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Pregnancy In A Rudimentary Horn Managed Laparoscopically: A Case Report

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Abstract
Pregnancy in a rudimentary uterine horn is an extremely rare and potentially serious obstetric situation, threatening the maternal-foetal prognosis.
Pregnancy can occur accidentally in the rudimentary horn. This is a true extra uterine pregnancy with a risk of rupture during the second trimester of pregnancy, which is why it must be diagnosed and managed rapidly from the start of pregnancy. We report the case of a patient with an arrested pregnancy on a rudimentary horn managed laparoscopically.
Keywords : *Rudimentary horn, Pregnancy, Laparoscopy, A case report.*

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I. Introduction

The rudimentary uterine horn is a major uterine malformation]. The incidence of unicornuate uteri is 1 per 1000 women [1] and represents 10% of uterine malformations [2].

The occurrence of pregnancy in a rudimentary uterine horn is estimated at one in 150,000 pregnancies [3]. This is a surgical emergency requiring removal of this rudimentary horn, as it exposes the uterus to rupture and recurrence.

We report the case of an aborted pregnancy in a right rudimentary horn.

II. Patient and observation

Patient information :

We present the case of a 23 year old patient, primigravida, with a pregnancy of 14 weeks of amenorrhoea, in the context of her first consultation a pelvic ultrasound found a retention of dead egg, the pelvic morphological assessment found an empty anteverted uterus, the pregnancy was in a rudimentary uterine horn which was not known before, the ultrasound exploration did not find any associated renal malformation (figure 1).

Therapeutic intervention :

We opted for a laparoscopic approach, intraoperative exploration found a rudimentary right horn seat of pregnancy, this horn is hypervascularized (Figure 2) and attached to the left hemi iuterus by a fibrous collar (Figure 3).

We performed a hemi hysterectomy removing the malformed uterus with the pregnancy by ultracision (Figure 4), the operative part was extracted in an endobag through a two-centimetre suprapubic incision (Figure 5), we also performed a homolateral salpingectomy, and finally we attached the ovary and the right round ligament to the right lateral wall of the remaining uterus (Figure 6).

The patient was discharged on postoperative day 2 and told that her next pregnancy would be a high-risk one for uterine rupture, and that her next delivery would be scheduled by caesarean section.

III. Discussion

Uterine malformations affect 0.5% of women. Of these, 5% are unicornuate uteri [4]. 10% of rudimentary horns communicate with the main hemi uterus; these uterine horns are solid in 5% of cases and cavitary in 35%, sometimes with a functional endometrium [3]. In the latter case, the rudimentary horn is symptomatic with cyclical

pain due to the accumulation of menstrual blood, and a risk of pregnancy with a functional endometrium but a poor quality myometrium.

Embryologically, the left Müllerian duct progresses more caudally than the right, which explains the slight predominance of the rudimentary horn on the right. Urinary tract anomalies occur in around 38% of cases, due to the narrow development of the Müller and Wolffian ducts, and unilateral renal agenesis is often found [5].

As far as pregnancy is concerned, implantation in the rudimentary horn results from intraperitoneal migration of the spermatozoa or fertilised oocyte.

Diagnosis can be made using ultrasound or magnetic resonance imaging, especially outside pregnancy. During pregnancy, however, diagnosis is more difficult. Endovaginal ultrasound appears to be a good means of diagnosing these pregnancies, especially in the first trimester. This diagnosis may be supported by magnetic resonance imaging.

Ultrasound criteria to look for are: the presence of myometrial tissue around the gestational sac, a well-differentiated placenta and above all the absence of continuity between the cervix and the water sac [6]. However, the diagnosis is often made intraoperatively in 95% of cases [7].

The rudimentary horn is not predisposed to pregnancy and often ruptures in the second trimester with a cataclysmic ruptured ectopic pregnancy.

The treatment is removal of the rudimentary uterine horn, taking the pregnancy and the homolateral tube with it. This operation can be carried out without any pregnancy, to avoid the risk of pregnancy on a rudimentary horn, especially if it is cavitary; others think that a simple unilateral tubal ligation is sufficient [8] [9], but when the horn is full it is generally asymptomatic and does not require any treatment. The patient must be warned that her next pregnancy is a high-risk pregnancy for uterine rupture, requiring a prophylactic caesarean section before the start of labour.

