

Pregnancy on a Rudimentary Unbroken Horn of a Pseudo-Unicornuate Uterus: A Case Report at The University Hospital of Angre Abidjan

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Abstract

The pseudo-unicornuate uterus which is a rare uterine malformation, that can be the site of a pregnancy. Pregnancies in the rudimentary horn usually result in a rupture due to a uterine wall not adapted to the level of the horn, but especially diagnostic difficulties. Their discovery is most often made in intraoperative, when an indication of laparotomy is made for hemoperitoneum in emergency. They are therefore responsible for high maternal-fetal mortality and morbidity. We report in this observation a case of pregnancy in a rudimentary unruptured horn, in a 28-year-old, 4th gesture 2nd parous, the discovery of which was made incidentally, during an indication of laparotomy posed for suspected abdominal pregnancy complicated by a surgical abdomen.

Keywords: Rudimentary uterine horn, Unicornuate, Malformation, Pregnancy, Hemi Hysterectomy

Introduction

The unicornuate uteri result from a defect in the development of one of the two ducts of Müller. They are frequently associated with a rudimentary horn when one of the two ducts only partially develops [1]. This horn may be full or on the contrary the seat of a cavity, and in the latter case it may communicate with the uterus [1]. The unicornuate uterine with rudimentary horns are responsible for several complications, the most serious of which are placental abnormalities and ectopic pregnancies [2].

The occurrence of a pregnancy on the rudimentary horn is a rare possibility, with an incidence in the literature ranging from 1 in 100,000 to 1 in 140,000 [3, 4]. The presence of a pregnancy is accompanied by a high risk of horn rupture in the second trimester in 60 to 90% of cases. They are a real diagnostic challenge, as only 14% of these cases are diagnosed before the onset of a rupture [5, 6]. We report in our observation, a case of pregnancy on rudimentary horn, discovered at the 16th week of pregnancy, per-operative following an indication of laparotomy posed for acute surgical abdomen.

Observation

It is a 28-year-old, 4th gesture 2nd parous, unemployed patient

who was evacuated from the Teaching Hospital of Cocody (Abidjan) for acute abdominal-pelvic pain suspected of abdominal pregnancy.

The patient who was being followed at a Level I health center by a midwife had not performed an ultrasound in the first trimester of pregnancy. She had severe abdominal pelvic pain of a sudden onset, for which she went to the community health center where she was being followed. She was immediately referred to our hospital for proper management. An ultrasound at the time had concluded to a 16-week abdominal pregnancy. On admission, the general examination noted an agitated patient because of the pain, the conjunctiva moderately colored, the blood pressure at 10/6, the pulse at 105 beats per minute, the temperature at 36.2 °C. Palpation of the abdomen regained a generalized defense. At speculum, the vaginal wall and cervix were macroscopically healthy, and there was no bloody discharge of endouterine origin. At the vaginal touch, the uterus had a size of about 12 weeks of amenorrhea with intense pain caused in Douglas's right lateral fornix. In front of this table of acute surgical abdomen and the result of the ultrasound, an indication of emergency laparotomy was decided.

During surgery, it was a pregnancy developed in the rudimentary

horn of a pseudo-unicornuate uterus and which was not yet broken, but whose wall was very thin with areas of crack beginning (Figure 1). It showed the presence of a living fetus. We performed a right hemi hysterectomy, a rudimentary horn resection (located on the right) with the homolateral tube, followed by a satisfactory hemostasis on the section slice (Figure 5). The patient was hospitalized for 3 days. The post-operative consequences were simple and the exit was decided at J5 post-operative, with appointments for follow-up.



Figure 1: Rudimentary horn upper view



Figure 2: Horn from the front

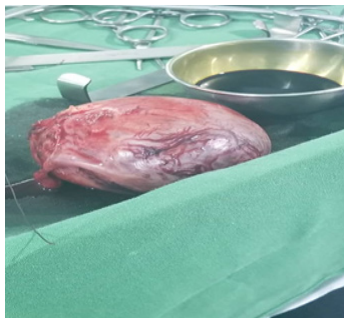


Figure 3: Piece of hemi hysterectomy



Figure 4: Fetus after piece opening

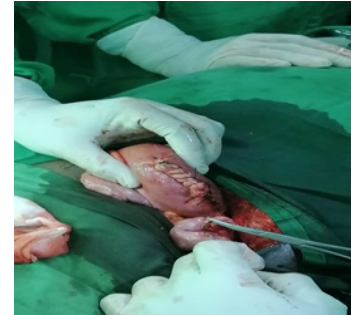


Figure 5: Hemostasis done on section slice

1. Rudimentary horn
2. Rudimentary horn ovary
3. Uterus
4. Left ovary
5. Rudimentary horn tube

Discussion

Mauriceau described the first case of uterine rupture during pregnancy in a rudimentary horn in 1669. Uterine abnormalities result from the failure of the complete fusion of the Müller ducts during embryogenesis. The incidence in the general population is estimated at 4.3% [7]. A unicornuate uterus with a rudimentary horn is the rarest anomaly and results from the failure of one of the Müller ducts to develop completely and an incomplete fusion with the contralateral side. The impact of this anomaly is approximately 0.4% [8]. The right predominance of this rudimentary horn is most often described (62%), as the left Müller duct progresses more caudally than the right [9]. Typically, (83%), the rudimentary horn is non-communicating [8]. This was the case in our observation, and pregnancy in such a situation would be possible due to the trans-peritoneal migration of sperm or a fertilized egg [3, 8].

Rudimentary horned pregnancies of a unicornuate uterus pose a high risk of rupture due to low musculature and small horn size. This rupture usually occurs (67% of cases) in the second trimester of pregnancy [10]. This indicates the need for an early diagnosis for adequate management, because any rupture results in a hemoperitoneum table involving the patient's vital prognosis. This diagnosis, although possible on ultrasound, is very difficult because according to the literature review, less than 14% of these pregnancies are discovered before the rupture. Most of them are accidentally diagnosed in per-operative, during an emergency laparotomy for hemoperitoneum [2, 3, 10]. This situation was found in our observation. Although the horn was not yet broken, pre-rupture stigmas were noted during the procedure, including a very thinned wall and slightly cracked areas.

The management in the operating room of our patient consisted of a right hemi hysterectomy (resection of the rudimentary horn carrying the right trunk) with conservation of the ovaries (Figure 5). It is this technique that is described in the literature. Immediate surgery is recommended by most after diagnosis, even in undisclosed cases [4, 10]. Excision of the rudimentary horn with the homolateral tube (to avoid a new ectopic tubal gestation) (Figure 3) is recommended [9]. In order to preserve fertility in young patients who still wish to have children, this surgery should retain the ovary.

In addition, cases of rudimentary horn pregnancies that have been treated laparoscopically are described. Under these conditions, the extraction of the surgical specimen can be done by enlargement of the incision, through a posterior colpotomy, or by partitioning after fetal potassium chloride injection [11].

Future pregnancies will then require extremely close monitoring, as the patient must be informed of the risks involved. Obstetricians treating these patients should be aware of the serious risk of uterine rupture during pregnancy. A full-term prophylactic caesarean section will be highly recommended [12].

Conclusion

Rudimentary horned pregnancies of a unicornuate uterus are extremely rare. Because of the diagnostic difficulty, their discovery is very often late in a hemoperitoneum table, involving the patient's vital prognosis.

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