Term Abdominal Pregnancy with Live Fetus: about a Case and Review of the Literature


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ABSTRACT

Objectives: To specify the diagnostic difficulties and the criteria allowing a conservative load taking.

Observation: We report a case of abdominal pregnancy with live fetus diagnosed ultrasonically at 23WA in a context of abdominal urgency on the background of secondary amenorrhea with prospective follow-up and birth at 36WA. Ultrasound is essential to diagnosis. The treatment is always surgical and the difficulty is dominated by the removal of the placenta. The fetal prognosis is reserved and the maternal mortality is not negligible.

Conclusion: Abdominal pregnancy is a rare event. Her diagnosis is difficult and a conservative attitude of pregnancy is possible.

Keywords: Abdominal pregnancy, Ultrasonography, Laparotomy.

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Introduction
Abdominal pregnancy (AP) is a rare entity in ectopic pregnancies that corresponds to the implantation and development of the fertilized egg in the abdominal cavity [1]. Early AP is distinguished from advanced AP diagnosed after 20 weeks of amenorrhea (WA). It is a rare possibility in the evolution of a pregnancy, since it represents only 1% of ectopic ovular implantations [2]. Although exceptional in developed countries, abdominal pregnancy has increased in low-density countries [3]. The evolutionary forms until the end are exceptional with a high perinatal mortality and maternal complications occlusive, infectious and especially hemorrhagic that can be very serious [4]. Most authors, once diagnosed, recommend a medical termination of pregnancy [5,6]. For others the high rate of neonatal survival without serious sequelae may justify a conservative attitude. We report an unusual case of advanced WA diagnosed by ultrasound in the 2nd trimester who received a prospective follow-up with birth at 36 WA in order to show the diagnostic difficulties and recall the criteria allowing a conservative management.

Observation
It was a second gesture nulliparous 26 years married for 5 years with notion of spontaneous abortion a year ago to 3 months of pregnancy. She had no particular medical history, without smoking or contraception.

The patient consulted gynecological emergencies for pelvic pain, diffuse abdominal pain with no particular character, associated with uncontrollable vomiting in a context of secondary amenorrhea, but without metrorrhagia. The clinical examination showed a patient in good general condition, apyretic and her conjunctiva were normally colored. The abdomen was enlarged and deformed with perception of the fetal cephalic pole at the level of the right hypochondrium and its caudal pole at the level of the left iliac fossa. Fetal heart sounds were perceived at the umbilical level. The gynecological examination returned to a subnormal uterus, the vulva clean and the cervix firm to the vaginal touch. . The abdominal and pelvic ultrasound examination, performed with 3.5 and 7.5 MHz probes, confirmed the diagnosis of progressive abdominal pregnancy. The uterus was slightly enlarged with an empty, thin and median cavitory line (Figure 1). The fetal head came into contact with the lower face of the liver, while its seat was at the level of the left iliac fossa in contact with the left colon. The placenta was outside the uterine cavity, adhering to the posterior surface of the uterine fundus and intestinal loops. The pregnancy was estimated at 23 weeks of amenorrhea plus 4 days without malformations found.

However for lack of financial means we could not achieve magnetic resonance imaging (MRI). Despite the maternal and fetal risks, the patient nevertheless wished to continue this pregnancy. A laparotomy for fetal extraction was programmed at 37 SA. Given the risks, the patient was followed regularly by gynecological examinations and repeated obstetric ultrasounds, and hospitalized several days before surgery. The laparotomy with xypoh-pubic incision showed in the abdominal cavity a living fetus contained in its amnio-chorionic membranes (Figure 3). After opening the membranes, a live female child with a birth weight of 2100 g and an Apgar of 6/10 was extracted, with no malformation. After clamping of the umbilical cord, exploration found a placenta adhering to the posterior surface of the uterine fundus, epiploon, and left appendix with moderate bleeding at the level of its bed and requiring total removal by dissection. step by step (Figure 3). Hemostasis and peritoneal lavage were performed. The blood spoliation was compensated peroperatively by the transfusion of three red blood cells. The postoperative course was simple. At the last check, the mother and the child were doing well.

Discussion
Epidemiology
AP is a rare localization of ectopic pregnancy. Its incidence is estimated globally at 1 for 8099
births. The great variability of incidence of the disease depends mainly on the socio-economic level of the country and the quality of the surveillance of pregnancy and childbirth, but also on the high prevalence of sexually transmitted diseases, which cause tubal lesions, frequently observed in Africa [3,6]. A racial predominance is reported in some publications, placing the incidence in the black race up to 10 to 25 times that of the white race [7]. The factors predisposing to AP are those of extra uterine pregnancy: genital malformations, specific or non-specific inflammatory sequelae, the sequelae of tubal surgery and the low socio-economic background.

Some observations of AP on medically assisted procreation have been described [8]. In the literature, AP is reported mainly in women over 30, with few deliveries.

Figure 1: Pelvic ultrasonography in longitudinal section showing a slightly enlarged uterus with medial line emptiness, placenta adhered to uterine fundus

Figure 2: Exploration at laparotomy
Pathogenesis

Several classifications of AP have been proposed. The oldest separates the primitive GAs from the secondary AP. In the primitive form, the least common, the ovum can remain in free peritoneum until 6 days after ovulation, by delay of oocyte uptake, and can be fertilized and nestle on any structure of the cavity [8,9]. To be confirmed, this form whose authenticity remains discussed must meet the four conditions of Studdiford [10]:
- both fallopian tubes and ovaries must be free from any lesions;
- absence of utero-peritoneal fistula;
- the ratios of the ovular sac are exclusively relevant to the peritoneal surface birthplace;
• the pregnancy must be young enough.

