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**Term Pregnancy in a Bicornuate Uterus:
Complications, Diagnostic and Therapeutic
Challenges in a Low Resource Setting
(Douala, Cameroon)**

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Authors' contributions

This work was carried out in collaboration between all authors. Authors AAT, VFF, NNB and RCN were involved in the management of the patient. Authors AAT and GEHE wrote the first draft of the manuscript. Authors AAT, VFF and NNB managed the literature searches. All authors read and approved the final manuscript.

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Case Report

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ABSTRACT

Severe uterine malformations are usually associated with infertility. Furthermore, a term pregnancy in the case of a severe uterine malformation is rare because spontaneous abortions and uterine ruptures are not uncommon before the third trimester. Pregnancies in bicornuate uteruses are difficult to diagnose and manage when advanced; especially in low-resource settings with suboptimal antenatal care (ANC). Maternal and foetal outcomes in such cases are usually poor when the diagnosis is missed. A high index of suspicion, appropriate investigations and management should be provided not only to reduce the maternal

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and foetal complications but also to improve on the prognosis in subsequent pregnancies. We report a case of a term pregnancy in bicornuate uterus; its diagnostic, therapeutic challenges and outcome.

Keywords: Bicornuate uterus; pregnancy, poor outcome, Cameroon.

1. INTRODUCTION

Abnormalities of the uterus are not so common and are usually incidental findings [1]. It is usually as a consequence of lack of or incomplete fusion of the paramesonephric duct the female genital tract. Some of these uterine malformations include; unicornuate uterus, uterine septum, bicornuate uterus and uterus didelphys. The prevalence of congenital uterine anomalies varies from 0.1% to 10% [1,2]. Effective diagnosis includes the use of investigations such as ultrasonography (USG), magnetic resonance imaging, hysterosalpingography, hysteroscopy and laparoscopy (direct observation) [3,4]. In addition, three-dimensional ultrasonography ultrasound can also be used to assess uterine morphology essentially, thereby reducing the need for invasive investigations [5,6]. Pregnancies occurring in the malformed uterus are relatively rare, with a vast majority being asymptomatic, but should be suspected in patients with recurrent miscarriages, fetal malpresentations and preterm labor [1,7,8]. Reports suggest obstetric interventions such as caesarean section did not remarkably augment the fetal survival rate for uncorrected uterine anomalies [7]. As much as 62.5% of women with a bicornuate uterus have a chance of having a live birth and 25% risk of preterm birth and spontaneous abortion [3]. Obstetric outcomes of pregnancies associated with uterine abnormalities can be improved with early diagnosis and close follow-up with better prognosis. We report a case of a term pregnancy in bicornuate uterus; its diagnostic, therapeutic challenges and outcome in a low resource setting.

2. PRESENTATION OF THE CASE

A 24-year-old lady, Gravida 2 Para 1, with a past history of a still birth at 37 weeks 5 days in her last pregnancy, presented at 38 weeks 1-day gestation in her second pregnancy (two years later) with spontaneous onset of crampy intermittent abdominal pain of 3 hours duration which became constant and was associated with absence of fetal movements. On inquiry, no

reference of fever, trauma, vaginal itches, dyspareunia, post coital bleeding, dysuria, vaginal bleeding, diarrhea and/or vomiting were identified.

On examination, the patient had stable vital signs, was afebrile but had pale conjunctivae. The cardiopulmonary examination was unremarkable. Abdominal examination revealed a distended abdomen with a symphysis-fundal height of 36 cm, foetal lie and presentation were difficult to assess. The Fetal heart tones were absent. On vaginal examination, the cervix was firm, long, posteriorly located, and closed. The rest of the physical examination was unremarkable. Investigations done included a 2D abdominal ultrasound which revealed an intrauterine pregnancy with no cardiac activity, fetus in breech presentation and a concealed retroplacental hemorrhage. The level of hemoglobin was 9 g/dl.

A diagnosis of fetal mal-presentation and concealed placenta abruption was made and an emergency caesarian section was performed. After delivery of a demised fetus of 3200 grams, a second non-pregnant uterine horn was seen intra operatively. The two uterine horns were completely separated by a firm septum at the lower segment as shown in Fig. 1.

After surgery, there was abundant vaginal bleeding. Bi-manual compression of the uterine horn was done. Uterotonics including oxytocin and ergometrine were administered at appropriate doses but the uterus was slow to become tonic. The estimated blood loss was 1,500 ml. Investigations performed immediately after the surgery included; Hemoglobin = 5.6 g/dl, Prothrombin time = 24.5 seconds, Activated Partial Thromboplastin Time = 60 seconds, International Normalized Ratio =1.91. So, she was transfused 3 pints of cross matched compatible whole blood. Uterine tonicity occurred after 45 minutes and her blood pressure normalized with a mild tachycardia (110 bpm) one hour after surgery. The post-operative period was uneventful as the patient recovered and was discharged on the 8th post-operative day. Hemoglobin on discharge was 8.8 g/dl with the



Fig. 1. Bicornuate uterus showing a post-partum horn and a nonpregnant uterine horn

patient receiving ferrous sulphate and folic acid to continue on ambulatory basis for three months. A follow up visit was programmed six weeks post-partum.

3. DISCUSSION

Abnormalities in the formation and fusion of Mullerian ducts with the uro-genital sinus can result in varied abnormalities of uterus and vagina [9]. However, the proportion of congenital uterine anomalies in the general population remain largely unknown [1]. One of those abnormalities is a bicornuate uterus which may often be noticed as a result of a pregnancy complication. Obstetric complications such as recurrent miscarriages, preterm labor and fetal demise like in case presented, uterine rupture or miscarriages tend to be more common in women with uterine malformations [3,8]. It is as well possible to have normal and uneventful deliveries in cases of bicornuate uteri although only with a 62.5% chance of a live birth [3,10]. The presence of anemia and the detection of a placenta abruption on ultrasonography prompted a decision for emergency caesarean section otherwise, a decision to induce labour would have been taken in some facilities in low-income countries where ultra-sonographic facilities are not available thereby worsening the morbidity.

Emphasis has been laid on pre-conceptual and antenatal care with regular cervical length evaluation and the need for cervical cerclage in patients with uterine anomalies so as to prevent risk of preterm deliveries or miscarriages, which was not the case in this patient, as the diagnosis of bicornuate uterus was made intra-operatively

at 38 weeks gestation. Furthermore, an ultrasound done at 35 weeks and 38 weeks by an ultrasound technician did not reveal any uterine abnormality which was misleading [11]. The diagnosis of bicornuate uterus was made by direct observation intraoperatively.

Ultrasonography is an imperative diagnostic tool for uterine anomalies and sometimes getting the accurate diagnosis is operator-dependent as it was missed in the case of this patient. There should be a high index of suspicion of pregnancy in a malformed uterus in women with a past history of recurrent miscarriages, intrauterine deaths and malpresentations so as to enable early diagnosis and proper management.

4. CONCLUSION

Uterine abnormalities such as bicornuate uterus are uncommon and are often asymptomatic. However, pregnancies in bicornuate uteruses are difficult to diagnose and often lead to miscarriages or other complications. Investigations should always be done in women with a previous or recurrent miscarriages or fetal demise to ensure that it's not as a result of morphological uterine abnormality in order to improve maternal and foetal pregnancy outcomes.

CONSENT

As per international standard or university standard, patient's written consent was obtained for the publication of the case report and the accompanying image by the authors.

ETHICAL APPROVAL

As per international or university standard written ethical approval was collected and preserved by the corresponding author.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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