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Ectopic Pregnancies: Four Cases and Review of the Literature

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Abstract :

Ectopic pregnancy or ectopic pregnancy (EP) is an implantation of the fertilized egg in a site other than the endometrial wall, with a variable location, sometimes even rare. A rare and serious pathology can sometimes be life threatening for the mother due to the high risk of bleeding. The treatment is variable depending on the situation, and can range from medical treatment to salpingectomy or even hysterectomy if the prognosis is vital. 4 patients with rare atypical locations of ectopic pregnancies were treated at the Department of Gynecology and Obstetrics, at the Mohammed 5 Military Hospital and at the Reproductive Health Maternity Hospital les Orangés in Rabat.

Keywords : ectopique, cornuale, cervicale, cicatrice de césarienne.

Introduction :

The incidence of ectopic pregnancies varies considerably among study populations [1]. Most involve the fallopian tubes and only 5% involve other sites [2]. Such as the uterine horn which is a rare entity accounting for nearly 2% of ectopic pregnancies [3]. Or more rarely at the level of the uterine cervix; this is a very rare form of ectopic pregnancy, with an average of 1/20,000 pregnancies [4]. The aim of this work is to describe some rare forms of ectopic pregnancy and to specify their diagnostic, therapeutic and prognostic aspects.

Observations :

Wepresenthere the cases of 3 patients withectopicpregnancies and the case of one patient with a heterotopicpregnancy.

Case1 : This is a horn pregnancy in a 27-year-old patient, second gestational age, primiparous, mother of one live child, without risk factors for ectopic pregnancy. The current pregnancy is spontaneous, estimated at 11 weeks of amenorrhea (SA). The patient was admitted for acute pelvic pain with uterine bleeding in early pregnancy, with right pelvic guarding and Douglas cry on physical examination. Suprapubic pelvic ultrasound found an empty uterus, 10 mm endometrium, with a heterogeneous echogenic right latero-uterine image of 2.5 cm, with the presence of a moderate peritoneal effusion at the level of the douglas cul-de-sac and intervesico-uterine. The beta hcg was 2017. Due to the strong suspicion of ectopic pregnancy, the patient was immediately referred to the operating room with blood order. A minilaparotomy for exploration was performed objectifying 200cc (aspirated) of hemoperitoneum with the presence of a 2cm right ruptured horn pregnancy (Figure 1). Contralateral horn of good quality without adhesions or pelvic endometriosis. A salpingectomy with horn resection

was performed (Fig. 2). The postoperative course was simple, with a drop of more than 25% in the initial hcg level after 48 hours.

Case2 : This is a cervical pregnancy in a 35 year old female patient with a regular cycle, 2nd gesture, with a live child delivered by scheduled caesarean section. The current pregnancy was marked by the appearance of moderate metrorrhagia at 7SA. The clinical examination was unremarkable: the patient was hemodynamically stable. Abdominal examination revealed a Pfannenstiel scar; with a soft abdomen on palpation, with no localized tenderness or pain and a uterus of subnormal size. Suprapubic pelvic ultrasound was performed showing a slightly enlarged uterus with a 39 mm gestational sac, toned, located at the level of the cervix with the upper pole flush with the internal cervical os, with an embryo without cardiac activity and a craniocaudal length (CCL) of 10 mm projecting the gestational age to 7 days after birth (Figure 3) without peritoneal effusion. The initial quantitative plasma hCG level was 950 IU/mL. Blood workup was normal. Medical treatment was attempted in the first instance, which consisted of an intramuscular injection of methotrexate at a dose of 1 mg/kg, repeated after 48 hours, with ultrasound control: clots in the endocervix and disappearance of the gestational sac, βhCG at D7 of MTX at 72 U/l and at D14 at 9 U/l. The follow-up was simple. The ultrasound check-up showed a uterus of normal size with a thin and regular endometrium, measuring 6 mm in thickness and an empty uterine cavity.

