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Case Report

Heterotopic pregnancy in a rural area in Haiti: case report

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ABSTRACT

Heterotopic pregnancy can be defined as the coexistence of at least two pregnancies in different implantation sites. It's a rare entity, but its diagnosis is becoming more common because of assisted reproduction techniques and ultrasound improvement techniques. The clinical symptoms are also similar to ectopic pregnancy, but a high suspicion index is needed to avoid diagnosis delay and subsequent unfavourable outcomes. This is the case of a 36-year-old female with heterotopic pregnancy who presented with shock symptoms and substantial delay in diagnosis due to socio-political crisis in Haiti at the time. Initial hemoglobin was at 6 g/dl. Transabdominal ultrasound showed an intra-uterine live fetus of 11 weeks 6 days along with a left adnexal mass and free fluid in the Douglas cul-de-sac. She was urgently transferred to the operation room where we performed a left annexectomy through laparotomy. She didn't get blood transfusion due to shortage at the blood bank of the hospital. The patient's post-op and pregnancy course were uneventful until the vaginal birth of her child who is alive and well today. We want to highlight the importance of optimizing healthcare access to the most vulnerable and careful adnexal evaluation. It is also important to reinforce the health system in Haiti to secure prenatal care and blood transfusion for all pregnant women.

Keywords: Shock in heterotopic pregnancy, Case report, Transabdominal ultrasound

INTRODUCTION

Heterotopic pregnancy is the coexistence of at least two pregnancies in different implantation sites. First described in 1708 during autopsy, its prevalence is estimated at 1:30,000 in spontaneous pregnancies.[1] Its diagnosis is becoming more common because of assisted reproduction techniques and ultrasound improvement.[2] The known risk factors are shared with ectopic pregnancy: previous ectopic pregnancy, tubal surgery, pelvic inflammatory disease, use of an intrauterine device, assisted reproduction techniques, smoking.[3,4] The clinical symptoms are also similar to ectopic pregnancy, but a timely diagnosis can prevent unfavourable outcomes.[5,6] We reported the case of the fortunate outcome, despite diagnosis delay, of a 36 year-old female with a left ruptured ectopic pregnancy associated with a normal intrauterine pregnancy.

CASE REPORT

This was the case of a 36-year-old female, from Saut d'eau, Haïti. After noticing gradually severe abdominal pain over 24 hours, her folks took her to the nearest outpatient health clinic. As she was also lethargic and presented 4 episodes of vomiting, she was then referred to the University Hospital of Mirebalais, the nearest tertiary hospital, which was about 20 minutes away. Due to civil protests and roadblocks in the country at the time, access to Mirebalais was impossible. Instead, they took off to Saint-Nicolas Hospital of Saint-Marc, the closest functioning hospital, 86.8 kilometers away, which was approximately a two-and-a-half-hour drive due to poor road conditions. With no past history of medical diseases and coming from a poor social background, she denied taking any medications. All of her three children were homebirths made by a local healer, with no prenatal visits.

She declared one abortion having occurred spontaneously three years ago.

Figure 1: Transabdominal ultrasound showing a viable intra-uterine pregnancy with a CRL of 5.23 centimeters (black arrow) and free fluid in the Douglas cul-de-sac (green arrow).

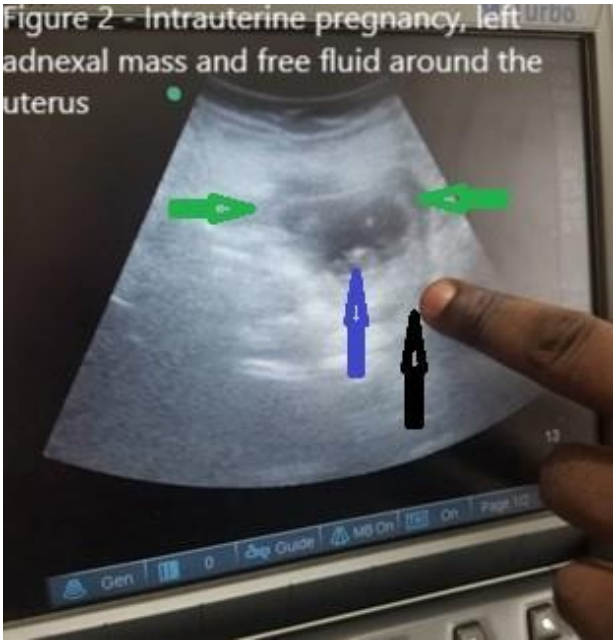

Figure 2: Transabdominal ultrasound showing a left adnexal mass (black arrow), the intrauterine pregnancy (blue arrow) and free fluid surrounding the uterus (yellow arrows).

