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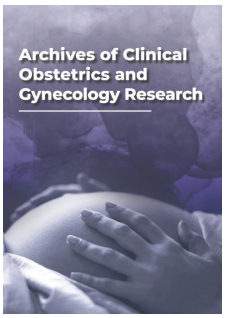

Ovarian Pregnancy: A Case Report And Review Of The Literature, At The Sourô Sanou University Hospital Center in Bobo-Dioulasso, Burkina Faso

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Abstract

Introduction: *Ovarian pregnancy remains an isolated and exceptional phenomenon in a woman's life. It is difficult to diagnose in countries with inadequate medical facilities. The authors report a case of ovarian pregnancy treated at the Sourô Sanou University Hospital in Bobo-Dioulasso in November 2024.*

The case : *The patient was a 26-year-old woman, pregnant for the first time. Although she had received five prenatal care visits during this pregnancy, she had never had an obstetric ultrasound. She was admitted to the CHUSS at 35 weeks of chronological amenorrhea for abdominal pain. An ectopic pregnancy was suspected, requiring an emergency laparotomy, which led to the fortuitous discovery of an ovarian topography of the product of conception. The surgical procedure was a partial ovariectomy after complete extraction of the macerated fetus and its appendages. The postoperative course was uneventful.*

Conclusion: *Although rare, ovarian pregnancy remains an obstetric emergency with a reserved and specific symptomatology depending on complications at different stages of pregnancy.*

Introduction

Ovarian pregnancy is a rare type of pregnancy in which the ovary is the site of implantation and development of the egg. It occupies a special place among ectopic pregnancies due to its rarity [1]. Unlike other types of extrauterine pregnancies, ovarian pregnancy remains an isolated and exceptional phenomenon in a woman's life [2]. There are forms that progress beyond the fifth month, which are common in countries with low medical coverage and exceptionally rare in developed countries. This type of pregnancy easily leads to maternal and fetal complications due to a lack of adequate healthcare infrastructure. Given the difficulties in accessing care, it remains a rare condition in the third trimester despite its difficult diagnosis, which is made intraoperatively, during an ultrasound examination, or through an anatomical pathology analysis [3]. We report a case of ovarian pregnancy discovered intraoperatively and treated at the Sourô Sanou University Hospital in Bobo-Dioulasso in November 2024.

Observation

Medical history

The patient was 26 years old and lived in a rural area. She was pregnant for the first time and had no reported medical history. Having started menstruating at age 12, she had been experiencing secondary amenorrhea since March 27, 2024, which corresponded to a gestational age of 35 weeks of amenorrhea at the time of admission.

Pregnancy history

During her pregnancy, she had received five prenatal care visits without any particular issues. During these visits, she had received iron and folic acid supplements, sulfadoxine and pyrimethamine malaria chemoprophylaxis, and two doses of tetanus serovaccination. No ultrasound scans were performed during the pregnancy.

She reported experiencing abdominal and pelvic pain in mid-October 2024. The pain was twisting in nature, not very intense, and associated with light vaginal bleeding. In addition, there was spontaneous milky discharge from the breasts when the pregnancy had reached 8 months.

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These symptoms prompted her to consult the local health and social promotion center (first-level health center). There, she received unspecified treatment. In the absence of fetal heart sounds, she was referred to the regional referral hospital (CHR), a second-level hospital. At the CHR, after a clinical examination supplemented by an ultrasound scan, a diagnosis of intrauterine fetal death was made. The patient then underwent several sessions of cervical ripening using 200µg of misoprostol sublingually, in accordance with the national protocol, but without success. After 27 days of hospitalization, she was transferred to the Sourô Sanou University Hospital in Bobo-Dioulasso, a tertiary care hospital, for intrauterine fetal death with failed induction and clinical anemia.

The clinical examination on admission revealed a general condition considered to be good, with clear consciousness and stable hemodynamic parameters. However, non-decompensated clinical anemia was noted. Obstetrically, the abdomen was enlarged with a large longitudinal diameter measured at 29 cm, which could correspond to the uterine height. However, fetal heart sounds were inaudible with a Pinard stethoscope. Speculum examination revealed a healthy vaginal wall and cervix. The cervix was lateralized to the right and stained with minimal red blood. On vaginal examination combined with abdominal palpation, the cervix was long, deviated to the right, firm, and closed. The cul-de-sacs appeared free. The uterus was not perceived as isolated from the mass. The finger cots were streaked with bright red blood.

Additional tests

An emergency obstetric ultrasound revealed a gynecological-sized, empty uterus and a dead fetus in the left lateral uterine cavity at 27 weeks of gestation, based on a femur length of 53 mm. The Douglas pouch was clear. The diagnosis of non-progressive abdominal pregnancy was then made.

