

## Case report



# Spontaneous heterotopic pregnancy associated with the threat of abortion: diagnostic difficulties

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## Spontaneous heterotopic pregnancy associated with the threat of abortion: diagnostic difficulties

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## Abstract

*Defined as the association of intrauterine and ectopic pregnancies in an individual, spontaneous heterotopic pregnancy occurred rarely with an incidence of 1/30,000. We report a case of a spontaneous heterotopic pregnancy associating a ruptured right ampullar pregnancy with a progressive intra uterine pregnancy and trophoblastic detachment managed in our department of Gynecology-Obstetrics II of the Hassan II Teaching Hospital of Fez.*

## Introduction

Heterotopic pregnancy is defined as the presence of intrauterine and ectopic pregnancies in an individual [1]. It is a rare form of twin pregnancy which was first described in 1708. With the advent of assisted medical procreation, the overall incidence of heterotopic pregnancy, which is reported at 1/30000 in spontaneous pregnancies has increased considerably and is estimated from 1.5 per 1000 to 1 per cent in assisted pregnancies [2,3]. Its diagnosis is not easy. Management is often difficult because the goal is to terminate the ectopic pregnancy by taking precautions to minimize the possible threat to intrauterine pregnancy [4]. We report a case of a spontaneous heterotopic pregnancy associating a ruptured right ampullary pregnancy with a progressive intrauterine pregnancy and trophoblastic detachment.

## Patient and observation

A 33-year-old patient, with no specific history and no known risk factors for ectopic pregnancy, G3P2 who consulted for the management of bleeding on an amenorrhea of 6 weeks and 2 days without any notion of induction of pregnancy in whom the examination found a patient hemodynamically and respiratory stable. The gynecological examination found on the abdominal palpation a flexible abdomen without contracture or defense, in the speculum a minimal bleeding coming from the endocervix with vaginal touching a right lateral uterine tenderness without palpable mass and a rectal examination without signs of peritoneal irritation. Pelvic ultrasound reveals the presence of an intrauterine gestational sac with yolk sac, embryonic sketches and positive cardiac activity associating a 19/33mm trophoblastic detachment and presence in right lateral uterus of a heterogeneous image of 52/38mm including nature is difficult to appreciate. We decided to complete the paraclinical assessment with a pelvic MRI which described a heterotopic pregnancy in which the active intrauterine one associates a

significant trophoblastic detachment and that ectopic is ampullary with right tube seat of a hematosalpinx with heterogeneous thickening making 39 x 10mm in favor of an ectopic pregnancy (Figure 1, Figure 2). The patient underwent a right laparoscopic salpingectomy for the management of ectopic pregnancy after placement of 200µg of progesterone ovum into the posterior vaginal sac. During laparoscopy, the exploration found a hemoperitoneum of low abundance aspirated estimated at 100cc with an enlarged uterus corresponding to gestational age of 09 SA; in the left appendices the trunk was without particularity the ovary was the seat of a yellow body. In the right appendices, the ovary was macroscopically normal in appearance and the fallopian tube was the site of a ruptured ampullary pregnancy measuring 5/6 cm with the presence of trophoblastic tissue at the level of the Douglas fir and the right para-rectal space. The patient's post-operative course was marked by a good course with the completion of an obstetric control ultrasound showing an active intrauterine pregnancy with stable image of the trophoblastic detachment.

## Discussion

Formerly considered rare, heterotopic pregnancy is nowadays becoming more and more frequent with the advent of different assisted medical procreation techniques. Its overall incidence is estimated at 1/30000 in spontaneous pregnancies and varies between 1.5 per 1000 up to 1 per 100 in assisted pregnancies [2,3]. Beyond the factors linked to the various techniques of assisted medical procreation, other factors including tubal pathologies and a history of pelvic surgery or ectopic pregnancy are also incriminated in its occurrence [5]. The discovery may be sudden during the diagnosis of an apparently normal pregnancy or even in the context of the management of a first trimester bleeding. The existence of a heterotopic pregnancy with a progressive intrauterine pregnancy is associated with diagnostic difficulties. The clinical symptomatology dominated by the occurrence of

