Case Report

Incidental Finding of Bicornuate Uterus at Repeat Caesarean Section in a Woman with Recurrent Abnormal Presentation: A Case Report

Joshua Ifebude,[1] Olaolu Oni,[1] Jamiu Ogunsola,[1] Temitope Olukunle,[1] Ademola Olutoye,[1] Olayinka Kuboye[2]

[1]Department of Obstetrics and Gynaecology, University College Hospital, Ibadan.
[2]Glasgow Caledonian University, Glasgow, United Kingdom

Abstract

Bicornuate uterus is one of the most common uterine anomalies and is often associated with adverse pregnancy outcomes. It is asymptomatic in some cases, but can cause abnormal lie and presentation in advanced pregnancy. The patient was an unbooked 39-year-old G7P2+4 (1A) woman with two previous caesarean sections and a poor obstetric history. The previous surgeries were due to breech presentations. She presented at a gestational age of 33 weeks and 6 days with preterm drainage of liquor and developed labour pain with the baby in transverse lie. She subsequently had an emergency caesarean section with an incidental finding of a bicornuate uterus, which was not previously identified in her previous deliveries. She delivered a live male neonate with a birth weight of 2.3 kg and an APGAR score of 6 at one minute and 9 at five minutes of life. Her post-operative state was satisfactory until discharge and at the postnatal clinic review. Uterine anomalies are associated with various abnormal obstetric conditions, as seen in the case presentation. Therefore, recurrent abnormal presentation requires a high index of suspicion for uterine anomalies, for which the uterus should be meticulously examined at or after delivery.

Keywords: Incidental finding, Abnormal presentation, Repeat Cesarean section, Bicornuate uterus

Correspondence:

Joshua E Ifebude
Department of Obstetrics and Gynaecology,
University College Hospital, Ibadan.
Phone numbers: +2348160882757
joshuaifebude@gmail.com

INTRODUCTION

Congenital uterine anomalies are abnormalities that result from agenesis, disorders of fusion, or resorption of the paramesonephric duct. This could cause uterine agenesis, septate, bicornuate, or unicornuate uterus. The cause of this condition is not defined; however, many factors, such as genetics, environmental factors, and drugs, including in utero exposure to diethylstilbestrol, have been implicated.[1] The prevalence of congenital uterine anomalies varies from 0.6% to 38% across populations.[2] The American Society for Reproductive Medicine classifies uterine anomalies into 7 categories, with the bicornuate uterus belonging to category 4 and constituting about 0.4% of uterine anomalies.[3] The incidence is higher among women with infertility and miscarriage, which are 1.1 and 2.1%, respectively.[4]

Bicornuate uterus and other uterine anomalies can originate as an isolated anomaly or in association with other genital and renal malformations due to similar embryologic origin. A bicornuate uterus is described as a heart-shaped uterus with two horns. A bicornuate uterus can have one cervical canal referred to as unicollis or two cervical canals referred to as bicollis based on the extent of central endometrium in the cervical canal.[5]

Most patients with bicornuate are asymptomatic and have a normal reproductive outcome. However, more uncommonly, this uterine anomaly has been associated

with some poor reproductive and obstetric outcomes such as infertility, recurrent miscarriages, premature rupture of membranes, and abnormal presentation as seen in our patient.[6] Thus, diagnosis is usually an incidental finding following evaluation for other disease conditions or during intraoperative evaluation. Therefore, the need for a high index of suspicion for uterine anomalies in patients with recurrent pregnancy problems cannot be overemphasised.

CASE PRESENTATION

A 39-year-old G7P2+4 (1A) woman with 2 previous caesarean sections who presented at a gestational age of 33 weeks and 6 days via the Accident and Emergency department of University College Hospital, Ibadan, following a referral from Adeoyo Maternity Hospital, Ibadan on account of premature rupture of membrane (PROM) and the possible need for intensive care for the newborn by the neonatologist after delivery.

She presented with complaints of labour pain of four hours' duration, which was preceded by drainage of liquor. There was no bleeding per vagina or abnormal vaginal discharge before the onset of PROM. There was also no associated fever or urinary symptoms.

The pregnancy was spontaneously conceived, and she booked at the source of referral at a gestational age of about 13 weeks, with normal booking and antenatal care parameters until admission. An obstetric ultrasound scan done two days before presentation showed a live singleton fetus in transverse lie, an estimated fetal weight of 2.2 kilograms, and an amniotic fluid index of 18 cm. The placenta was posteriorly located on the body of the uterus and revealed no uterine abnormality.

In 2006, she had an emergency lower segment caesarean section at a gestational age of 34 weeks due to breech presentation in labour at a private hospital. She was delivered of a live male neonate. Unfortunately, the baby suffered early neonatal death about eight hours after delivery from birth asphyxia. In 2014, she had a second emergency lower segment caesarean at 37 weeks due to breech presentation in labour with one previous Caesarean section at another private hospital. She was delivered of a live male neonate, and the baby is alive and well. Following earlier deliveries, there was no history suggesting any information or counselling on the uterine anomaly in our patient. In 2020 and 2021, she had three voluntary terminations of pregnancies at gestational ages of 8, 10, and 12 weeks, respectively, with no post-abortal sequelae. In 2022, she had a spontaneous termination of pregnancy at a gestational age of 13 weeks. The evacuation was completed using misoprostol. She had no underlying medical illnesses; her genotype was AA, and her blood group was O Rhesus positive.