The assessment was completed by blood typing/Rhesus factor testing (O negative) and a complete blood count, which revealed normocytic normochromic anemia with a hemoglobin level of 7.7 g/dL.

Treatment

After being prepared for surgery, the patient underwent an emergency laparotomy accompanied by a transfusion of 800 cc of packed red blood cells. The laparotomy, performed under general anesthesia, revealed numerous false membranes and loose ovario-uterine and ovario-parietal adhesions during the coelioscopy. After careful adhesiolysis using taxis, the

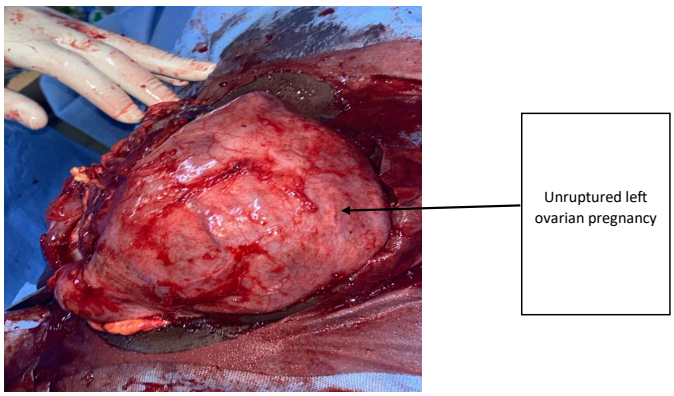

Figure 1: *Unruptured ovarian pregnancy*

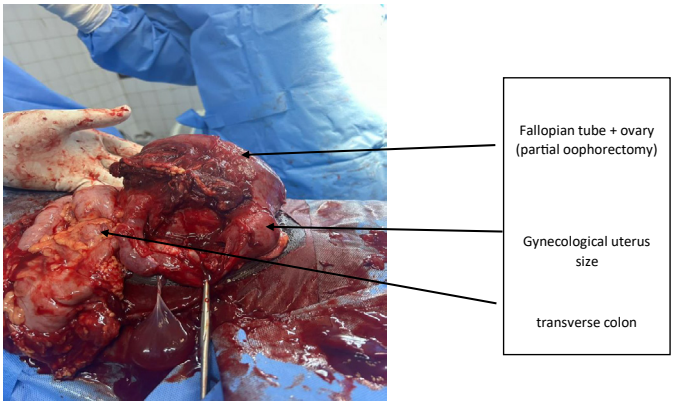

Figure 2: *Macroscopic appearance after partial ovariectomy*

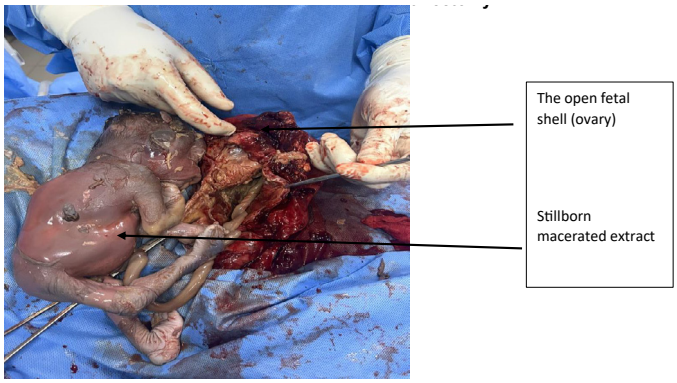

Figure 3: *Macroscopic appearance after opening and extraction of the fetus*

examination revealed a gynecological-sized uterus, inflamed fallopian tubes, and a normal right ovary. However, to the left of the uterus was a large mass measuring 20 cm x 15 cm, attached to the ovary (Figure 1).

An ovarotomy revealed purulent amniotic fluid, which was aspirated. A male fetus that had died and macerated and its placenta were then removed en bloc, weighing a total of 950 g (Figure 2). A necrosectomy and partial oophorectomy were then performed, followed by satisfactory hemostatic sutures (Figure 3). After carefully cleaning the abdominal cavity with compresses and saline solution, the abdominal wall was closed layer by layer.

Postoperative care

Postoperative care consisted mainly of an infusion of painkillers based on 1 g of paracetamol combined with tramadol every 6 hours for 24 hours. The anemia was corrected by an additional transfusion of 900 cc of packed red blood cells. Bowel function resumed on the second postoperative day. After a 7-day stay to correct the anemia, she was discharged. The first dressing change on day 9 confirmed that the skin wound had healed. The woman was seen again at the postoperative consultation on day 30 and was completely normal.

