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An Unusual Case of Spontaneous Uterine Rupture After a Salpingectomy Following an Interstitial Ectopic Pregnancy

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Abstract: Spontaneous uterine rupture following a history of surgical treatment of an interstitial tubal ectopic pregnancy (EP) is a rare clinical form. This uterine rupture occurring after a wedge resection of the uterine horn, is a serious obstetric complication involving maternal and fetal vital prognosis and obstetric fate of patients in the absence of immediate management. Our observation concerned a 32-year-old gestant, G3P1 (without living children), with a history of interstitial EP dating back to 3 years during which a uterine wedge resection was performed. For this patient, a prophylactic caesarean was recommended between 36 and 37 weeks of amenorrhea. The patient presented during her prenatal follow-up at 37 weeks and 6 days, a complete uterine rupture involving the right uterine horn with the death of a fetus weighing 2900g. The rupture extended throughout the uterine horn, with the right uterine pedicle intact and the right fallopian tube absent. A conservative treatment of the uterus was decided since the patient had no living children. The purpose of our observation is to recall the risk of uterine rupture after cornual uterine excision hence the importance of performing during a EP if possible, a salpingectomy at the level of the uterine horn and if necessary coagulate the intramural portion of the tube. And also in case of uterine wedge resection, to hasten the prophylactic caesarean section as soon as sufficient maturity of the fetus to reduce the incidence of this pregnancy complication.

Keywords: Uterine Rupture, Interstitial EP, Uterine Wedge Resection, Scar Uterus

1. Introduction

Uterine rupture is one of the major complications of pregnancy involving the maternofoetal prognosis [1-3]. However, this complication is observed in varying proportions in the case of a history of opening of the uterine cavity, namely caesarean section and uterine rupture, mucosal rupture in the case of myomectomy and wedge resection of the uterine horn in the case of interstitial EP [1, 4]. We want to report a rare clinical case of uterine rupture at term after a wedge resection following a salpingectomy for a right interstitial ectopic pregnancy.

2. Observation

This is K Y K 32 years old, G3P1 (without living children) hotelkeeper, with history of interstitial EP 3 years ago during which it had been carried out a uterine wedge resection involving the right uterine horn and which benefited from contraception based on estrogen-progestogen for 2 years. For this patient, a prophylactic caesarean was recommended between 36 and 37 weeks of amenorrhea. In the course of her prenatal follow-up, the patient presented abdominopelvic pain associated with vertigo on a 37 SA + 6-day pregnancy. At the examination in obstetric emergencies, it was noted a BP=13/8, a Pulse=98bpm, BDCF absent, a fetus palpated under the skin, absence of metrorrhagia on vaginal examination. Faced with this clinical picture strongly suggestive of a uterine rupture, an indication for emergency laparotomy made it possible to objectify a hemoperitoneum of more than 1000cc and a complete uterine rupture involving the right uterine horn and a stillborn fetus not macerated intra-abdominally, male, weight = 2900g, H =

47cm, CP = 33cm (see figures 1 and 2). The rupture extended throughout the uterine horn with the right uterine pedicle intact and the right uterine tube absent. After extraction of the fetus followed by artificial delivery and uterine revision assisted by an intravenous infusion of 20 IU of oxytocics (syntocinon®), it was decided on a conservative treatment of the uterus since the patient had no living children. A suture of the uterine rupture with absorbable suture was performed (see figure 3). The postoperative period was marked by anemia at 5 g / dl requiring compensation by a blood transfusion of 1000 cc of red blood cells. After 8 days of hospitalization, the postoperative follow-up was simple and the patient was able to leave the department on oral contraception, iron therapy and a postoperative appointment on D15.

