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Case Study

Bicornuate Uterus: Case Report Viable Pregnancy in Right Horn of Uterus With Atrial Septal Defect with Bells Palsy

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I N F O

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A B S T R A C T

Uterine malformations consist of a group of uterovaginal malformation of the female reproductive system and seen in around 0.16% of female. A bicornuate uterus is a congenital uterine malformation occurs as a result of impaired fusion of the Mullerian ducts. Intercornual angle is obtuse in bicornuate uterus and outcome is poorer than uterus didelphys . Bicornuate uterus is commonly associated with recurrent abortions and preterm deliveries. Many of the cases are asymptomatic, but it is important to suspect and consider this diagnosis in recurrent miscarriages, preterm delivery, intrauterine growth retardation and malpresentations. We report a case of 28 year female primigravida, diagnosed with bicornuate uterus. Patient delivered preterm live baby through caesarean section. According to the results, pregnancy in bicornuate uterus can achieve successful outcomes.

Keywords: Bicornuate Uterus, Mullerian Anomaly, Pregnancy with ASD

Introduction

Bicornuate uterus is a congenital anomaly and deformity of the uterus caused due to non-fusion or impaired fusion of Mullerian ducts, a error in embryonic development. Mullerian ducts, also known as paramesonephric ducts, are embryological structures important for developing of urogenital system. The incidence of uterine malformations is estimated to be 3-5% in the general population.[1] The incidence of bicornuate uterus is estimated to be 0.1- 0.6%.[2] A bicornuate uterus is a very rare congenital anomaly in which the uterus is split into two sections, resembling a heart shape instead of being a single, pear-shaped organ. It comes under the class 4 category of Mullerian duct anomalies classification. Class 1 - agenesis uterus, class 2 -unicornuate uterus, class 3 - didelphys uterus, class 4A is partial and 4B is complete bicornuate uterus. Class 5 -septate uterus, class 6 - arcuate uterus, and class 7 is of diethyl stilbestrol- related abnormalities.[3]

Case Report

A case of a 28 -year-old patient, a homemaker by occupation, comes to the emergency department with chief complaints of pain lower abdomen since one day with 9 months amenorrhea and her gestational age was 36 weeks one day. Patient give history of bell's palsy on right side of face since childhood. She also gives history of her delayed cry at birth.

Maternal history: Last menstrual period was on 14 may

2024, and the calculated expected delivery date was 21 February 2025. The current period of gestation is 36 weeks one day. Her pre-menstrual history is 4-5 days every month, regular with normal flow and no clots with no dysmenorrhea.

History of facial palsy since childhood. There was no history of any trauma or hospitalization. On physical examination, conscious, cooperative, and oriented to time, place, and person. Average build with weight 52 kg, height 158 cm. Body mass index 22 kg/m^2. Afebrile to touch with Heart rate 90 per minute, respiratory rate of 14 per min, and blood pressure of 120/80 mm Hg. Face deviated to left side, lower lip deviation and angle of mouth deviation present to the left side. No history of ear discharge or decreased hearing or tinnitus and vertigo. Nasolabial fold intact forehead wrinkling present and eye closure is normal. No acute signs of facial nerve involvement present.

On Systemic examination

CNS Examination power b/l upper and lower limb normal. Facial deviation present. Motor and sensory reflexes intact except facial. Respiratory- bilateral air entry, CVS examination- systolic murmur was present with loud $S_{1.}$ The abdominal Examination revealed 36-week uterus size in accordance with the gestation period. Breech presentation with fetal heart rate 152 bpm regular interval. Per vaginal examination = 1 cm dilated with early effacement , breech presentation, show was present , station -5 , pelvis borderline .Investigations: On complete blood count, haemoglobin was 9.9gram%. Platelet count 82,000. Suggestive of thrombocytopenia. Blood group A positive. Serology negative, Urine complete, Renal function test, Liver function test Prothrombin time, International Normalized Ratio was within normal limit.A serial ultra-sonogram (USG) had been done starting from 7 weeks shows a bicornuate uterus with single viable pregnancy seen in right horn of the uterus. Repeat ultrasound was done, at 28 weeks three days pregnant, suggestive of breech presentation, baby weight was 1200 grams. Third ultrasound was done at 34 weeks four days pregnant, suggest breech presentation, baby weight was 2426 grams with normal amniotic fluid and placenta was anterior and upper segment. ECG : suggestive of right atrial enlargement, mild right ventricle hypertrophy, right axis deviation and rsr pattern in right chest lead.

Preoperative Echocardiography was done shows: Acyanotic congenital heart disease, 2.8cm ostium secundum ASD with left to right shunt.Moderate TR, RA AND RV Dialated, RVSP 52 mmhg ,Peak Trans pulmonary artery pressure = 35 mmhg ,Mean trans pulmonary artery pressure = 70 mmhg.

