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A Case of Ovarian Hyperstimulation Syndrome Following A Spontaneous Complete Hydatidiform Molar Pregnancy

Mehdi laaouze, Sarah seghrouchni idrissi, karam mohammed saoud, Mamouni Nisrine, Sanae Errarhay, Bouchikhi Shehrazad, Abd Aziz Banani

Department of Gynecology, Hassan II Teaching Hospital,

Fez, Morocco

***Abstract*: *Introduction*:** *Ovarian hyperstimulation syndrome (OHSS) is often associated with ovulation induction therapies. However, OHSS can rarely be associated with a spontaneous ovulatory cycle, usually in the case of multiple gestations, hypothyroidism, or polycystic ovary syndrome. We present a case of OHSS following a molar pregnancy. The patient had abdominal pain, ascites, nausea, vomiting and dyspnea with 15 weeks of amenorrhea. After imaging examinations and laboratory tests, the diagnosis of ovarian hyperstimulation syndrome with a molar pregnancy was established. The patient was managed in a predictable, uncomplicated manner. Although spontaneous ovarian hyperstimulation is a rare entity, it is important to be aware of it . Prompt diagnosis and successful management will likely prevent serious complications, which can develop rapidly.*

Keywords—Ovarian hyperstimulation syndrome, molar pregnancy, abortion, dilatation and evacuation

1. INTRODUCTION

Ovarian hyperstimulation syndrome includes an increase in the size of both ovaries, ascites, hemoconcentration, electrolyte disorder, oliguria, pleural or pericardial effusion, and hypercoagulability [1-2]. It is very often iatrogenic, complicating medically assisted procreation [1,3]. Very rarely, this syndrome can be spontaneously seen during pregnancy and poses the problem of differential diagnosis, especially with ovarian cancer [4]. It varies in severity, ranging from mild abdominal distension requiring simple monitoring, to major, life-threatening complications requiring resuscitative measures [5].

Moreover, until recently, the precise chemical mediators that played a role in the over production of hormones during the pathogenesis of OHSS were unknown [6]. Recently, increased levels of cytokines (interleukins and tumor necrosis factor-α), endothelin-1, and vascular endothelial growth factor (VEGF) have also been impli- cated in the pathophysiology of OHSS. Furthermore, estrogen has been suspected to play a role in the progression of OHSS, while alpha-2-macroglobulin (α-2M) has been shown to be a protective factor in patients with OHSS [6].

Gestational trophoblastic disease (GTD) is known to be associated with increased maternal age and is more common in our country. This disease has been subdivided into two types. Partial hydatidiform moles present with a fetal pole that is often triploid, and refers to the combination of a fetus with a localized placental hydatidiform. Complete hydatidiform molar (CHM) pregnancies have no fetal tissue, but the tumors have diploid genomes that are derived entirely from the paternal genome. They are charac- terized by abnormally elevated levels of β-hCG with bilaterally enlarged cystic ovaries [7]. It is postulated that the elevated β-hCG levels in molar pregnancies precipitate the enlargement of both ovaries [6].

The incidence of OHSS is increasing in young women, and spontaneous forms of OHSS are extremely rare. A few cases have been reported where OHSS was associated with PHM [8] or developed after Partial hydatidiform moles was treated [9]. Strafford et al. reported the case of 19-year-old woman who was diagnosed OHSS after a pregnancy [10]. In this report, we present a 38-year-old patient who developed OHSS following Complete hydatidiform molar. This condition has not been reported previously in an older woman.

2. CASE REPORT :

A 38-year-old, gravida 5 para 4, presented to our hospital with a lower abdominal mass and 18 weeks pregnancy. She was known to be previously healthy with a regular menstruation pattern. The level of β-hCG was 1200,000 mIU/mL and transvaginal sonography indicated the presence of a molar pregnancy. Furthermore, the ovaries were found to be bilaterally enlarged with multiple follicular cysts (Figure 1).

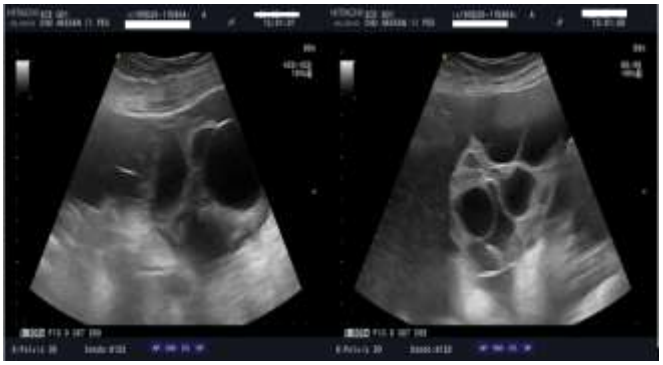

Figure 1 : TVS image of multiple follicular cysts.

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An ascites was detected. On the basis of the sonographic findings and the highly elevated β-hCG, a molar pregnancy was suspected . All preoperative laboratory examinations were within the normal ranges. With the consent of the patient, an uncomplicated evacuation of the molar pregnancy was performed(figure2) After 10 days, the final pathological diagnosis confirmed the existence of a CHM.