Case3 :this is a heterotopic pregnancy in a 26-year-old patient, nulligravida, with an IUD removed 5 months before conception. The current pregnancy was marked by minimal metrorrhagia at 6 weeks of amenorrhea. The clinical examination found the patient to be stable in all respects, normocardial and normotensive. The gynecological examination by vaginal touch revealed an enlarged uterus with the presence of a left latero-uterine mass sensitive to mobilization and Douglas cry (indicating peritoneal irritation). The endovaginal pelvic ultrasound allowed the diagnosis of heterotopic pregnancy by the presence of an intrauterine ovarian sac with embryonic echo LCC corresponding to 7 SA associated with a second gestational extrauterine sac comprising an embryo which corresponds to 6 SA + 4 d with a negative cardiac activity. Treatment by mini-laparotomy confirmed the diagnosis of EP at the cracked left ovarian location with the presence of a hemoperitoneum. Exploration of the rest of the pelvic cavity was unremarkable. An ovarian resection was performed, removing the entire ectopic gestational sac. The follow-up of the intrauterine pregnancy was without any particularities before a vaginal delivery at term.

Case 4: This is a pregnancy on a caesarean scar in a 31 year old patient, second gesture, primiparous, mother of a live child delivered by caesarean 1 year before. The current pregnancy is estimated at 7 weeks of amenorrhea. The patient consulted for acute midline pelvic pain with minimal uterine bleeding a few days after admission. Physical examination found diffuse pelvic tenderness without signs of peritoneal irritation. Ultrasound examination concluded that there was an isthmic gestational sac with the presence of an embryo whose CCL corresponded to 7 SA and a positive cardiac activity. The gestational sac was visualized within the myometrium on the scar at 1 mm from the bladder. The preoperative workup was normal and the patient had an exploratory laparotomy under general anesthesia. On exploration, a bladder was found adherent to the anterior aspect of the uterus, with no other adhesions. The operators proceeded first to a detachment of the bladder with a selective vascular ligation and to the wide exeresis of the scar carrying the gestational sac.

Discussion

The incidence of ectopic pregnancies is estimated to be between 1% and 2%, the majority of which are located in the fallopian tubes. Pregnancies may also implant in rarer sites, such as the uterine horn, cesarean scar, intra-abdominal, or cervix [5]. The frequency of heterotopic pregnancies is approximately one in 30,000 in spontaneous pregnancies, but it is now thought to be one in 7,000 in the general population. However, with assisted reproductive technologies, this incidence varies between one in 100 and one in 500 [5]. The exact frequency of cervical pregnancy is not well known and varies from 1/1000 to 1/35000 according to the authors.[6] The incidence of pregnancy on a caesareanscar varies from 1/1800 pregnancies to 1/2216 pregnancies [7].

The clinical symptomatology of a heterotopic pregnancy is mainly dominated by the classic triad of EP, associating amenorrhea, bleeding in about 50% of cases, and pelvic pain in 80 to 90% of cases. Collapse may be seen in 13 to 45% of patients [7]. However, the presence of this triad associated with an increase in uterine volume allows heterotopic pregnancy to be evoked. Unlike heterotopic pregnancy, the clinical signs during cervical pregnancy are generally absent, or when they do exist, they are not at all pathognomonic at the beginning. Indeed, the cervix is soft and purplish. Then the cervix increases in volume and often appears blown out, but this appears later, beyond 7 SA [8]. In the case of pregnancy with a caesarean section scar, the clinical manifestations include abdominal pain and metrorrhagia, which can vary from simple spotting to life-threatening haemorrhage [9]. However, the clinic can be asymptomatic, in fact, a series of studies found that up to 40% of patients did not show pain or bleeding [4]. This is why it is important to pay close attention to the patient's history. Any delay in diagnosis may be the cause of uterine rupture. It should be noted that a diagnostic error and management as an abortion by curettage could result in massive bleeding [9]. In the study by Nikodijevic et al. of 19 patients with cervical pregnancy, almost 90% presented to the emergency room with pelvic pain, with metrorrhagia in 58% of cases, associated in almost half of cases with a picture of hemoperitoneum [8].

