

# Pregnancy with placenta accreta on a unicornuate uterus with rudimentary horn: a case report

Assal Asmaa<sup>2,\*</sup>, Atfi Fadwa<sup>1</sup>, Sabir Soukaina<sup>1</sup>, Elomri Hajar<sup>1</sup>, Elbouadi Oumnia<sup>1</sup>, Gotni Aicha<sup>2</sup>, Jalal Mohamed<sup>2</sup>, Lamrissi Amine<sup>2</sup> and Bouhya Said<sup>2</sup>

<sup>1</sup>Resident Physician, Department of Gynecology and Obstetrics, at Ibn Rochd University Hospital, Casablanca, Morocco

<sup>2</sup>Professor in the Department of Gynecology and Obstetrics at the Ibn Rochd University Hospital in Casablanca, Morocco

\*Corresponding author: Assal Asmaa, Professor, Department of Gynecology and Obstetrics, Ibno Rochd University Hospital, Casablanca, Morocco

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## Abstract

The unicornuate uterus with rudimentary communicating horn is a rare uterine malformation, which occurs several maternal-fetal complications. Pregnancy on the rudimentary uterine horn of a unicornuate uterus is an uncommon phenomenon, and the diagnosis of pregnancies on a rudimentary uterine horn is difficult. Early diagnosis in the first trimester can be made by endovaginal ultrasound. The treatment of rudimentary horns in unicornuate uterus is based on hemihysterectomy, ideally performed before the pregnancy.

**Keywords:** Uterine malformations, Unicornuate uterus, Rudimentary horn, Placenta accreta

**Abbreviations:** MRI: Magnetic Resonance Imaging, CT: Computed Tomography

## Introduction

Unicornuate uterus is rare uterine malformation, difficult to diagnose, which result from a defect in the development of one of the two Müllerian ducts [1]. The association with a rudimentary horn is frequent when one of the two ducts is partially developed [2]. A cavity may be present in the rudimentary horn, communicating with the endometrium and leading to the implantation of a pregnancy [3]. Pregnancy on the rudimentary uterine horn of a unicornuate uterus is a rare phenomenon, the incidence of rudimentary horn pregnancies is being estimated at 1/100 000 [4]. The Diagnosis of pregnancies on a rudimentary uterine horn is difficult, and may be revealed late, during the course of several complications that may arise, notably placental anomalies [5].

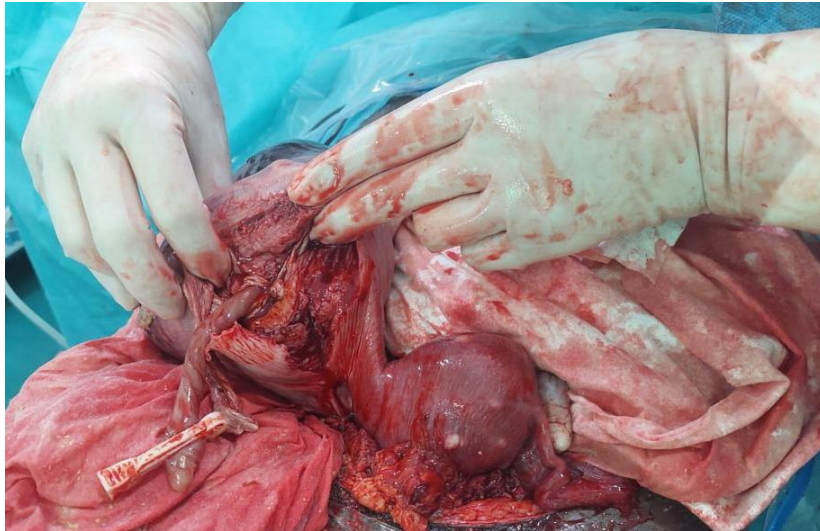
We report the case of a pregnancy on a unicorn uterus with rudimentary horn discovered at 30 weeks, complicated by fetal death in utero and placenta accreta treated by hemihysterectomy of the rudimentary horn.

## Case report:

The patient is a 37-year-old female patient, IIG I P, with 11 child delivered by cesarean section, and a history of miscarriage, and a myomectomy. The patient presented to the obstetric emergency department with an Intrauterine fetal death on a uni-scarred uterus with a 30 SA pregnancy. Examination revealed a hemodynamically stable patient, HU 28 cm from the symphysis pubis, closed cervix with no bleeding on vaginal touch, and no fetal heart sounds. An

obstetric ultrasound revealed a malformed unicornuate uterus with a 30 weeks fetus with no cardiac activity, and a suspicion of a placenta accreta. Surgical exploration confirmed the diagnosis of a unicornuate uterus with

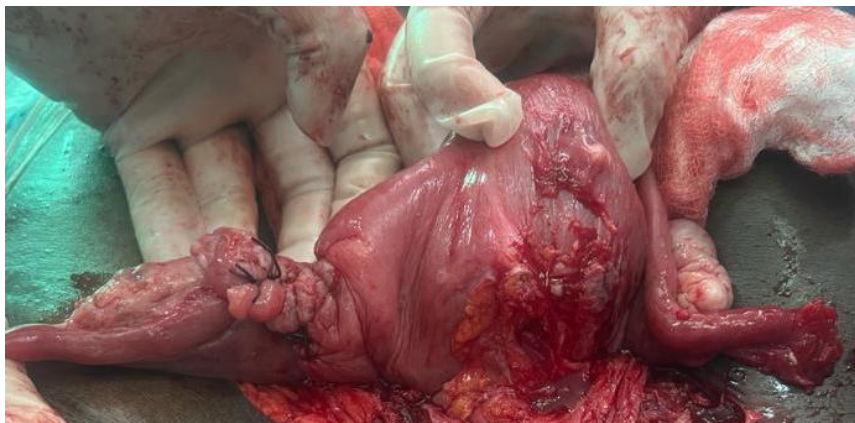
rudimentary horn (**Figure 1**), with a placenta accreta (**Figure 2**). An hemihysterectomy of the rudimentary horn was performed by laparotomy without crossing the second cavity (**Figure 3**). Postoperative follow-up was straightforward.



