



TWO RARE OBSTETRIC ENTITIES: ECTOPIC PREGNANCY IN A PATIENT WITH BICORNUATE UTERUS

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INTRODUCTION

A bicornuate uterus is a congenital abnormality of the uterus that results from the improper fusion of the Mullerian ducts during development, occurring in 0.4% of females. They can be associated with significant obstetric complications and result in poor reproductive outcomes. Mullerian duct anomalies are thought to arise through an intricate combination of abnormalities of gene expression and environmental facts. Some of the genes involved include Pas, Lim1, WNT4 and Wnt7a. These among other genes play key roles in the morphogenesis and differentiation of the Mullerian duct system. The ASRM developed the Mullerian Anomaly Classification in 2021, which was updated to include not only uterine anomalies but also cervical and vaginal anomalies.

CASE REPORT

History:

35-year-old female G⁴P⁰⁺³ at 7⁺⁶/40 with one-day history of sudden left lower quadrant pain and vaginal bleeding.

Physical Exam:

Patient in mild painful distress, left lower quadrant tenderness, without rebound or guarding, minimal bleeding and cervical motion tenderness.

Investigations:

Patient was hemodynamically stable with a hemoglobin of 11.1 mg/dl. She had a positive urine beta-HCG and was Rhesus positive. Ultrasound showed no intrauterine pregnancy in a bicornuate uterus, with an oval shaped heterogenous structure with posterior enhancement and vascular flow seen in the left adnexa measuring 2.4 x 3.7 cm. No free fluid seen.

Surgical Findings and Hospital course:

A Bicornuate uterus with a ruptured left ectopic in the ampulla, evidence of endometriosis, pedunculated fibroid and blockage of cornual region of right fallopian tube was discovered.

Patient underwent an exploratory laparotomy with left salpingectomy, myomectomy of a pedunculated fibroid and TAP Block. Patient tolerated the procedure well. She had an uneventful post-operative period and was discharged day two post-op.



Fig.1 Bicornuate Uterus Exposed at laparotomy



Fig. 2 Left ampullary ruptured ectopic pregnancy

DISCUSSION

Both bicornuate uterus and ectopic pregnancies are rare obstetric conditions (0.4% and 1-2% respectively) and can be a challenge to diagnose and manage. Though having a bicornuate uterus is not life threatening, an ectopic pregnancy can be if not recognized and managed in a timely fashion. According to NICE guidelines, in the UK the rate of ectopic pregnancy is 11 per 1,000 pregnancies, with a maternal mortality of 0.2 per 1,000 estimated ectopic pregnancies. About two-thirds of these deaths are associated with substandard care.

Pre-conception counselling is important, but especially for those with uterine anomalies, as they are at an especially increased risk of obstetric complications. In terms of an isolated bicornuate uterus, a meta-analysis study of 25 comparative studies reported a significantly increased risk of first and second trimester losses, preterm delivery <28 weeks, low birth weight babies and malpresentation at birth.

Additionally, these patients are at increased risk for post-partum hemorrhage and high risk of having a C-section due to the increased risk of malpresentation. Because of this, these patients should be adequately counselled about their condition before pregnancy and made aware of all the risk that can ensue should they become pregnant. Once pregnant this would be considered a high-risk pregnancy with heightened antenatal surveillance and monitoring for these complications.

The patient in this case seemed to have a lack of knowledge of the risks associated with her condition. She also has a poor obstetric history and thus surgical management may be indicated for her. In a prospective study done over seven years, open Strassman's metroplasty reports improvements in the fetal viability from 0% to 80%. Additionally, the management of this case was limited to laparotomy due to the low resource setting of the institution. Laparoscopy was unavailable and as a result the patient's hospital stay was prolonged and it also puts the patient at additional risk of adhesion formation and further increased risk of a future ectopic pregnancy should she choose to attempt to conceive again.

CONCLUSION

Bicornuate uterus, although very rare, is an important anomaly to recognize and manage. A high suspicion for uterine anomalies should be present for women who display menstrual irregularities as this could aid in early diagnoses and proper preconception counselling. Additionally, once pregnant these patients should receive close antenatal monitoring. Surgical management should be considered for those who suffered recurrent miscarriages. An ectopic pregnancy is a gynecological emergency and should be managed as such.

FURTHER WORK

Further research can be directed towards looking at the relationship between uterine anomalies and ectopic pregnancies, to see if there is increased risk to patients with a uterine anomaly. This would ultimately help to update guidelines on preconception counseling and early pregnancy monitoring in these patients in order to avoid any potential catastrophic events related to having an ectopic and bicornuate uterus.