The secondary form is the most common, it can come from a broken tubal pregnancy or a tubo-abdominal abortion. It may be the result of intra-uterine pregnancy secondary to the abdominal site following hysteroscopy scar rupture, uterine perforation breach or rudimentary horn fracture [3,11]. This classification remains rather theoretical given the difficulty of specifying peroperatively the integrity of the tube or uterus, especially if the pregnancy has evolved until the near term. It has few clinical and therapeutic implications. Some Anglo-Saxon authors have proposed a new classification based on gestational age or location of implantation. It distinguishes early AP with a gestational age of less than 20 weeks with trophoblastic implantation, which is mainly performed on the uterus, the broad ligament, the parietal peritoneum and the Douglas cul-de-sac, abdominal pregnancy. late after 20 WA [8].

Diagnosis

Interrogation often finds the factors of ectopic pregnancy: infertility, intrauterine device, pregnancy after in vitro fertilization, history of uterine trauma, vacuum termination of pregnancy, uterine scar, repeated genital infection. In the reported case we found a notion of spontaneous abortion whose uterine evacuation was done by aspiration.

The physical examination is characteristic when it shows an abdomen spread over the inspection in relation to an irregular presentation. The palpation confirms the abnormal position of the fetus which is superficial under the skin, not very mobile and especially irreducible. The physiological contractions of Braxton Hicks frequent in late pregnancy are absent. With vaginal touch, the marked displacement of the cervix to the symphysis pubis is evocative.

According to some authors, the clinical diagnosis can be better guided by an oxytocin test: the absence of uterine contractions is considered as pathognomonic of AP. In total, clinical latency and nonspecific symptomatology make doubt in the diagnosis with other diseases associated with pregnancy (appendicitis, cholecystitis, bowel obstruction, abdominopelvic tumor ...).

Complementary examinations are a great help. Ultrasound is the essential element of diagnosis and confirms clinical suspicion [14]. Ultrasound criteria for the diagnosis of advanced AP are well codified [8]. This is the absence of a visible wall between the maternal bladder and the fetuses, the extra uterine location of the placenta, fetal parts close to the maternal abdominal wall, abnormal presentation of the fetus, absence of amniotic fluid between the placenta and the fetus. Indications for ultrasound should be broad...
in the presence of abdominal pain in pregnant women.

Magnetic resonance imaging has a better diagnostic relevance. In addition, it allows ultrasound data to specify the placental situation with respect to intra-abdominal viscera [15]. But in our work context, the problem of financial accessibility to these diagnostic means arises. In this case, the MRI could not be done because of lack of financial means.

In our resource-poor countries, unprepared abdominal X-ray examination can be of great help.

It allows to make the diagnosis by visualizing the fetus in contact with the maternal spine. However, this means of medical imaging exposes a risk of irradiation of the fetus. The antenatal diagnosis of advanced AP with live fetuses raises the problem of its management [16].

**Treatment**

Therapeutic management is always surgical. The therapeutic strategy depends on several factors [2,3,8]:

- If the fetus is alive, there is the problem of the operating delay: should we intervene early without waiting for fetal viability? Or is it necessary to wait for fetal viability by exposing the woman to the risk of haemorrhagic, infectious and occlusive complications? It seems that the most reasonable attitude is that of observation in a surgical setting under strict maternal and fetal supervision.
- If the fetus is alive and viable, surgical extraction should be urgent as soon as the diagnosis is made.
- The same attitude can be proposed when the fetus is dead or the pregnancy is young.

The usual approach is laparotomy, some rare cases first laparoscopic for pregnancies of less than 12 weeks have been reported. After 20 weeks, a laparotomy will be scheduled at 34 weeks [1.16], after obtaining a fetal lung maturation.

The attitude towards the placenta depends on its insertion sites [3,8,16]:

- If delivery is possible, it is performed intraoperatively. It must be cautious and total otherwise there is a risk of massive haemorrhage that may be the cause of maternal death. In our case, total excision of the placenta was possible.
- Because of the risk of uncontrollable haemorrhage, all attempts to extirpate the placenta are strictly prohibited if the placenta fits on a noble organ or vessel. The classic attitude is to leave the placenta in place by cutting the cord as close as possible. This attitude should encourage rigorous postoperative monitoring for rare but serious complications such as placental abscess, secondary haemorrhage or intestinal obstruction. This monitoring is provided by ultrasound and / or MRI and repeated dosing of placental hormones (gonadotropic chorionic hormone). The use of Methotrexate, in order to destroy a placenta in place, does not seem to give appreciable results, in addition to the risk related to the toxicity of this product and the favorable spontaneous evolution.

Finally, some interventional radiology techniques have been proposed in advanced AP to embolize the placental pedicles when the placenta has not been completely removed.

**Prognosis**

The fetal prognosis is reserved with high stillbirth, 75% to 95%. In our case, we noted fetal hypotrophy and respiratory distress in the first cases requiring neonatal resuscitation. This fetal hypotrophy can be explained by the poor vascularization of the placenta known in abdominal pregnancies making the fetus more fragile [6,10].

The maternal prognosis depends on the precocity of the diagnosis and the attitude taken with respect to the placenta. Maternal mortality ranges from 0% to 18%, mainly due to haemorrhage and infectious complications. The prognosis was favorable in our patient [3,8].
CONCLUSION
Advanced AP is a rare event. It occurs mostly in countries with low medical density. Her diagnosis, which is recognized as difficult, must be early with ultrasound, which must be systematic during pregnancy. A conservative attitude of pregnancy is possible subject to certain criteria. The fetal prognosis is reserved.

BIBLIOGRAPHY