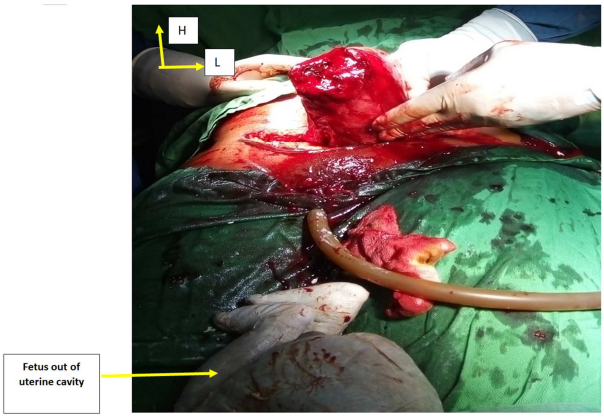

Figure 1. *Spontaneous uterine rupture with fetus out of uterine cavity.*

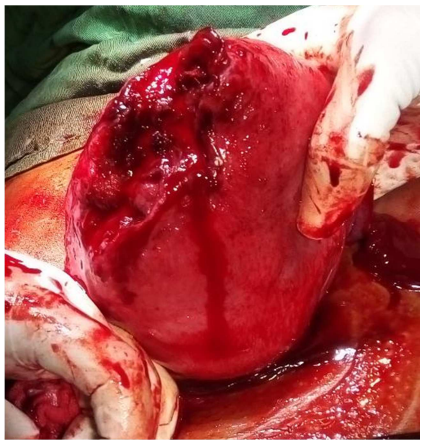

Figure 2. *Rupture Involving Right Uterine Horn.*

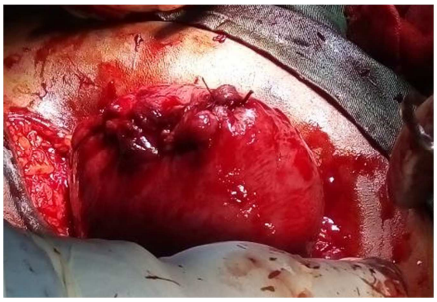

Figure 3. *Appearance of the uterus after Hysterorrhaphy.*

3. Discussion

The interstitial portion of the fallopian tube corresponds to the proximal segment incorporated into the uterine muscle wall (0.7x1.5cm). A pregnancy implanted at this location is called an interstitial pregnancy. The frequency of interstitial pregnancies is between 2-3% of all ectopic pregnancies, with a mortality rate twice as high as tubal pregnancies [5, 6]. The occurrence of pregnancy in the interstitial portion of a fallopian tube is a rare situation.

The incidence of uterine rupture varies from region to region, and it would be inversely proportional to the level of development of the country, according to many authors [1, 7]. Of all the factors predisposing spontaneous uterine rupture, the only one recognized by all authors is the uterine scar after caesarean section. It is found in 50 to 92% of cases of uterine rupture [8]. However, other types of uterine scar were described as potentially risk factors for rupture: myomectomy with mucosal rupture, salpingectomy with excision of the interstitial portion, infections, curettage or artificial delivery of the placenta [9]. Other factors generally described concern multiparity with an average parity of around 2.8 and the seniority of the surgical scar [10]. Uterine rupture after salpingectomy is rare [11, 12]. This is the first case described in our service. In our observation, the initial surgical treatment of interstitial pregnancy consisted of a salpingectomy with corneal resection by laparotomy [12]. Indeed, according to authors such as Lizan, total salpingectomy with resection of the interstitial part of the trunk is generally recommended in order to prevent implantation in the interstitial stump [13]. So after such surgery, the uterine scar was comparable to that of a uterine rupture. The patient thus had to respect an intergenerational period of at least 2 years under contraception and be the subject of special monitoring during pregnancy with close appointments at the end of the pregnancy. From an anatomopathological point of view, this situation presented similarities of a hysterorrhaphy after a complete uterine rupture, hence a weak post-operative scar conducive to a spontaneous uterine rupture. Therefore, repair of the myometrium after mucosal invasion should be carefully evaluated [2].

In current practice, interstitial pregnancy is typically diagnosed at an early gestational age and before rupture, leaving the opportunity for conservative medical or surgical treatment, preventing obstetric risk [5]. In our case, the fetal prognosis was marked by fetal death, in the Stanirowski series, fetal death occurred in more than 67% of cases [4].

According to Soriano and his team, the best practice is to remove the interstitial pregnancy via cornustomy with resection of the interstitial portion of the fallopian tube if necessary and suture of the hysterotomy [12, 14]. With the advent of coelioscopy, trained teams practice on hemodynamically stable patients, a surgical conservative laparoscopic treatment [12].

In the literature, hysteroscopic removal of interstitial pregnancywas also described with success [15]. However, the operated uterine horn appears to be a fragile area and

cases of uterine rupture in the second trimester were described. It is assumed that even after medical treatment, doubts persist about the quality of the cornual myometrium. However, in order to preserve subsequent fertility, conservative treatment was undertaken in the reported case, notwithstanding a risk of recurrence of 4 to 19% during the next pregnancy, according to the data in the literature [16].

Currently, most authors recommend performing a C-section before the onset of labour in a subsequent pregnancy [12]. It appears from our observation that during a salpingectomy, it is important to carry out as much as possible a tubal section close to the uterus. However, recurrences of ectopic pregnancies were described with residual tubal stump after salpingectomy [17, 18]. Ultimately, particular attention should be paid to patients with a history of salpingectomy due to the risk of uterine rupture throughout pregnancy.

4. Conclusion

The occurrence of pregnancy in the interstitial portion of a fallopian tube is a rare situation. The diagnosis of certainty is often made difficult because of the technical platform and the experience of the practioner in sub-Saharan Africa.

The management of interstitial EP is delicate and particularly requires close monitoring due to the obstetric prognosis by the occurrence of spontaneous uterine rupture due to the fragility of uterine scar. In case of uterine wedge resection during EP, sufficient intergenerational space should be respected and increased monitoring should be carried out during prenatal follow up.

The prophylactic caesarean section should be hastened as soon as the fetus is sufficiently mature to reduce the incidence of uterine rupture which remains extremely serious.

Conflict of Interest

The authors declare that they have no competing interests.

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