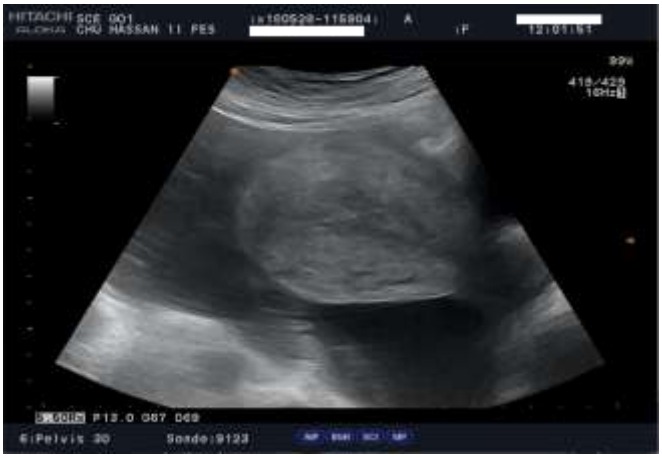

Figure 2 : shows a vacuum line after molar aspiration with the presence of ascites.

The patient remained hospitalized in our training for surveillance because she had an ovarian hyperstimulation syndrome which was considered moderate because On ultrasound, the largest axis of the ovaries exceeds 12 cm and serous effusions were observed. Biologically, there is a hemoconcentration with 50% hematocrit with hyperleukocytosis of less than 22,000 per cubic millimeter.

3. DISCUSSION

Ovarian hyperstimulation syndrome after spontaneous pregnancy is extremely rare (although it is somewhat more common in twin pregnancies due to high hCG levels) [11]. The frequency with which OHSS complicates molar gestations is not known. We have reported one case of moderate OHSS presenting on suspicion of a molar pregnancy. We show the importance of early diagnosis and the role of observation and supportive care in the resolution of a potentially fatal syndrome.

Because of its vasoactive functions, pathologically elevated levels of VEGF caused by massive luteinization is one of the main proposed etiologic agents for physical find- ings of OHSS that are observed in a spontaneous pregnancy or in assisted reproductive technology (8). A case of OHSS in a spontaneous pregnancy was reported by Ludwig et al. (8), who described the hospital course of a gravida 3 para 1 woman who presented with increasing abdominal pain and dyspnea on postoperative day 14 after a suction di- latation and curettage for a fetal triploidy. In that report, VEGF concentrations were quantified and found to be extremely elevated during the course of OHSS, and those investigators showed that VEGF serum concentrations did not predict the course of OHSS; although clinical and laboratory resolution was evi- dent, VEGF remained high. This was the first indication that VEGF has an important role in the development of OHSS but is not triggered only by hCG and that other factors must be involved in the pathogenesis of this clinical entity.

In the literature, there are classifications of OHSS according to gravity .However, these grades are difficult to distinguish because it is an evolutionary pathology [12,13-14].

Mild OHSS presents as abdominal tension, discomfort or pain associated with vomiting, diarrhea. Objective ultrasound shows an increase in ovarian volume but with ovaries whose longest axis is less than 12cm. There is no serous effusion at this stage or an effusion limited to Douglas' cul-de-sac. Biologically, urinary estrogens are greater than 150 g/24 h and urinary pregnandiol greater than 10 mg/24 h. Hematocrit at this stage is normal.

Moderate OHSS presents with abdominal pain, vomiting and diarrhea associated with increased abdominal girth. On ultrasound, the longest axis of the ovaries exceeds 12 cm and serous effusions are observed. Biologically, hemoconcentration is observed with hematocrit between 40 and 55% with hyperleukocytosis less than 25,000 per cubic millimeter, this is the case of our patient.

Severe OHSS, which can be life-threatening, is also present: either a tension ascites with or without pleural effusion;or a thromboembolic complication;or an acute respiratory distress syndrome;or renal failure with oligoanuria ;

On the biological level: a hemoconcentration with a hematocrit higher than 55%, hyperleukocytosis greater than 25,000 per milli-cubic meter, hepatic cytolysis,a hyponatremia of less than 135 mmol/L, hyperkalemia;

Ultrasonographically, the ovaries are larger than 12 cm long.

There is currently no recommendation for the management of OHSS. Treatment will therefore depend on the severity of the OHSS and the occurrence of complications. Treatment is mainly symptomatic and preventive.

Hospitalization is generally recommended at least in the initial phase, because of the risk of aggravation and more intense pelvic pain. Bed rest is not strict, associated with antithrombosis support stockings and anticoagulation at a high preventive dose such as LMWH (enoxaparin 40mg/d) for six weeks because of the risk of thrombosis. A high-protein diet is generally recommended. The water restriction must be limited even in case of ascites, to one liter per day in winter and two liters per day in summer in order not to aggravate hemoconcentration. On the other hand, the daily intake/outflow balance should be kept balanced in order to detect any acute functional or even organic renal insufficiency.

Clinical surveillance includes monitoring of weight, diuresis, abdominal perimeter, development of dyspnea, signs suggestive of arterial or venous thrombosis, in particular, cephaeus, cervical or upper limb pain. At the paraclinical level, regular biological monitoring, approximately every three days, of hematocrit, platelet levels, electrolytes, creatinine, as well as a pelvic ultrasound, will be intensified in the event of a worsening of the parameters.

Caution encourages initial hospitalization of these patients. Although the mild forms evolve favourably in two to three weeks, a rapid transition to the severe form is possible.

4. CONCLISION

The risk factors for OHSS include being young (<30 year), low body weight, polycystic ovarian syndrome, high doses of gonadotropins and previous episodes of OHSS [6,15]. Although previous reports have described patients with OHSS after hyda- tidiform molar pregnancies, all of these patients have been under 30 years of age [8–10]. This case indicated that OHSS should be considered in older women with molar pregnancies, although the underlying reasons for the development of OHSS in these patients require further investigation

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