

**BICORNUATE UTERUS AND PREGNANCY**

Yassine Edahri\*, Dr. Anas NAH, Dr. Intissar Benzina, Pr. Aziz Baydada, Pr. Amina Lakhdar

CHU IBN SINA Rabat, Internship in Gynecology and Obstetrics, Morocco.

\*Corresponding Author: Yassine Edahri

CHU IBN SINA Rabat, Internship in Gynecology and Obstetrics, Morocco.

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**ABSTRACT**

The bicornuate uterus is one of the rare congenital uterine malformations caused by an abnormality of differentiation of the Mullerian ducts during organogenesis. Usually asymptomatic, a pregnancy can therefore progress normally.

Their diagnosis is most often made incidentally during a primary or secondary sterility assessment, repeated abortion or during an antenatal consultation. The risk of complications remains high, increasing maternal and fetal morbidity in the perinatal period. Our study aims to identify the main complications observed during pregnancy in a malformed uterus. We report the case of a patient in whom a bicornuate uterus was discovered incidentally during the performance of a cesarean section for retro-placental hematoma on presentation of breech and premature rupture of membranes at 36 weeks of amenorrhea.

**KEYWORDS:** uterine malformation, bicornuate uterus, congenital anomalies, obstetric complications.

**INTRODUCTION**

The bicornuate uterus is a congenital malformation affecting 3 to 4% of the female population.<sup>[1]</sup>

Its occurrence is due to a failure of the Mullerian ducts to close during organogenesis between the 11th and 13th week of embryonic life<sup>[2]</sup>

Usually asymptomatic, the diagnosis is made accidentally, most often in a context of primary or secondary hypofertility, early or late miscarriages or premature delivery.

We report in our study the case of a bicornuate uterus discovered during the performance of a cesarean section for retro-placental hematoma of spontaneous onset on presentation of breech and premature rupture of the membranes.

The aim of our study is to shed light on the main maternal and fetal obstetric complications observed during uterine malformation.

**CASE REPORT**

A 25-year-old patient with no notable history, primigravidae primipara, referred to our establishment for third trimester bleeding in a 36-week pregnancy with amenorrhea. No prenatal consultation has been performed previously.

Clinically, the patient presented in good general condition, normal tense normal cardiac, obstetrically, uterine height at 24 cm, regular fetal heart sounds at 124 min, abdominal contracture with minimal bleeding from blood blackish.

An obstetric ultrasound objectified an evolving mono-fetal pregnancy in breech presentation with a biometry corresponding to the term and an estimate of the fetal weight at 2900 g, a placenta located in the posterior fundic allowing the elimination of a placenta previa or low insert.

The vaginal examination found a single long closed posterior cervix, with rupture of the membranes. The fetal heart rate recording showed an oscillating and responsive trace with a base rate of 125.

A cesarean section was performed for clinical suspicion of a retro-placental hematoma on breech presentation with premature rupture of membranes at 36 weeks in a primipara, allowing the extraction of a newborn male apgar 10 out of 10, Analysis placenta confirmed the diagnosis of a retroplacental hematoma.

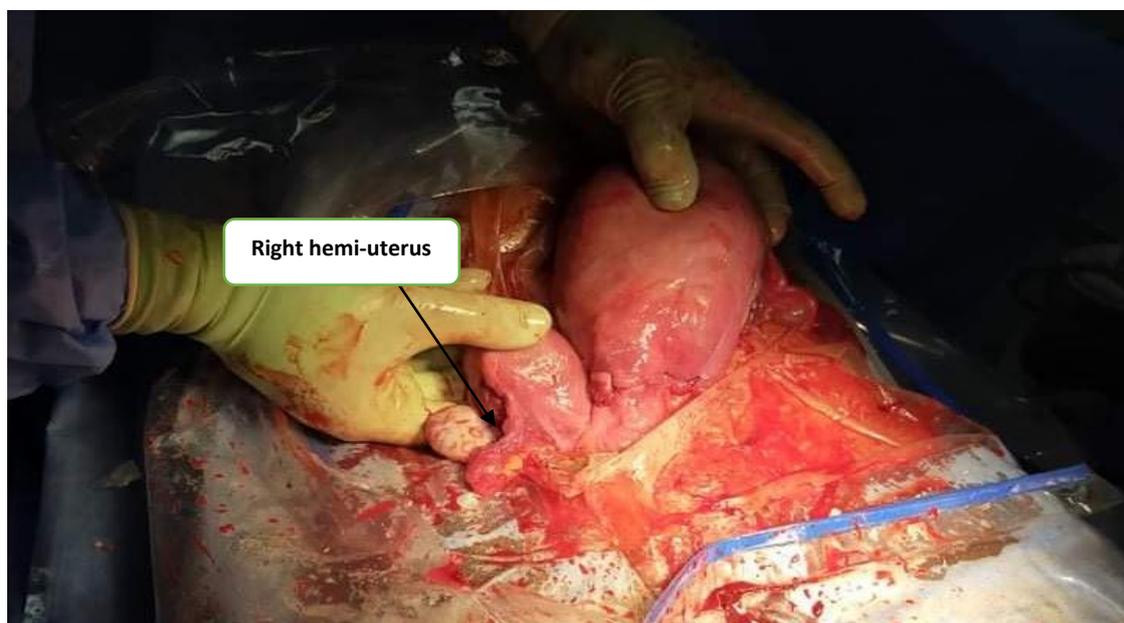
On exploration we found two hemi uteri, a left hemi uterus of gravid aspect (figure1) where the hysterotomy was performed, and right hemi uterus (figure2) of smaller volume reminiscent of the appearance of a non-pregnant uterus comprising each a uterine horn or