Physical examination of the patient showed a young woman, conscious and alert, afebrile, not pale, anicteric, not cyanosed, well hydrated, with no pedal oedema. Her weight was 72 kg, and her height was 158 cm. The pulse rate was 90 per minute, blood pressure was 120/70 mmHg, and the respiratory rate was 22 breaths per minute. The abdomen was uniformly enlarged, with a midline infra-umbilical scar noted. The symphysio-fundal height was 34 centimetres, consistent with her gestational age. A singleton fetus in transverse lie with fetal head to the maternal right was palpated; while she had 2 strong contractions in 10 minutes. She had a normal fetal heart rate of 156 beats per minute. The vaginal examination revealed a wet perineum with normal vulvar and vaginal epithelium. The cervix was firm, posterior, and 40% effaced with a cervical os that was 2 cm dilated. An assessment of preterm labour with transverse lie in an unbooked multipara with two previous CS, and poor obstetric history was made.

Investigations showed her Packed Cell Volume was 32%; other parameters in the Full Blood count were essentially normal, and urinalysis was normal. Two units of blood were grouped and cross-matched for her, as she was counselled on the clinical findings and the need for emergency CS. Informed consent was obtained for emergency CS, and she had an emergency lower segment caesarean section under spinal anaesthesia.

The intra-operative findings included adhesions involving the anterior abdominal wall, bladder, omentum, and uterus. A live male neonate in transverse lie was delivered by internal podalic version and breech delivery, following some initial difficulty necessitating an inverted 'T' lower uterine incision (Figure 1). The birth weight was 2.3 kilograms, and APGAR scores were 6 at 1minute and 9 at 5 minutes; no obvious anomalies were noted. There was an incidental finding of a bicornuate uterus with one cervix (unicollis), which was noted after exteriorising the uterus. The placenta was located posteriorly. Ovaries and Fallopian tubes were grossly normal; the uterus was repaired in two layers (Figure 2), and the estimated blood loss was 1.2L.

The surgery was complicated by primary postpartum haemorrhage for which she had two units of blood transfused intraoperatively. Her baby was admitted to the special-care baby unit(SCBU) due to prematurity. Her immediate post-operative period was uneventful. She had parenteral antibiotics for 48 hours, intramuscular analgesics, and intravenous fluid for 24 hours, and thereafter her medications were changed to oral. Her postpartum packed cell volume was 30%. The mother was stable; she was counselled on the intraoperative findings and told about the need for long-acting reversible contraceptives. She was discharged to her baby in SCBU on the fourth postoperative day, and given a two-week appointment to review the wound and intensify our counselling on contraception. The baby was

discharged from the special care baby unit on the 6th day of life.

At the routine postnatal clinic, the mother had remained clinically stable, and her baby had gained weight appropriately (3.6kg) and was reported by the mother to be feeding well. The mother was counselled on the implications of her uterine anomaly, with the risks of adverse outcomes even in subsequent pregnancies, and therefore informed to book antenatal care early. She was discharged to the family planning clinic, and the baby was discharged to the well-baby clinic.

