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(CASE REPORT)

A case report of heterotopic pregnancy

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Abstract

Heterotopic pregnancy (HP) refers to the simultaneous presence of intrauterine pregnancy (IUP) and ectopic pregnancy (EP), which is very rare but a potentially life-threatening condition. HP can be spontaneous or the subsequence of assisted reproductive technology (ART). A 23 years old patient, primigravida who came to the emergency department presenting lower abdominal pains for four days accompanied by moderate dark vaginal bleeding. The sonar reported Heterotopic Pregnancy. Laparotomy was performed and a clinically 13 week's fetus was found in the Pouch of Douglas. The other embryo that showed fetal activity and no other complication was left inside the uterus. The patient was seen in the hospital every month till delivered by cesarean section an alive baby. Heterotopic pregnancy is now more frequent because of reproductive assisted techniques. Doctors should keep a high index of suspicion in patients with intrauterine pregnancies accompanied by abdominal pains.

Keywords: Delivery; Heterotopic; Pregnancy; Laparotomy; Pouch of Douglas

1. Introduction

Heterotopic Pregnancy (HP) refers to the simultaneous presence of intrauterine pregnancy (IUP) and ectopic pregnancy (EP), which is very rare but a potentially life-threatening condition. Jeon and Schroeppel TJ et al [1, 2]. Duverney described this diagnosis for the first time in 1708 with the findings in the autopsy of a patient who died from an ectopic pregnancy [3, 4]. It can be spontaneous or the subsequence of assisted reproductive technology (ART) and the inductor of ovulation. The incidence of spontaneous HP in the general population is thought to be about 1 in 30,000, but which the widespread of ART, the incidence of HP in this subgroup of women raises to about 0,09% to 1.00% [1-4].

Vikhareva O and Na ED et al [5, 6] said in 2018 that the aetiology is still unknown, many types of researches have demonstrated that pelvis inflammatory disease, previous tubal surgery, ovarian stimulation, and ART are high-risk factors of HP, however, some patients do not have these risk factors. Clinical presentations are the same for all the ectopic pregnancies, include vaginal bleeding, acute abdominal pain, and sometimes hypovolemic shock, or they are asymptomatic. The management according to many authors Guan Y et al in 2017 [7] and Maiti GD in 2018 [8] includes medical treatment like expectant management or the use of drugs to produce the embryo demise and the active management include the surgical procedures such as laparotomy or laparoscopic, and sonographic guided embryo aspiration. The expectant management should be very careful of the possible ectopic rupture which will pose a great danger for the woman's life.

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2. Abbreviations

HP: Heterotopic pregnancy;

IUP: Intrauterine pregnancy

EP: Ectopic Pregnancy

ART: Assisted Reproductive Technology

3. Case Report

A 23 years old patient primigravida came to the emergency department reporting lower abdominal pains for the last four days, accompanied by moderate dark vaginal bleeding. No history of chronic disease. On physical examination fully awake, BP: 132/78, Oxygen saturation: 98% and Hb: 9.8 g/dl. The abdomen was soft, no tender, and the uterus is palpable above the symphysis of the pubis measuring 11 centimetres, no other palpable mass. Per vaginal examination, cervix posterior 2 centimetres long and closed, pregnant uterus and a small amount of darkish blood seen on the glove.

Abdominal ultrasound reported: Intrauterine pregnancy about 15weeks 5days with good vitality, fetal heartbeat 168 per minute, normal liquor. A complex mass visualized on the right adnexa containing another fetal pole without cardiac activity. Conclusions: Heterotopic pregnancy.

The patient went to the theatre for emergency laparotomy, (Figure 1),

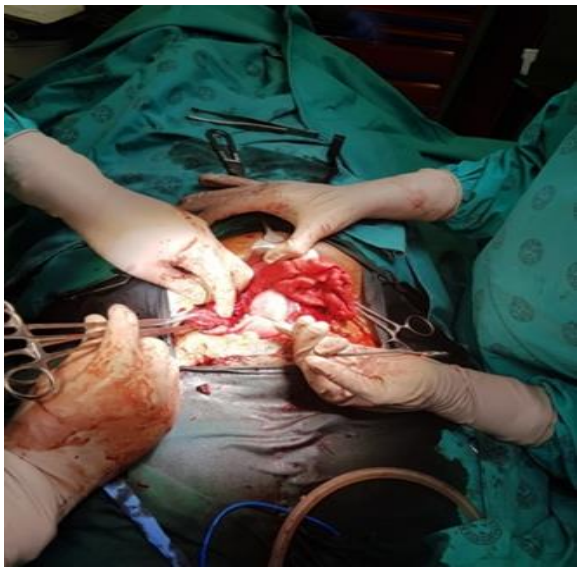

Figure 1 Exploratory laparotomy. Visualization of gravid uterus and right adnexa

we found a bulky uterus about 14 weeks size and a clinically 13 week's fetus inside a complex mass in the pouch of Douglas with a fetus inside (Figures 2 and 3).

