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### RESEARCH ARTICLE

#### PATIENT WITH HETEROTOPIC PREGNANCY: CASE REPORT

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#### Abstract

Heterotopic pregnancy refers to the coexistence of an intrauterine pregnancy and an extrauterine pregnancy, regardless of the latter's location. Its prevalence increases with advanced maternal age, often due to a history of gynecological infections. Diagnosing this condition is challenging due to its ambiguous clinical presentation. Pelvic ultrasound is the key diagnostic tool. The primary goal of treatment is to remove the ectopic pregnancy while preserving the intrauterine pregnancy and minimizing the risk of recurrence. The maternal prognosis is similar to that of isolated ectopic pregnancies, with a mortality rate below 1%. We present the case of a 38-year-old woman with no history of assisted reproductive technology, who was admitted to the emergency department with hemodynamic instability, pelvic pain, and slight blackish vaginal bleeding. An ultrasound confirmed the diagnosis of heterotopic pregnancy. The patient underwent a right salpingectomy, and at 37 weeks of gestation, delivered a healthy baby.

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#### Introduction:-

Heterotopic pregnancy (GH) is defined by the simultaneous presence of an intrauterine pregnancy (GIU) and an extrauterine pregnancy (GEU). These are bi-ovular twin pregnancies in which one of the nests is in the uterine cavity and the other is ectopic, usually in the fallopian tube. The first case was reported by Duvernetin 1708 during an autopsy. In the literature, the frequency of heterotopic pregnancies in spontaneous cycles is 1/30,000 and 1/100-1/500 in medically assisted procreation (MAP). This frequency has risen sharply in recent years due to the development of MAP techniques and the resurgence of upper genital infections. This is an often unrecognized pathology that poses a diagnostic problem and can be life-threatening. We report the case of a GH, a right ampullary pregnancy, associated with an intrauterine pregnancy which proceeded without anomalies, resulting in vaginal delivery at 37 weeks' amenorrhea, giving birth to a healthy child.

#### Case Report :

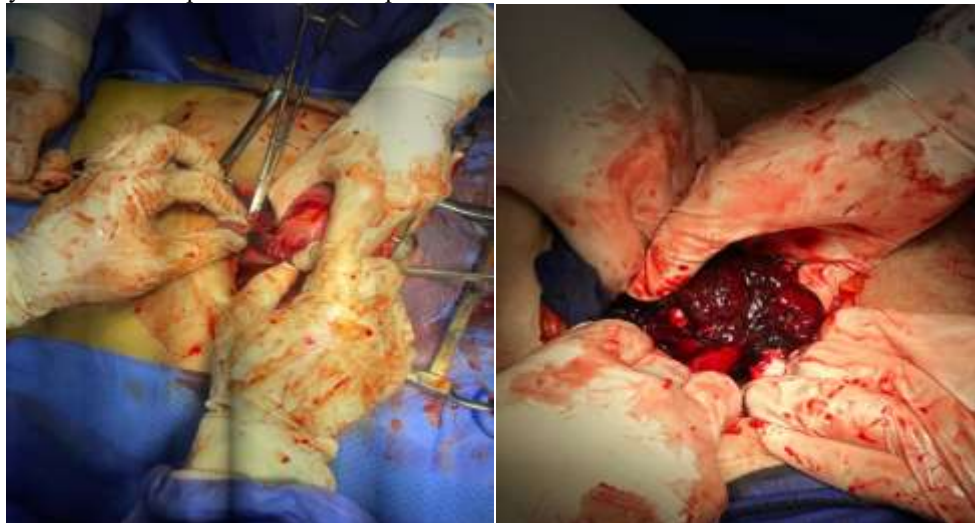
The patient was 38 years old, G3P2 (2EV/AVB), with a pregnancy estimated at 7 SA according to precise DDR, with no notable pathological ATCDS, admitted for pelvic pain evolving for 3 days + T1 metrorrhagia. Clinical examination found conscious patient hypotensive to 80/40 mmHg, tachycardic to 125bpm, conjunctivae slightly discoloured. Gynaecological examination found minimal blackish bleeding from the endocervix on speculum, with TV, pain on uterine mobilization with positive douglas cry and blackish blood on removal of finger pad. Pelvic ultrasound revealed a heterotopic pregnancy with an intrauterine gestational sac containing a vitelline vesicle with an embryonic button whose measurements corresponded to 7 SA+2 days, with an oblong right latero-uterine image suggestive of a hematosalpinx with a medium-sized effusion.



**Figure 1:-** Pelvic ultrasound revealing hematosalpinx

An emergency laboratory work-up revealed a hemoglobin level of 8g/dl, with a positive BHCG level of 10200.