abdominal pain and/or metrorrhagia as well as an increase in the serum concentration of chorionic gonadotropin (b-hCG) does not differ from the symptomatology in the event of threat of abortion and could lead to ignorance of heterotopic pregnancy [6]. Transvaginal ultrasound is essential for the diagnosis of heterotopic pregnancy, which presents as a coexisting intrauterine pregnancy with a separate adnexal mass or adnexal gestational sac [7]. However, this ultrasound has a low sensitivity, since the diagnosis of ectopic pregnancy may be missed or confused with a torsion of the appendix, a hemorrhagic cyst, a yellow body, a tubo-ovarian abscess or appendicitis [8,9]. The clinical picture of our patient was misleading with a diagnostic ambiguity on the etiology of the metrorrhagia for which she consulted. The ultrasound performed revealed the existence of a progressive intrauterine pregnancy with a trophoblastic detachment. In our present case, we carried out magnetic resonance imaging (MRI) given the difficulty we had in characterizing the lateral uterine image objectified by the initial ultrasound. MRI was not recommended in the diagnosis of a heterotopic pregnancy, but allowed us to know more about the adnexal image which was described on ultrasound. This image has been described by MRI as an ectopic pregnancy with a hematosalpinx. The Management is often difficult because the goal is to terminate the ectopic pregnancy by taking precautions to minimize the possible threat to intrauterine pregnancy [4]. Successful conservative therapy depends on rapid diagnosis, which can reduce the risk of life-threatening serious bleeding, hysterectomy, blood transfusion, and viable embryo death [10]. This management, which remains controversial, includes both surgical and medical management of the patient. Surgical treatment can confirm heterotopic pregnancy and evacuate ectopic pregnancy by laparoscopy or laparotomy [11]. The prognosis for intrauterine pregnancy is most often favorable.

## Conclusion

Spontaneous heterotopic pregnancy remains rare and can occur apart from any other risk factor as it is the case in our observation. Transvaginal ultrasound, although useful for diagnosis, may not be specific. The use of pelvic MRI to diagnose our case was very helpful.

## Competing interests

The authors declare no competing interests.

## Authors' contributions

The authors participated in the care of the patient; writing and correcting the manuscript. All authors have read and approved the final version of the manuscript

## Figures

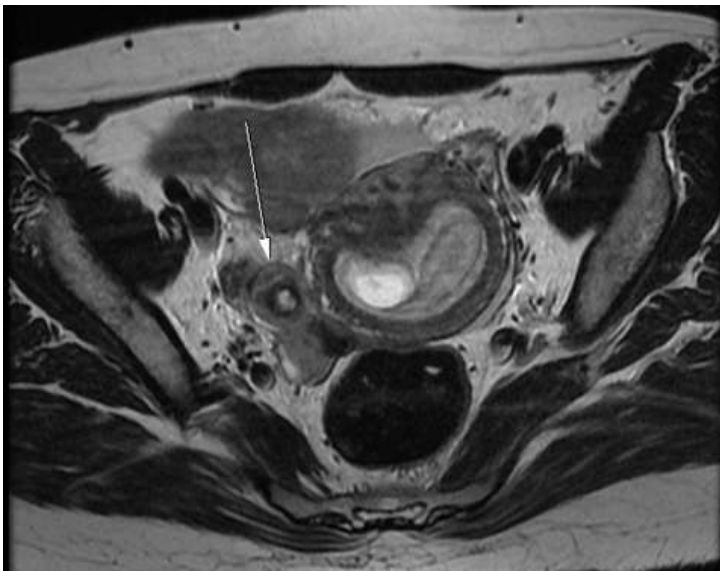
**Figure 1:** lateral uterine image in favor of a hematosalpinx

**Figure 2:** trophoblastic detachment

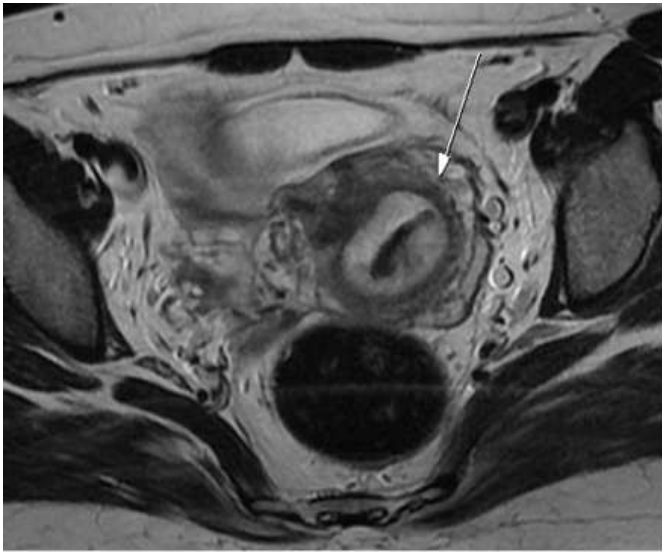
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**Figure 1:** lateral uterine image in favor of a hematosalpinx



**Figure 2:** trophoblastic detachment