



ORIGINAL RESEARCH PAPER

Obstetrics & Gynaecology

MANAGEMENT OF POSTPARTUM HEMORRHAGE IN CASE OF BICORNUATE UTERUS

KEY WORDS: Bicornuate Uterus, Postpartum hemorrhage,

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ABSTRACT

Bicornuate uterus can lead to early miscarriages, preterm labor, foetal growth retardation, congenital malformation, placenta previa and postpartum hemorrhage. It is unusual to manage a case of PPH in a bicornuate uterus with one horn well developed and the other horn an accessory. As it may be associated with vascular malformations, Urinary tract malformations. Systemic approach and identification of anatomy before ligating any vessel is of at most important in such cases.

INTRODUCTION

A bicornuate uterus falls in the class 4 category of Mullerian duct anomalies classification. It is one of the congenital anomalies and malformation of the uterus that is caused due to the non-fusion or impaired fusion of Mullerian ducts. There are several uterus anomalies, including agenesis of the uterus, unicornuate, didelphys, septate, arcuate, bicornuate, and many more. 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. Bicornuate uterus can lead to early miscarriages, preterm labour, foetal growth retardation, congenital malformations and post partum haemorrhage which need aggressive management.

Case Summary

A 25 - year - old primigravida, a booked case, presented in labour room at 37 weeks of gestation with chief complaints of pain in abdomen for last 6 hours. she had no history of PV leak, no history suggestive of pre-eclampsia. There was no significant past and family history. She was diagnosed case of bicornuate uterus with pregnancy in the right horn in second trimester.

On Examination

Patient was vitally stable, there was no pallor, Systemic examination detected no abnormality, Per Abdomen suggestive of Fundal height uterus 32 - 34 weeks size Relaxed, longitudinal lie, cephalic presentation, Head -not engaged, liquor decreased clinically, fetal heart rate was normal and regular, per speculum examination- single vagina and single cervix visualised. Per Vaginum- cervical OS closed and uneffaced. Immediately preliminary investigations were done. Suggestive of Hb - 13.1 mg/dl, TLC, 11000/cumm, Platelet -2.6/ cmm, blood grouping and Rh-Typing - O Rh Negative, IDCT Negative, LFT and RFT were within normal limits.

USG OBS Revealed - Bicornuate uterus with A single live intrauterine fetus with vertex presentation at the time of scan corresponding to 32 weeks 3 days in right horn, placenta posterior with AFI-1cm with EFW-1.9 kg with uteroplacental and fetoplacental insufficiency.

USG (A+P) Revealed - Right kidney? ectopic/hypoplastic, left kidney-? Compensatory hypertrophy.

Considering all the investigations and USG report, with adequate blood reserve, posted for Elective C-section in view

of oligo-IUGR with Doppler changes.

Operative Procedure- Under S/A, a Pfannenstiel incision was taken 2cm above pubic symphysis. Abdomen was opened in layers. Two horns of the bicornuate uterus were visible. Right horn was bigger in size containing the foetus while the left horn was globular and smaller in size. Evidence of large dilated vessels over right ovarian ligament and evidence of endometritic tissue over posterior aspect of uterus. Loose UV fold was dissected on the right horn of the uterus & bladder was pushed down. A nick was given over uterus. A single live baby was delivered on 31/08/2023 at 12pm of baby weight 2.1 kg. Early cord clamping done, cord was cut and baby handed over to pediatrician. Cord blood sample was taken and sent to the laboratory for blood grouping and Rh typing. Inj. Oxytocin 10IU IM given. Placenta delivered after signs of separation. Uterine cavity was explored. Evidence of Bicornuate uterus with right horn well developed and left horn not well developed and there was a gap between 2 horns. Uterus was closed in double layers. There was evidence of atonic uterus and on vaginal examination there was evidence clots of around 500cc removed manually, along with continuous uterine massaging, Inj. Oxytocin infusion of 40 units was started, Inj. Carboprost 250 µg IM given and Misoprostol 800 µg kept per rectally. Bimanual uterine massage was continued. Intra operatively patient was pale and BP-90/60 mmHg with PR-120-130 bpm. PCV transfusion started. Right side uterine artery ligation was done, left side uterine artery was not appreciated, still there was flabby uterus. On compression test, there was trickling of blood per vagina, hence decision of Hayman suture was taken and proceeded to Hayman sutures. In order to reduce blood loss, Right Internal Iliac artery ligation was done. Uterine tone regained. As USG(A+P) was suggestive of ?ectopic or agenesis of right kidney, retroperitoneal dissection was done, right ureter was not visualized and due to difficult anatomy on left side ureter was also not appreciated, but urine output was 100ml and clear. Hemostasis achieved and confirmed. Intra peritoneal drain placed and fixed. Abdomen closed in layers. Betadine vaginal toileting was done.

Post - Operative Period Immediate post op 2 more pint PCV, 4 pint FFP and 4 pint platelets were transfused. Patient was monitored for uterine height, BP, PR and urine output. She was given injectable antibiotics. On post operative day 5- intraperitoneal drain removed, this period was uneventful and she was discharged on 10th post - operative day. She was given Inj. Anti D within 72 hrs of LSCS after knowing the baby's blood group to be O positive.



A. Bicornuate Uterus



B. Hayman Sutures

DISCUSSION

Worldwide 50%–70% of all cases of maternal morbidity have been attributed to postpartum hemorrhage.³⁻⁶ Risk factors for postpartum hemorrhage in pregnant women need to be identified earlier in their course of care, and subsequent plan and preparation for delivery is paramount to avoid this morbidity. Uterine atony is the commonest cause of postpartum hemorrhage and is responsible for 80% of the cases⁷. Women with congenital malformations of uterus usually have higher incidence of complications during pregnancy and delivery. PPH is a life-threatening condition. Several methods have been described for the treatment of PPH secondary to uterine atony including mechanical and pharmacological methods, medical management of PPH is quite successful, and surgical interventions are not needed in the vast majority of the cases. However, when surgical interventions are required, a procedure that is efficient and preserves fertility is preferable. uterine compression sutures that were developed as uterine-salvaging procedures for the treatment of PPH. Hayman et al described placement of two to four vertical compression sutures from the anterior uterine wall to the posterior uterine wall without hysterotomy^{8,9}. If bleeding persists despite these measures, surgical interventions such as uterine artery ligation, hypogastric or internal artery ligation, and finally hysterectomy may be performed. Early identification of PPH and immediate treatment by both conservative and surgical procedures such as uterine compression sutures are the key to successful treatment and prevention of hemodynamic shock and its consequences.¹⁰

This report discusses a case of bicornuate uterus with Rh negative pregnancy carried to term, delivered by cesarean section due to obstetrical reason. Patient suffered from a massive postpartum hemorrhage which was then successfully managed with uterine compression sutures followed by step wise devascularization. It bears the significance of being one of the very few reported cases of successful non-surgical management of postpartum hemorrhage in a bicornuate uterus.

CONCLUSION

It suggests that woman with bicornuate uterus could have good reproductive prognosis without any intervention and also does not always lead to complications like miscarriage, growth retardation, placenta previa or preterm labour. Compression sutures followed by step wise devascularisation for the control of PPH in a congenitally malformed uterus during caesarean section while the classic management failed, is a simple, effective and safe technique to control PPH in the field of conservative surgical approaches. This case also demonstrates that a favourable outcome is possible in cases of Rhesus antibodies.

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