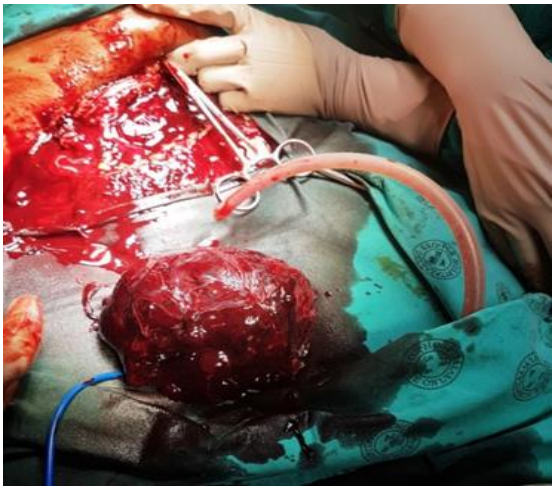

Figure 2 Complex mass

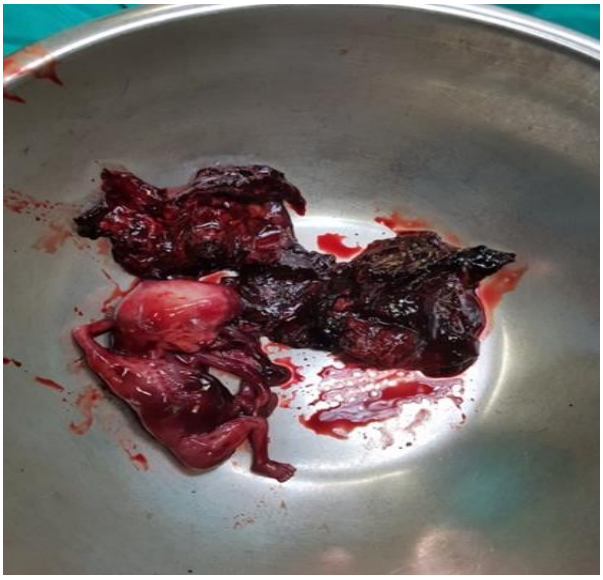

Figure 3 Embryo found inside the mass

and a hemoperitoneum of fewer than 500 ml. The other fetus remained inside the uterus. The patient had an uneventful recover being discharged after 3 days. She attended the high-risk clinic at the hospital until term when an alive healthy baby was born by caesarean section.

4. Discussion

While heterotopic pregnancy (HP) is rare, its frequency increased with the advent of fertility treatment and reproductive technologies [9].

Russman C et al [10] in 2015 found that the diagnosis in almost 70% of heterotopic pregnancies is done between 5-8 weeks, 20% between 9 and 10 weeks, and 10% more than 11 weeks.

The more common symptoms founded by Taran FA [11] are abdominal pains, abnormal bleeding, referred to as spotting or heavy bleeding with clots. Peritoneal signs and cervical tenderness indicate the presence of blood inside the abdominal cavity. A Ruptured ectopic can induce shock (dyspnea, hypotension, tachycardia and collapse).

According to other authors like Chadee A and Yildirim G [12, 13], the gold standard for the diagnosis, most of the time is the abdominal or transvaginal sonar. However, is difficult when the pregnancy is still small and we cannot find the embryo. The images in transvaginal sonar consist of a complex cyst or adnexal masses, but the visualization of fetal

heart activity outside the uterus and another inside the uterine cavity is the pathognomonic sign of heterotopic pregnancy.

Laparotomy or laparoscopy is a surgical treatment modality for HP depending on the patient's clinical condition. If the patient is hemodynamically unstable or with any signs indicating rupture of the ectopic pregnancy, emergency surgery is strongly recommended to rescue the patient. Selective surgery is only suitable for those HP patients with a stable hemodynamic condition. Surgical procedures include salpingectomy, salpingostomy, cornual resection, oophorectomy, and even total abdominal hysterectomy. The surgical management gains the advantage of complete removal of the ectopic pregnancy, but it may be associated with a higher rate of the intrauterine pregnancy loss. Miscarriage can happen with a rate of 15%. [1, 5, 7, 14, 15].

Ultrasound-guided aspiration of ectopic gestation with or without using a method for the embryo's demise, which is thought to be minimally invasive, has been performed as a treatment modality of ectopic pregnancy for years, its safety and effectiveness have been well demonstrated. The challenge of this treatment modality depends on the site of the ectopic gestational sac. This should be done only when the ectopic gestational sac is visualized. Both potassium chloride and hyperosmolar glucose can be used to induce the embryo demise in the management of HP. Methotrexate is contraindicated because of its teratogenic effects on the viable intrauterine pregnancy [1, 5, 15-17].

Expectant management may be an option in those patients with stable hemodynamic state and are asymptomatic. The main advantage of expectant management is that it avoids complications of surgery. Nevertheless, expectant management should not be considered in patients with viable ectopic pregnancy or clinically unstable. Rupture of ectopic pregnancy can occur during expectant management. Therefore, regular ultrasonography re-examinations and close observations in the hospital are essential for patients who opted for expectant management. Once the patient presents symptoms or signs of ectopic rupture or enlargement, emergency surgical intervention is recommended to ensure a good maternal outcome. Anozie OB et al and Guan Y [3, 7].

In the presented case, the patient was stable with mild signs of intra-abdominal bleeding, reason why we intervened her as is indicated in those situations to save the patient's life.

5. Conclusion

Heterotopic pregnancy is now more frequent because of reproductive assisted techniques. Doctors should keep a high index of suspicion in patients with intrauterine pregnancies accompanied by abdominal pains.

Compliance with ethical standards

Acknowledgments

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Disclosure of conflict of interest

The authors declare that they have no conflict of interest.

Statement of informed consent

All data published here are under consent for publication.

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