Anaesthetic Management of Dichorionic Pregnancy in Separate Uterine Compartments

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Introduction

Bicornuate uterus is a rare anomaly of the Mullerian duct, estimated to occur in 1 in 250 women. Women with a bicornuate uterus are at greater risk of recurrent miscarriages, preterm birth, malpresentation and disruption to foetal growth. We present a case of a woman with a bicornuate uterus with a twin in each cavity who delivered by caesarean section using two separate uterine incisions[1]. We discuss preoperative anaesthetic considerations, our anaesthetic technique and postoperative care.

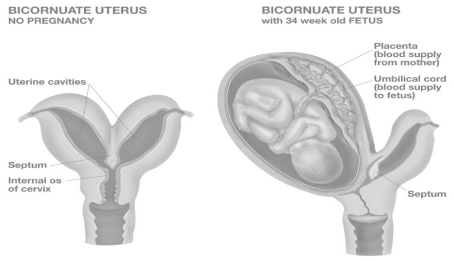


Figure 1: Comparison of Bicornuate uterus with and without foetus.

Case report

A 28-year-old woman gave birth to twins at the 35 weeks of her third pregnancy. She had two previous unremarkable spontaneous deliveries at 33 and 34 weeks. After imaging during her second pregnancy the patient was found to have a bicornuate uterus however it was not until she had her 12 week scan that it was confirmed she was carrying twins, one in each uterine cavity. On vaginal examination she had a single cervix. She was invited for a preoperative assessment by an obstetric anaesthetist where she was optimised in terms of her haematinics but was otherwise deemed fit, with no regular medication, no allergies and no pregnancy – induced health issues.

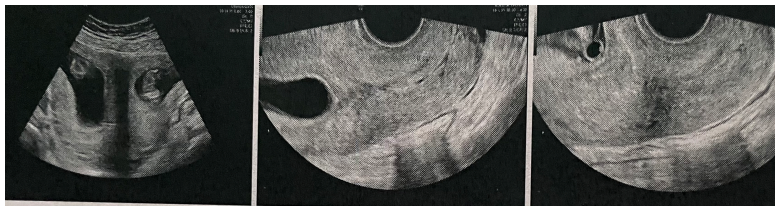


Figure 2: First trimester transvaginal and transabdominal ultrasound scan

Method:

The patient had a pre-operative haemoglobin of 105 g/L and platelets of 215 x 10 /L. Due to the unusual uterine anatomy and the lie of each twin, a conventional single lower segment uterine incision was not possible. Instead the surgical plan was to deliver the cephalic twin, clamp the uterine cavity and delay uterotonics and then perform a second uterine curved incision to extract the breech twin. Due to high risk of haemorrhage, care was taken to ensure blood products were available before proceeding. The patient was pre –medicated with omeprazole with GA drugs on standby. Two large bore IV cannulas were sited and cell salvage set up. A spinal injection of 0.5% hyperbaric bupivacaine 2.3 mL with diamorphine 300µg was used without complication. Phenylephrine at 50 µg/min (30 mL/h) was used as vasopressor support as soon as the spinal was administered and stopped upon delivery of first baby. After delivery of the second twin oxytocin was given (5U bolus and 40U over 4 h). Ondansetron 4mg and Tranexamic acid 1g were also given at this point . The patient remained haemodynamically stable and comfortable throughout. The first baby was delivered at 11 minutes after the administration of the spinal in the cephalic position with the second baby delivered at 16 minutes later in the breach position. The patient received 1000 mL of fluid intraoperatively. Estimated blood loss was 700 mL. The twins weighed 2655 g and 3335 g, respectively.

Discussion

This is a rare case and one that neither the surgical nor the anaesthetic teams had been presented with before; A dichorionic pregnancy in separate uterine compartments. The surgical challenge involved two separate uterine incisions. The anaesthetic challenge was haemorrhage control.

A retrospective cohort study of twin pregnancies by Fox et al. concluded that patients with uterine anomalies had significantly worse pregnancy outcomes however literature is limited when it comes to twin pregnancy[2]. Twin pregnancies are already considered a high-risk cohort for most adverse pregnancy outcomes making it difficult to identify whether adverse outcomes are related to uterine anomaly or twin pregnancy itself. Anaesthetic management in these cases depend upon mode of delivery and as such will vary on a case to case basis. In this case the patient was admitted for an elective c-section due to high risk of preterm labour. We feel our anaesthetic planning especially with regards to blood loss control and inotropic support was vital in maintaining haemodynamic stability of the patient. It would be interesting to compare methods as more cases are presented..

Acknowledgements

We would like to take this opportunity to thank the patient for their permission to submit and present this report.

References

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