normally insert from front to back the round ligament, the tube and the utero-ovarian ligament.

In addition, a single cervix was found, thus confirming the diagnosis of a bicornuate uterus. The course in the immediate postpartum period was unremarkable.



*Figure 1: Pregnant left hemi-uterus after fetal extraction and suturing of the hysterotomy.*



*Figure 2: Right hemi-uterus.*

## DISCUSSION

Uterine malformations are relatively rare conditions, their prevalence is around 3 to 4% of the global female population (3), with a higher rate occurring in women followed for recurrent miscarriages (16.7%) and in a context of infertility (7.3%).<sup>[4]</sup>

During organogenesis, a defect of fusion of the Mullerian ducts would be the main cause of the occurrence of uterine malformations,<sup>[5]</sup> such as the bicornuate uterus and didelphus, as well as other abnormalities of differentiation of the genital and urinary tract.<sup>[6]</sup>

Due to their symptomatic mutism, the discovery of bicornuate uterus is most often fortuitous.<sup>[7]</sup> However, the risk of the occurrence of an obstetric complication

remains high<sup>[8]</sup> Yves Idi et al<sup>[9]</sup> report a breech presentation rate of 21% to 61% in the event of uterine malformation, premature deliveries emerge as a frequent complication in the study by ceizel et al.<sup>[10]</sup> in accordance with what is observed in our patient, obstructed presentation as well as premature delivery seem to be frequently associated with malformed uteruses. A large number of fetal malformations have also been described,<sup>[10]</sup> emphasizing the importance of systematic early and regular ultrasound screening.

In addition, the course of the placentation can be thwarted by the existence of a uterine malformation, leading to a decrease in the placental weight and abnormal cord insertions, thus exposing to intrauterine growth retardation, which suggests a possible link between the above-described placental abnormalities and the occurrence of a retroplacental hematoma in our patient.

## CONCLUSION

The bicorn uterus is a rare congenital uterine malformation, most often asymptomatic, they must be systematically sought, particularly in a context of infertility or abortive disease. In order to improve the management of possible maternal and fetal obstetric complications.

## DECLARATIONS

### Guarantor of Submission

The corresponding author is the guarantor of submission.

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## Availability of data and materials

Supporting material is available if further analysis is needed.

## Competing interests

The authors declare that they have no competing interests.

## Consent for publication

Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

## Ethics approval and consent to participate

Ethics approval has been obtained to proceed with the current study. Written informed consent was obtained from the patient for participation in this publication.

## CORRESPONDING AUTHOR DETAILS

Yassine Edahri

Phone number: +212 6 68 37 53 10

Email: Yassine.edahri88@gmail.com

## AUTHORS

1. Dr. Anas NAH
2. Dr. Intissar BENZINA
3. Pr. Aziz BAYDADA
4. Pr. Amina LAKHDAR

## AFFILIATIONS

1. Internship in Gynaecology-obstetrics, CHU IBN SINA, Rabat, Morocco,
2. Internship in Gynaecology-obstetrics, CHU IBN SINA, Rabat, Morocco, benzina-intissar@hotmail.com
3. Professor of Obstetrics and Gynaecology, Head of the M1 Department at the Souissi Maternity Hospital, Rabat, CHU IBN SINA,
4. Professor of Obstetrics and Gynaecology, M1 Department at the Souissi Maternity Hospital, Rabat, CHU IBN SINA,

## AUTHOR'S CONTRIBUTIONS

### Anas Nah

Group1 - Conception and design, Acquisition of data, Analysis and interpretation of data

Group 2 - Drafting the article, Critical revision of the article

Group 3 - Final approval of the version to be published

### Intissar Benzina

Group1 - Conception and design, Acquisition of data, Analysis and interpretation of data

Group 2 - Drafting the article, Critical revision of the article

Group 3 - Final approval of the version to be published

### Dr. BAYDADA

Group1 - Conception and design, Analysis and interpretation of data

Group 2 - Critical revision of the article

Group 3 - Final approval of the version to be published

### Dr. LAKHDAR

Group1 - Conception and design, Analysis and interpretation of data

Group 2 - Critical revision of the article

Group 3 - Final approval of the version to be published

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