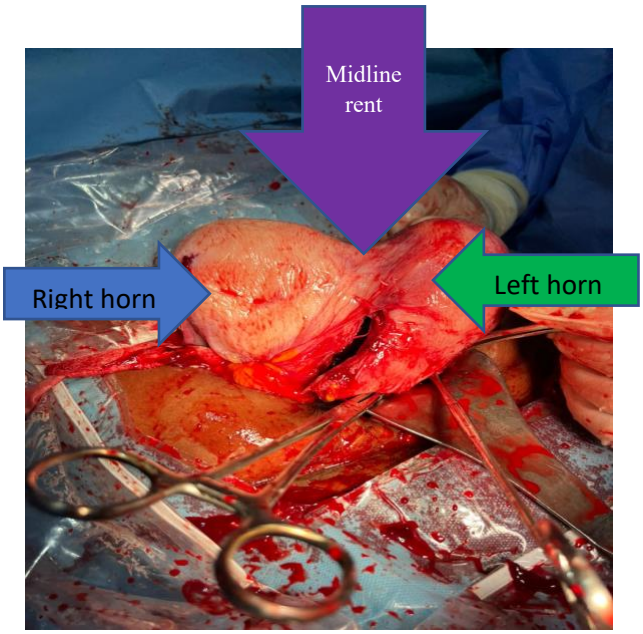

Fig 1: Before repair

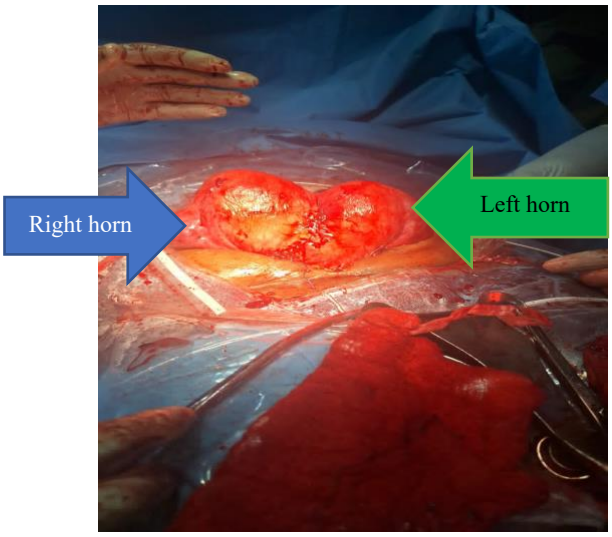

Fig 2: After repair

DISCUSSION

Congenital uterine anomalies are relatively common, often asymptomatic, with a prevalence of 0.6-38% in the general population. [2,7,8] It is difficult to determine the exact prevalence in Nigeria, as some cases will remain undiagnosed, as in the index patient, which was earlier missed despite having had two previous caesarean sections. Women with uterine anomalies have poorer reproductive outcomes and lower live birth rates compared to women with a normal uterus.[8] The prevalence of infertility and reproductive abnormalities in them is about 15-25%.[9] Uterine anomalies are associated with an increased miscarriage rate (25%), preterm birth (15-25%), and cervical incompetence (38%).[10] Other obstetric complications associated with uterine anomalies include malpresentation, PROM, premature labour, abnormal presentation with dystocia,[4] risk of uterine rupture, and the risk of operative delivery.[6,8,11,12]

A bicornuate uterus results from incomplete fusion of the Mullerian ducts, resulting in the formation of a uterus with two horns and one or two cervices. It may be diagnosed before or during pregnancy. Congenital uterine malformations could be incidentally discovered at surgery for other indications, and occasionally by investigations following suspicions.[7]

A bicornuate uterus is also considered an independent risk factor for cervical insufficiency, and some authors have advocated for the routine use of cervical cerclage for pregnancies with a bicornuate uterus and other uterine anomalies due to the risk of preterm delivery, as seen in the previous deliveries of the patient presented.[2] However, cases of successful term singleton and twin pregnancies have been reported without cervical cerclage.[7,8]

Our patient had two previous Caesarean sections, but the uterine anomaly was not reportedly identified. Possibilities are that the uterus was not exteriorised during the caesarean sections, or the inability of previous surgeons to identify the anomaly. It has been suggested that internal and external examination of the uterus should be done as a routine step during Caesarean section.[13] Interestingly, she had a recurrence of breech presentation in the two previous pregnancies, which should have prompted the search for a possible risk factor. Also, early pelvic ultrasound is an important diagnostic tool in evaluating an abnormal uterus in pregnancy.[12] However, its sensitivity for visualising the rudimentary horn of the uterus is 23%, allowing diagnosis in only 14% of patients before clinical symptoms manifest. In the index patient, prior ultrasound scans did not identify the anomaly. This may be due to

the well-developed "horns," which make the anomaly subtle. Also, obstetric ultrasonography done in late pregnancy might not detect the anomalies.

The recurrent abnormal presentation in this case was a striking finding that should have raised suspicion for a uterine anomaly. Although an abnormal presentation is an indication for a primary caesarean section, it is assumed to be a non-recurrent event that could necessitate a repeat caesarean section in the absence of other contraindications to vaginal delivery. When this occurs, it is therefore important to consider the possibility of an underlying uterine anomaly.

Diagnosis of a bicornuate uterus requires a high index of suspicion, as it can be misdiagnosed as a septate uterus or uterine didelphys. Investigation for uterine anomalies in non-pregnant women includes Magnetic Resonance Imaging (MRI), hysterosalpingography, pelvic ultrasound, and laparoscopy.[5,8] The patient had repeated ultrasound scans done, although the bicornuate uterus remained undiagnosed. This questions the competence of some ultrasonographers who scan our patients in developing countries like Nigeria, and underscores the need for more specialists, further training, and capacity building to ensure competence in ultrasound scanning. MRI is highly sensitive in making its diagnosis and produces a detailed image of the uterus in multiple dimensions. It is non-invasive, does not use radiation, and can identify other associated anomalies in the abdominopelvic region.

Other congenital anomalies involving the renal or other systems should also be evaluated in patients with a bicornuate uterus because of their related embryological origin.[5] Treatment in non-pregnant women is surgical by either hysteroscopic or laparoscopic interventions and open hysterotomy and repair. The surgical procedure is a Strassman metroplasty, which involves removing the tissue that causes the separation of the cavity and the indentation of the uterine fundus.[7]

CONCLUSION

In conclusion, a bicornuate uterus in pregnancy is a high-risk condition which requires a close antepartum evaluation and monitoring for prevention and early identification of adverse pregnancy outcomes associated with it. It might also be a cause of infertility for some women, for which a high index of suspicion is needed when evaluating women for some reproductive issues. Also, meticulous evaluation of the uterus is necessary at and after delivery for women with recurrent abnormal fetal lie and presentation. The importance of establishing referral networks and feedback on care cannot be overemphasised, as seen in the reported case.

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