Discussion

The ovaries are the most common site for ectopic pregnancies. Over the past 12 months, 5,565 deliveries and 124 ectopic pregnancies (EP) were recorded in the obstetrics department

at Sourô Sanou University Hospital. The frequency of ovarian pregnancy corresponded to 0.018% of deliveries and 0.80% of EP, respectively. In the literature, it is estimated at 2-3% of ectopic pregnancies, representing an incidence of approximately 1/2500 to 1/5000 births [1,4,5]. The lowest rate was reported in Tunis, at 1 in 21,439 births [6]. The pathophysiology of ovarian pregnancy remains poorly understood. Some authors believe that it is secondary to reflux of the fertilized egg back into the ovary [7]. In this case, the pregnancy implants preferentially on the scar of the original follicular ostium, which is rich in fibrin and new capillaries. This theory corresponds to the intra-follicular and juxtapositional forms. Another theory suggests that implantation may occur at a distance from the corpus luteum or even on the contralateral ovary: this is the juxtacortical or juxtinterstitial form. Its pathophysiology remains unclear. Although rare, there are also cases of bilateral ovarian pregnancy and heterotopic pregnancy with ovarian pregnancy [8]. The at-risk population is slightly different from that of patients with tubal ectopic pregnancy. According to Ranaivoson et al., women with ovarian pregnancy are young, most often fertile, multiparous, or have an intrauterine device [1]. In our observation, the patient was young, aged 26, primigravida nullipara, and had not used contraception. According to Philippe [9], the average age of onset of ovarian pregnancies is 29 years. Contraception using an intrauterine device appears to be particularly associated with ovarian pregnancies [10]. This was not the case in our observation. In fact, several authors studying series of 7 to 26 ovarian pregnancies [8] noted that between 57% and 90% of patients had an IUD. She had presented with mild abdominal and pelvic pain of a twisting nature. This type of pain is generally the most prominent symptom [8]. In addition to abdominal and pelvic pain, several other symptoms can help guide the diagnosis: digestive disorders, anemia with deterioration of general health, a fetus very superficial, often in an atypical high transverse position, internal or external hemorrhage, or toxic-infectious syndrome ; on vaginal examination, the cervix is often fixed, hard, and long under the pubic symphysis [11]. In our observation, the cervix was non-pregnant and lateralized to the right, associated with bright red vaginal bleeding of minimal abundance, but there was spontaneous milky discharge because the fetus was dead and the pregnancy was at an advanced stage. In addition, the failure to stimulate uterine contractions by administering a uterotonic confirmed the diagnosis of abdominal ectopic pregnancy, which was confirmed by obstetric ultrasound showing an empty uterus and an abdominalized fetus. The diagnosis of ovarian pregnancy was confirmed by laparotomy. This highlights the diagnostic difficulty of these rare cases of advanced ectopic pregnancies. It is known that the diagnosis is often confirmed intraoperatively, with the uterus covered by the fetal cyst or a shell [3]. Thoyer-Rozat [12] stated that beyond the fifth month of pregnancy, it should be considered in order to recognize the extrauterine location of the pregnancy.

According to Spiegelberg [13], the usual location of ovarian pregnancy is the right ovary. In addition, the following characteristics are present: 1) the normal size of the right ovary (16 mm x 19 mm) is significantly smaller than that of the left ovary (35 mm x 18 mm); 2) part of the parenchyma of the right ovary often transforms into a cystic cavity; 3) the wall of this cavity and the ovary have the same histological structure, and the remains of the fetus and placenta are usually found in this cavity [1]. In our observation, the pregnancy was in the left ovary and an emergency ultrasound was performed. Surgery is the treatment used in most cases to treat ovarian pregnancy. In cases where the ovarian pregnancy is advanced in age, oophorectomy or even adnexectomy may be performed [12]. However, Nday [3] recommends partial resection of the ovary. This treatment option was used in our observation, as the patient was young and had no living children. Some authors recommend medical treatment with methotrexate at a dose of 1 mg per kilogram of patient weight administered intramuscularly immediately after surgery, given the risk of persistent trophoblastic tissue [14]. However, it must be acknowledged that this is rarely done in cases of ovarian pregnancies. There were other reasons for not administering additional treatment with methotrexate in our observation : on the one hand, it was a pregnancy at an advanced age and we were able to completely and reliably extract the egg under direct visualization; on the other hand, this medical treatment is more effective for early pregnancies and its success does not seem to be fully understood [3,15].

Conclusion

Ovarian pregnancy is a rare type of ectopic pregnancy. Its diagnosis and management are not always easy. Although rare, it remains an obstetric emergency. The particularity of our observation is the occurrence of ovarian pregnancy in a primigravida who had progressed to 35 weeks of chronological amenorrhea. Its management was mainly surgical with a favorable postoperative outcome..

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