IV. Conclusion

This observation illustrates a particular form of ectopic pregnancy on a uterine malformation, the rudimentary horn. This clinical form is often characterised by a delay in diagnosis. The prognosis of rudimentary horn pregnancies is guarded. This is because the rudimentary horn muscle is particularly fragile due to its thinness. In addition, in the majority of cases, the non-functioning endometrium leads to pathological placentation. Spontaneous development most often leads to rupture, which generally occurs at the start of the second trimester and is responsible for maternal haemorrhage, which in some cases can lead to death. After extraction of the foetus, treatment of this uterine malformation involves resection of the rudimentary horn and tube.

Conflicts of interest

The authors declare no conflicts of interest.

Authors' contributions

Lounas BENGHANEM: data collection, bibliographic research and writing of the article.
Lydia FAÏD: proofreading and supervision of the writing of the article.
Mounir BISKER: proofreading and supervision of the writing of the article.
Kamel HAÏL: proofreading and supervision of the writing of the article.

Figures

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Figure 2: Hypervascularised rudimentary horn
Figure 3: Fibrous collar
Figure 4: Resection of the horn using ultracision
Figure 5: Extraction of the surgical specimen

Figure 6: Pexy of the ovary and round ligament

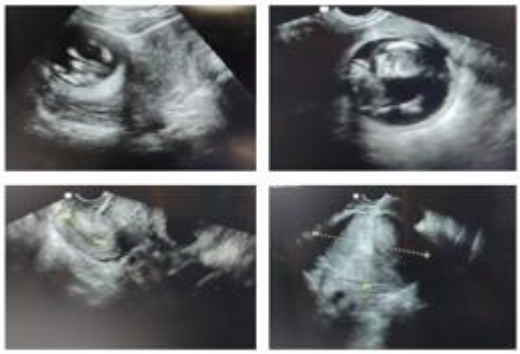

Figure 1 : Ultrasound appearance

Figure 2 : Hypervascularised rudimentary horn

Figure 5 : Extraction of the surgical specimen

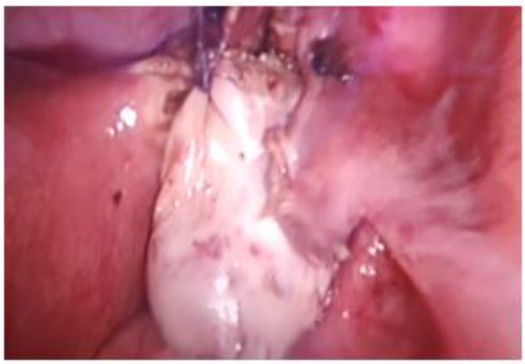

Figure 6 : Pexy of the ovary and round ligament

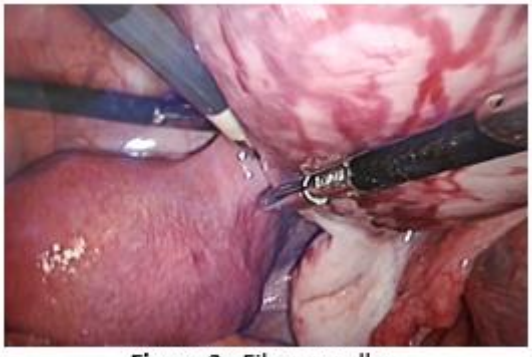

Figure 3 : Fibrous collar

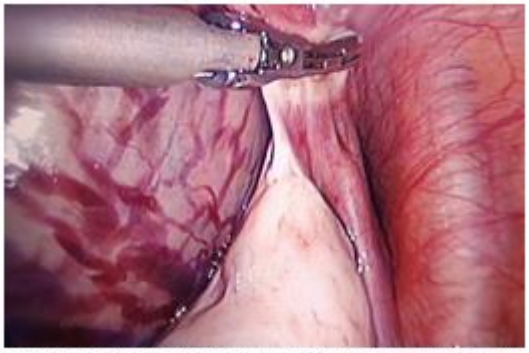

Figure 4 : Resection of the horn using ultracision

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