



## Case Report

# Second Trimester Abortion Due to Implantation in Non-Communicating Rudimentary Horn of Uterus – A Diagnostic Dilemma

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## ABSTRACT

**Background:** *The incidence of uterine rupture in women without previous scar is estimated to be 0.1-0.2% in the second trimester of pregnancy using mifepristone and gemeprost. Persistent failed induction necessitates further investigations to find the true nature of the pregnancy. Unicornuate uterus is a congenital uterine anomaly resulting from a non-developing Mullerian duct or agenesis of the Mullerian system. It was first classified in 1979 by Buttram and Gibbons and further revised by the American Society of Reproductive Medicine in 1988.*

**Case Description:** *A 19-year primigravida at 20 week gestation presented to the emergency with ultrasound finding of intrauterine dead fetus of 17 weeks gestation. The patient had stable vitals though she was clinically pale. The patient was stabilized with initial three units of packed red blood cell transfusion and induced with mifepristone 200 micrograms. After 48 hours of mifepristone, induction was started with P/V misoprostol 200 micrograms every eight hours. Following two doses of misoprostol, patient gave history of subsiding pains and on examination revealed a loss of contour of uterus and tenderness on deep palpitation. Emergency scan revealed rupture uterus with hemoperitoneum. On laparotomy, ruptured left non-communicating rudimentary horn of uterus with possible placenta accreta was found. 500ml of hemoperitoneum was drained. Postoperative period of the patient was satisfactory.*

**Conclusion:** *This case illustrates that in case of failure of second trimester medical abortion, differential diagnosis of pregnancy in non-communicating horn of unicornuate uterus should be kept in mind as USG can miss to diagnose mullerian anomalies.*

**KEYWORDS:** *Uterine Rupture, Placenta Accreta, Rudimentary Horn, Mullerian Anomaly.*

## INTRODUCTION

Uterine rupture has not been limited to surgical induction, but has also been reported following medical induction for second trimester abortion.<sup>1</sup>

The incidence of rupture uterus in women without previous uterine scar is estimated to be 0.1-0.2% in the second trimester of pregnancy

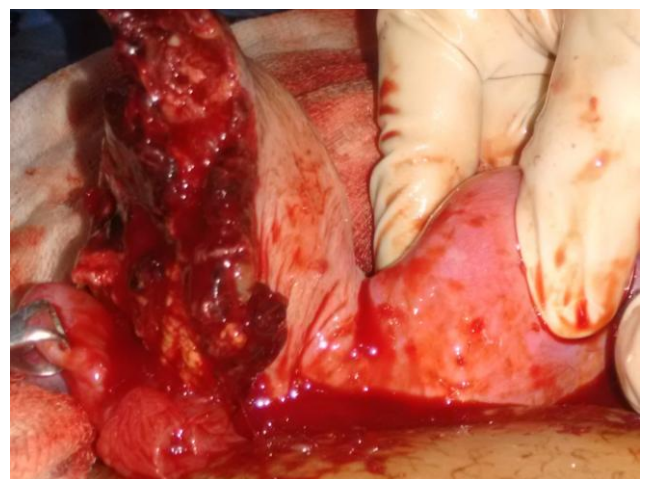
using mifepristone and gemeprost.<sup>2</sup> It is necessary to find the true nature of the pregnancy if there is failure of response to the induction doses.<sup>3</sup> Unicornuate uterus is a congenital uterine anomaly resulting from a non-developing Mullerian duct or agenesis of the Mullerian system. It was first classified in 1979 by Buttram

and Gibbons and further revised by the American Society of Reproductive Medicine in 1988.<sup>4</sup> General population estimates cite that a unicornuate uterus develops in 1 in 4000 women.<sup>5</sup> Pregnancy in rudimentary uterine horn is rare. Its incidence reported in the literature varies between 1:76,000 and 1:140,000 pregnancies.<sup>6</sup>