The patient underwent an emergency LSCS . The procedure was done under General anaesthesia. Mask ventilation and endotracheal intubation was done with caution, as the facial nerve is vulnerable to injury from pressure or stretching. The etco2 was maintained to prevent pulmonary hypertension. Adequate eye protection to prevent corneal complications. Hypotension was prevented by use of inotropic support to prevent shunt reversal i.e Right to Left shunt due to Asd. Anaesthesia implication was to prevent hypotension Spinal was contraindicated because of thrombocytopenia and spinal induce hypotension.The indication of LSCS was primigravida 36 weeks one day with breech presentation with borderline pelvis in labour. Therefore, an emergency LSCS was done with Pfannenstiel incision. A female baby 2.5 kg was extracted out by breech presentation. The baby cried immediately after birth. The cord was clamped baby handed to the paediatrician. The surgery was completed by closing the uterus with Vicryl number 1 with interlocking sutures. Left horn of uterus was rudimentary. Patient had moderate blood loss due to low platelet count .Two unit Packed red blood cell with 2 Fresh frozen plasma and 1 unit single donor platelet transfused,. Which had a significant impact on her post-operative recovery. Pt had episode of hypotension which was reverted with injection Nor adrenaline 0.05mgm/kg/min. ABG shows metabolic acidosis which was corrected by Injection soda bicarbonate. Post operatively, she was transferred to the intensive care unit for further management and monitoring. Later she was extubated on postop day 1, she recovered well and was shifted to room after hemodynamically stability . and discharged on 6th postoperative day . The baby , was a female, 2.5 kg weight, and the Apgar score was 8 and 9 at 1 and 5 minutes after birth, respectively. She was shifted to her relatives' side, and immunization as per schedule was given, including zero doses of oral polio, hepatitis, and BCG. Foley's catheter was removed on the 5th postoperative day, after which urine was passed, and antiseptic dressing was done on the third day. During discharge, she was advised to follow up after 7 days or as per requirement in case of any emergency. Also, she was asked to maintain a high-protein and -iron diet and plenty of fluids. Adequate rest was advised. Exclusive breastfeeding for six months every 2 hours.

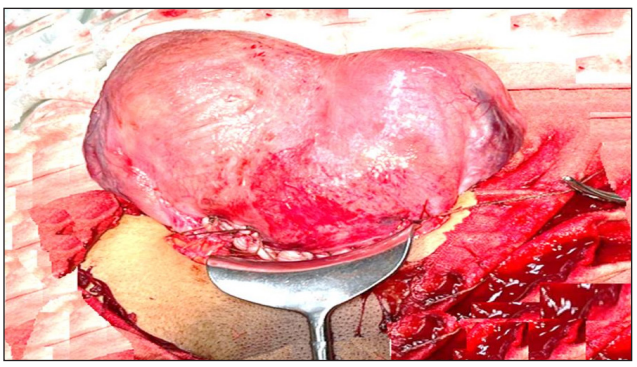

Figure 1.Shows a bicornuate uterus after a successful caesarean section delivery

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Discussion

A bicornuate uterus with cardiac anomaly ASD is rare entity. Pregnancies are relatively common and many of them are asymptomatic, but should be suspected in patients with recurrent abortions, preterm labour, intrauterine growth restriction and malpresentation. Infertile women have significantly high frequency of Mullerian anomalies (6.3%) compared with fertile (3.8%) and sterile (2.4%) women.[1] Some reports confirmed the increased incidence of bicornuate uterus in the infertile population compared to the fertile population, the ratio being 1:1 and 1:4 respectively. Majority of the women are diagnosed during gestation, so it is important to counsel them about the reproductive outcomes including signs of preterm labor, possibilities of uterine rupture and advise to be prepared for a caesarean section when the need arise. Early ultrasound is a contributing procedure for diagnosis and evaluation of the effects of abnormal uterus on pregnancy. The sensitivity of ultrasound in visualizing the rudimentary horn of uterus is 23% which only allows diagnosis in only 14% of patients before the onset of clinical symptoms. In this case study, patient was diagnosed with bicornuate uterus in the first pregnancy by early ultrasonography. Patient went in late pre term labour and delivered through emergency caesarean section. Under general anaesthesia due to congenital heart disease and Thrombocytopenia. Bicornuate uterus may carry a pregnancy till term without any complications, but it is important to create awareness about the possible outcomes of the condition. Prenatal diagnosis is necessary for proper care and prevention of complications at the earliest. With the emergence of new investigation techniques like 4G MRI and 2D ultrasound, it is much more practicable to diagnose a malformed congenital uterus. [3]Management of uterine malformations can range from a wait-and-watch approach to performing full abdominal surgery. If the diagnosis is made during adolescence, that is, before pregnancy, the preferred treatment is surgery but surgery is only done on patient consent. The choice of surgery is Metroplasty in symptomatic individuals. In the case of women in the reproductive age group, it is necessary to rule out differential diagnoses of recurrent abortions and malformations in order to be confirmed about conducting the surgery [4]. Based on recent advances, Strassman's utriculoplasty operation with a transverse fundal incision for the reunification of the uterine cavity has certainly proven to improve the obstetric outcome in patients with a bicornuate uterus. The key to management is to remove the septum and unify the uterine cavity.[4]

Conclusion

All the relevant discussion on the possibility of normal pregnancy in the bicornuate uterus, we state that due to reduced gestational capacity, the reproductive outcome can be poor. Uterine congenital malformations can have a remarkable effect on the pregnancies outcome. Misdiagnosis of uterine malformations may lead to altered management and poor pregnancy outcome. There is a high prevalence of preterm delivery and malpresentation, as seen in the above mentioned case. However, after correction of anomaly by metroplasty, pregnancy wastage is reduce significantly, it will also reduce mother sufferings and financial stress. Cervical cerclage, is effective in preventing second-trimester abortions and premature delivery but ineffective first trimester. The majority of the patients with bicornuate uterus do not have any clinical symptoms in their early reproductive age. Therefore, metroplasty is always preferred. Females aged 35 and above, metroplasty should be done on time to prevent wastage of reproductive years. It is a reconstructive laparotomy surgical procedure and may cause adhesions which may reduce fertility. In this case report early diagnosis, and prompt management of intraoperative complication through multidisciplinary team approach, resulted in successful surgical outcome. Thus preventing maternal and foetal morbidity and mortality.

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