Ultrasound is of significant value and remains the first-line examination, in terms of cost and accessibility, in the diagnosis of ectopic pregnancies, all locations combined. Nevertheless, it can sometimes be difficult to distinguish between certain locations on two-dimensional ultrasound. Such as cornual pregnancy and tubal ectopic pregnancy. In the study by R. MacRae et al. the ultrasound diagnosis of coronal pregnancy was made in 80% of cases (8 women) and tubal pregnancies were suspected in the other two women [10]. In a study of 36 women with cornual ectopic pregnancies, the diagnosis of ectopic pregnancy was correct in 21 (53.4%) cases [11]. A diagnosis of coronal pregnancy was made in only 5 (14%) women and the others were suspected to have tubal ectopic pregnancies. The sonographic particularity of pregnancy on a caesarean scar is based on the Vial criteria established in 2000 [12] which associate: an empty uterus; an empty cervical canal; the existence on the sagittal section of the uterus of the gestational sac on the anterior uterine wall. There are also indirect ultrasound signs such as a decrease in the thickness of the myometrium between the bladder and the gestational sac, which reflects the depth of the invasion, or the objectification of hyper-vascularization in the peri-trophoblastic area by color Doppler. If the diagnosis is accepted on two-dimensional ultrasound, no other complementary examination is recommended [13]. On the other hand, in case of diagnostic doubt despite ultrasound, other imaging examinations may be requested such as three-dimensional ultrasound or MRI, which allow the anatomical relationships and the depth of the trophoblastic implantation in the myometrium to be clarified, as well as the possible involvement of the serosa or the bladder [14]. In

heterotopic pregnancies, the diagnosis is retained when an intrauterine sac is demonstrated with embryonic echo with visualization of another gestational ectopic sac containing an embryo, especially when the cardiac activity is positive, but most often the progressive intrauterine pregnancy is diagnosed first, the EP is discovered later [15]. Pelvic and endovaginal ultrasonography, allows the diagnosis of heterotopic pregnancies in almost 90% of cases [5]. The ultrasound report should specify the gestational age, the quality of the intrauterine pregnancy, the site of the ectopic pregnancy and the possible presence of a peritoneal effusion.

The treatment of cervical pregnancy is evolving and is based on early diagnosis. On the one hand it preserves fertility and on the other hand it allows improving the maternal prognosis according to the frequency of bleeding [16]. Thanks to the progress of resuscitation and codified therapeutic indications, maternal mortality in well-equipped countries has decreased from 50% to 0% in 30 years [8]. In fact, treatments for cervical pregnancy can be surgical, drug, or combined. Surgical treatment usually consists of spa treatments performed under general anesthesia. Treatment consists primarily of methotrexate (MTX) in combination with folinic acid intramuscularly at doses of 0.5 to 1 mg/kg for 5 days [8]. MTX can also be injected directly with ultrasound-guided amniotherapy [17].

Conclusion :

Rarely located ectopic pregnancies are ectopic pregnancies that are often difficult to diagnose clinically. They are a source of complications that can compromise the patient's vital prognosis and fertility. The contribution of intra-vaginal and trans-abdominal ultrasound has allowed early treatment, thus improving the functional prognosis and reducing the indications for hysterectomy. The treatments currently proposed most often combine methotrexate with curettage or laparoscopic treatment. It certainly remains a rare diagnosis, but uterine bleeding in early pregnancy should be kept in mind, especially in patients at risk.

Conflicts interest :

THE authors born declare none conflict of interest.

Figures:

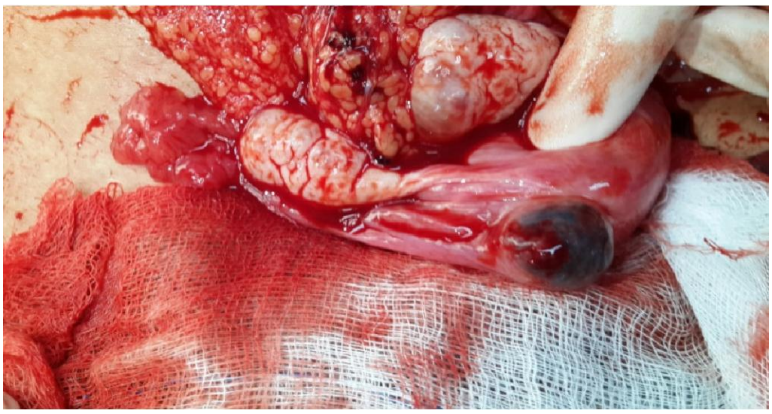

Figure 1:appearance of cornual pregnancy after mini laparotomy

Figure 2 :macroscopic aspect of salpingectomy

Figure 3 :ultrasound appearance of cervical pregnancy

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