks ,patient improved and discharged, pregnancy continued uneventfully thereafter and delivered an alive term male baby through vaginal delivery. Postpartum period was uneventful and ovaries returned to normal size

CONCLUSIONS:

Spontaneous Ovarian Hyperstimulation Syndrome (SOHS) is a rare and potentially serious condition characterized by the abnormal stimulation of the ovaries without the use of fertility medications. Unlike the more common iatrogenic ovarian hyperstimulation syndrome associated with assisted reproductive technologies, SOHS occurs spontaneously in the absence of external hormonal triggers.

The exact etiology of SOHS remains unclear, but it is thought to involve an exaggerated response of the ovaries to endogenous hormonal fluctuations. This syndrome is often associated with conditions such as polycystic ovary syndrome (PCOS), where hormonal imbalances and increased sensitivity of the ovaries to gonadotropins can contribute to the development of SOHS.

Clinical manifestations of SOHS can range from mild symptoms such as abdominal discomfort and bloating to more severe complications, including ovarian enlargement, ascites, and pleural effusion. In rare cases, it can lead to thromboembolic events and respiratory compromise, requiring prompt medical intervention.

Diagnosis is based on clinical presentation, hormonal assessments, and imaging studies to evaluate ovarian size and fluid accumulation. Management of SOHS typically involves supportive measures, including pain management, fluid restriction, and close monitoring of complications. In severe cases, hospitalization may be necessary for more intensive care and intervention.

While SOHS is infrequent, it highlights the importance of recognizing and managing ovarian hyperstimulation beyond the context of assisted reproductive technologies. Further research is needed to elucidate the underlying mechanisms of this syndrome and improve our understanding of its pathophysiology for better prevention and management strategies.

REFERENCES:

- Cardoso CG, Graça LM, Dias T, Clode N, Soares L. Spontaneous ovarian hyperstimulation and primary hypothyroidism with a naturally conceived pregnancy. *Obstet Gynecol.* 1999;93:809–11.
- Edwards-Silva RN, Han CS, Hoang Y, Kao LC. Spontaneous ovarian hyperstimulation in a naturally conceived pregnancy with uncontrolled hypothyroidism. *Obstet Gynecol.* 2008;111:498–501
- Smits G, Olatunbosun O, Delbaere A, Pierson R, Vassart G, Costagliola S. Ovarian hyperstimulation syndrome due to a mutation in the follicle-stimulating hormone receptor. *N Engl J Med.* 2003;349:760–6
- Olatunbosun OA, Gilliland B, Brydon LA, Chizen DR, Pierson RA. Spontaneous ovarian hyperstimulation syndrome in four consecutive pregnancies. *Clin Exp Obstet Gynecol.* 1996;23:127–32.