When she arrived to Saint-Nicolas hospital about three hours later, her initial vital signs were as followed: HR 120 bpm, BP 90/70 mm Hg, RR 28 cycles/min, T 36,6 ^{0}C. Her initial assessment in the triage were unremarkable. Her physical exam was remarkable for pallor, rebound tenderness, closed cervix with no palpable adnexal mass. We don't have access to B-HCG dosage at the hospital, but we did a urinary pregnancy test which was positive. Initial hemoglobin was at 6 g/dl. Transabdominal ultrasound showed an intra-uterine live fetus of 11 weeks 6 days, a left adnexal mass and free fluid in the Douglas cul-de-sac, consistent with a ruptured ectopic pregnancy associated with an intrauterine pregnancy complicated by hemorrhagic shock (Figure 1 and 2). She was transferred urgently to the operating room for a laparotomy.

Figure 3: Left annexectomy showing the ruptured ovarian cyst (black arrow), the fetus (green arrow) and the left ovary (blue arrow).

We found a left ruptured ampullary pregnancy and drained 2000 milliliters of blood in the abdominal cavity. An incidental ovarian cyst was found in the left ovary (Figure 3). We performed a left annexectomy. She didn't get blood transfusion due to shortage at the blood bank of the hospital at the time. She refused definitive contraception.

Her post-op was uneventful as she was sent home 48 hours later with close follow-up. She felt so grateful for the care she received at Saint-Marc, she preferred coming to our family medicine outpatient clinic for every following prenatal visit instead of going to the nearest clinic. These visits were uneventful: there were no medication for preservation of pregnancy used, nor there were any complications in the 2nd and 3rd trimester. When she visited at 39 weeks 2 days, her vitals were unremarkable, Bishop score at 9 and biophysical profile at 8/8. Because of the distance she had to travel for every visit, we discussed hospitalization for an elective induction, which she accepted. She was started on oxytocin under continuous fetal monitoring. Her record showed a Category 1 tracing throughout the labor until the uncomplicated vaginal birth of her boy. This was one of

the success stories of the family medicine outpatient clinic and maternity ward of the hospital.

DISCUSSION

This was first described case of heterotopic pregnancy in the Haiti, to our knowledge. 71% of the patients have at least one risk factor.[2] Our patient had no identifiable risk factors based on her background. It can occasionally remain asymptomatic or even come to term, but like our patient, complaints usually occur in the first trimester.[7,8] The most common location is the oviduct, the left one being more frequent than the right one, consistent with our patient's case.[1] Triplet heterotopic pregnancy after spontaneous conception have been described: 2 on the same fallopian tube and 1 intrauterine pregnancy, bilateral tubal and 1 intrauterine pregnancy.[9,10] Our patient presented with severe abdominal pain, vomiting and shock symptoms due to the ruptured tubal pregnancy. Peritoneal inflammation may cause gastrointestinal disturbance. Our patient didn't present vaginal bleeding, but it does occur.[11] Although in shock, she travelled far for urgent care due to socio-political crisis in the country. Poor health behavior was probably an additional reason for diagnosis delay. Our failing health system caused blood transfusion not being available to her.

The gold standard method for diagnosis and therapeutic tool is laparoscopy.[12] Although, in the presence of shock, laparotomy remains indicated with caution not to manipulate the uterus to preserve the intrauterine pregnancy.[13] Transvaginal ultrasound has superior diagnostic accuracy than transabdominal ultrasound.[14] We don't have a vaginal probe in our maternity ward and don't have access to laparoscopy in the operating room. Medical management option does exist in hemodynamically stable patients, where you can inject under ultrasound guidance potassium chloride into the corneal sac or fetal heart when it's unruptured, but it's also associated with higher abortion rates than surgery.[14] Other options include fine-needle aspiration of the oviduct guided by ultrasound with subsequent glucose 50% application, hemostatic sutures or local hypertonic NaCl solution in cervical pregnancy.[12] Success rates for the birth of a live newborn reach 66%, as the risk of early or late miscarriage is a concern during follow-up.[15]

CONCLUSION

This case highlights the gruesome set of events that led our patient to be admitted to our hospital and how optimizing healthcare access to poor people can be paramount. The course of management shows the complexity of providing emergent care in an unstable geopolitical environment and limited availability of ultrasound and resuscitative blood products. Despite not having received blood transfusion, her following prenatal visits and post-op thankfully went well until she delivered her baby, who is alive and well today. Careful adnexal evaluation helps lower the risk of missing a heterotopic pregnancy because the consequences can be fatal. It is important to reinforce the health system to secure prenatal care and blood transfusion for all pregnant women.

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