Due to hemodynamic instability and a strong ultrasound suspicion of an ectopic pregnancy (EP), the patient was urgently taken to the operating room for an exploratory laparotomy. A ruptured EP was identified at the ampullary level of the right fallopian tube. As it was impossible to preserve the tube, a right salpingectomy was performed, and approximately 400cc of hemoperitoneum was aspirated.



**Figure 2:-** Ruptured right ampullary pregnancy.

Pathological examination confirmed the presence of an ectopic pregnancy.

The patient was put on progestin therapy: 200mg 2\*/dr.

An ultrasound examination was carried out within 10 days of the operation, showing an evolving intrauterine monofetal pregnancy at 8 weeks gestation. The pregnancy proceeded without anomalies and a vaginal delivery took place at 37 weeks' amenorrhea, giving birth to a healthy male child.



**Figure 3:-** Pelvic ultrasound revealing evolving intrauterine monofetal pregnancy at 8 weeks gestation.

### Discussion:-

Heterotopic pregnancy is the simultaneous presence of an intrauterine pregnancy (IUP) and an ectopic pregnancy (EP), a rare and potentially life-threatening condition. The frequency of heterotopic pregnancies varies widely depending on the context. In spontaneous pregnancies, the rate is approximately 1 in 30,000, while in cases involving assisted reproductive technologies (ART), this incidence increases to 1 in 100 (1). Our case involved a spontaneously conceived pregnancy, a situation that is comparatively rarer.

The risk factors for heterotopic pregnancy include a history of pelvic inflammatory disease (PID), endometriosis, and prior surgeries that could lead to tubal damage, as well as age-related factors. Older women, such as our 38-year-old patient, are at increased risk due to the higher likelihood of gynecological infections or tubal abnormalities, even without ART (3). In our patient's case, although there was no documented history of such risk factors, the age alone could be a contributing factor.

Imaging plays a pivotal role in diagnosing heterotopic pregnancies. Transvaginal ultrasound is the primary diagnostic tool, and it is essential in visualizing both the intrauterine gestational sac and any ectopic mass. MRI can be considered in selected cases where ultrasound findings are inconclusive. MRI offers the advantage of excellent soft-tissue contrast without exposing the patient to ionizing radiation, which is especially important in pregnancy (8). In our patient, the diagnosis was made using ultrasound, which identified a heterotopic pregnancy, and MRI was not necessary.

The standard treatment for heterotopic pregnancy is surgical intervention, typically via laparoscopy, which has the dual benefit of confirming the diagnosis and providing definitive treatment (3). In stable patients, laparoscopy is preferred due to its minimally invasive nature, but in cases of hemodynamic instability, laparotomy may be required. In our case, the patient presented with pelvic pain and hemodynamic instability, leading to the decision to perform an emergency laparotomy with right salpingectomy.

Salpingectomy is often the treatment of choice when the ectopic pregnancy is located in the fallopian tube, as it allows for complete removal of the affected tube, especially if the contralateral tube is healthy. Alternatives such as salpingotomy may be considered if fertility preservation is a concern, and the other tube is compromised (7). Our patient underwent a right salpingectomy via laparotomy due to her unstable condition, which was consistent with the surgical approach taken in similar cases described in the literature (5).

Several case reports have documented similar presentations of heterotopic pregnancy. Ali et al. (2020) described a 22-year-old primigravida who presented with lower abdominal pain, vaginal discharge, and a viable intrauterine pregnancy. Imaging revealed a complex adnexal mass consistent with an ectopic pregnancy, and laparoscopy confirmed the diagnosis with subsequent right salpingectomy. Similarly, Javanmanesh and Moeini (2022) reported the case of a 25-year-old woman with a spontaneous heterotopic pregnancy. Following a diagnosis via ultrasound,

the patient underwent emergency laparotomy, where a ruptured fallopian tube was found and treated by salpingectomy.

In the current case, our patient also presented with symptoms of pelvic pain and vaginal bleeding, leading to the diagnosis of heterotopic pregnancy confirmed by ultrasound. Given the hemodynamic instability, an emergency laparotomy was performed, with the successful removal of the right fallopian tube. This approach aligns with the surgical management of heterotopic pregnancies, as described in the literature, where salpingectomy remains the most appropriate treatment for cases of tubal ectopic pregnancy (6).

### **Conclusion:-**

Heterotopic pregnancy is a rare but serious condition that requires prompt diagnosis and management. Ultrasound remains the diagnostic modality of choice, and surgical intervention, typically salpingectomy, is often necessary, especially in cases of tubal ectopic pregnancy. Early detection and appropriate treatment are key to ensuring favorable outcomes for both the mother and the intrauterine pregnancy.

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