**Figure 1:** Unicornuate uterus with gravid rudimentary horn



**Figure 2:** Placenta accreta on a rudimentary horn



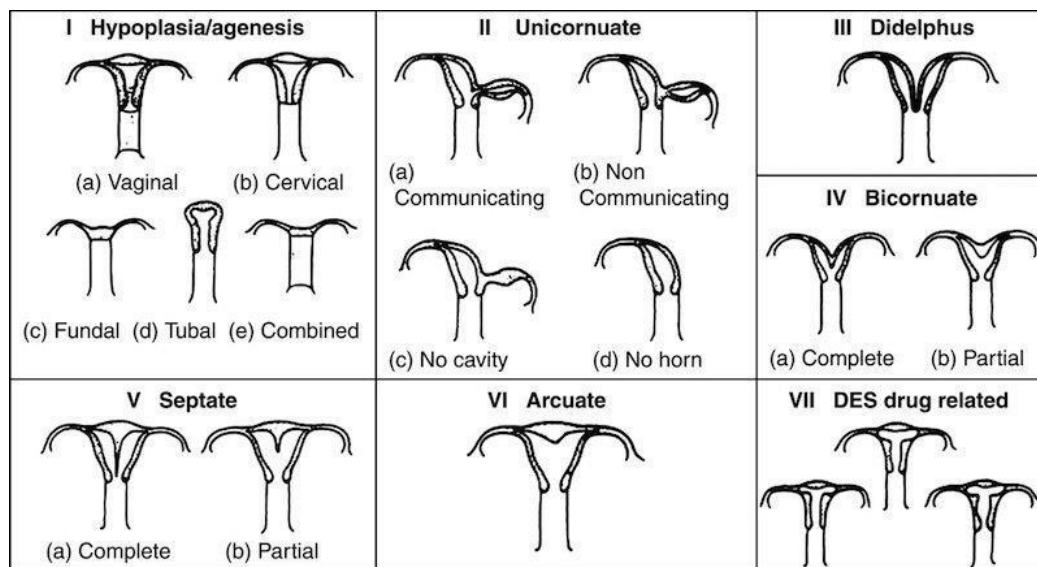
**Figure 3:** Hemihysterectomy of the rudimentary horn

## Discussion:

Unicornuate uterus account for 5% of uterine malformations [5], the occurrence of pregnancy on a rudimentary uterine horn is rare, with an incidence of 1/100,000 [5].

The rudimentary horn communicates with the endometrium in 10% of cases, and contains a cavity in 35% of cases [5]. As a result, the endometrium of the cavity may be the site of a pregnancy, complicated by a placental anomaly, as in the case of our patient [6].

This malformation often goes unnoticed, and is only discovered after serious acute complications, as demonstrated by our observation. In a series of seven pregnancies with a rudimentary uterine horn, Heinoven reported the presence of three placenta accretas (43%) [1]. In our case, the patient presented with a unicornuate uterus with a rudimentary communicating horn, corresponding to stage IIa of the American Fertility Society classification (Figure 4).



**Figure 4:** American fertility society classification of uterine anomalies

Unicornuate uterus are the result of arrested development of one of the two Müller ducts between the sixth and ninth weeks of embryonic development. The aplastic side is responsible of a rudimentary uterine horn, which is located on the right in 62% of cases, as the left Müller duct progresses more caudally than the right [5]. In our case, the horn was on the right, in contrast to the series of cases reported by Daskalakis [7] and Kuscu [8].

Urinary anomalies are frequent (38%) and should be systematically investigated, dominated by unilateral renal agenesis, homolateral to the rudimentary horn side [1].

Early diagnosis in the first trimester can be made by endovaginal ultrasound; later, magnetic resonance imaging (MRI) or, failing that, computed tomography (CT) will be of great help in making the diagnosis [9].

In the first trimester, rudimentary horn pregnancy in a unicornuate uterus can be differentiated from an ectopic pregnancy by the presence of myometrial tissue surrounding

the gestational sac and the presence of a well individualized placenta [10].

Treatment of rudimentary horns in unicornuate uterus is based on hemihysterectomy, ideally performed prior to pregnancy if the diagnosis has been established. Laparoscopic surgery is the preferred option before and during pregnancy. It is advisable to remove the rudimentary horn as well as the homolateral tube in order to prevent a subsequent ectopic pregnancy if the contralateral tube appears functional, without waiting for an obstetrical accident [11].

## Conclusion:

The unicornuate uterus with rudimentary communicating horn is a rare uterine malformation, responsible for a number of maternal-fetal complications. The prognosis of pregnancies associated with this malformation is generally unfavorable, hence the importance of first-trimester obstetrical ultrasound, which not only allows us to diagnose intrauterine pregnancy, but also to verify the absence of



associated uterine malformation.

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