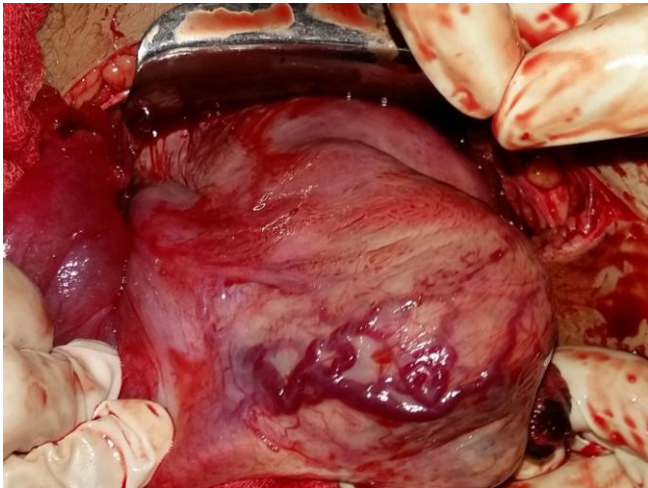
### CASE

A 19-year primigravida with 20 weeks period of gestation presented to the emergency department with history of fever with chills for two to three days and USG finding of intrauterine dead fetus of 17 week gestation. The patient was clinically pale with stable vitals and afebrile on admission. Her systemic examination revealed rhonchi bilaterally in lungs. On per abdominal examination uterus was found 14 to 16 weeks, relaxed and non-tender. On P/S and P/V examination, there was no active bleeding and cervical os was closed, posteriorly directed, firm and uneffaced. Laboratory finding showed that hemoglobin of patient was 5 gm % with total leukocyte count of 20,000/dl. The patient was stabilized with initial three units of packed red blood cell transfusion and injectable antibiotics followed by induction with mifepristone 200 micrograms. After 48 hours of mifepristone, induction was started with P/V misoprostol 200 micrograms every eight hours. Following two doses of misoprostol, it was observed that there were no changes in the P/V findings of patient. When repeat hemoglobin was done after 3 units of blood transfusion, it was found that hemoglobin was raised only by 1 point despite 3 unit blood transfusion. Next day during routine rounds, patient complained of palpitation and cessation of uterine contractions. On examination pulse rate was 110/min and blood pressure was 100/60 mm Hg. Per abdomen examination revealed a loss of contour of uterus and tenderness was elicited on deep palpitation. On P/V examination, the exact uterine size was not made out. A differential diagnosis of rupture uterus was made and an emergency scan revealed rupture uterus with hemoperitoneum, which was

confirmed by ultrasound guided aspiration of blood. After explaining the clinical scenario and consent of patient and relatives, she was immediately taken up for laparotomy with arrangement of required blood products (packed red blood cells and fresh frozen plasma). Per operative findings revealed approximately 1 liters of hemoperitoneum with clots, non viable fetus in the peritoneal cavity and rupture in the rudimentary non-communicating left horn of uterus with possible placenta accrete (figure-1,5). The posterior surface of the non-communicating rudimentary horn was found ruptured, (figure-1) however the unicornuate uterus (figure-2) was in normal contour and was confirmed by passing probe through the cervix. The placenta was found adherent to the ruptured uterine serosa (figure-3) which was confirmed by histopathology report. In view of non-communication, the ruptured horn (figure-4) was removed and sent for histopathological examination. Postoperative period of the patient was satisfactory and was discharged on the tenth day after complete stitch removal.



**Figure 1:** Posterior Surface of Non Communicating Horn And Unicornuate Uterus Showing Ruptured Wall



**Figure 2:** Non-Communicating Horn Showing Placenta Accreta



**Figure 3:** Excised Rudimentary Horn

## DISCUSSION

Possibility of pregnancy in rudimentary horn of uterus should be kept in mind, if Bishop's score of patient does not show any change after the induction dose of medical abortion techniques. Conventional USG may fail to identify unicornuate uterus as smaller size and lateral deviation of an isolated unicornuate uterus or a rudimentary horn may not be appreciated. If suspected, 3-D sonography increases diagnostic accuracy, but MR imaging is often preferred.<sup>5</sup> Tsafiriet *al* outlined a set of criteria for diagnosing pregnancy in the rudimentary horn. They are: (1) A pseudo pattern of asymmetrical bicornuate uterus; (2) Absent visual continuity tissue surrounding the gestation sac and the uterine cervix; (3) Presence of myometrial tissue surrounding the gestation

sac. None-the-less most cases remain undiagnosed until it ruptures and present as an emergency.<sup>7</sup> Transperitoneal sperm migration may be responsible for the pregnancy in non-communicating horn. In a report of 70 such pregnancies, Rolan and associates in 1966 found that the rudimentary uterine horn ruptured prior to 20 weeks in most.<sup>5</sup> In this case, like other similar cases, a retrospective diagnosis was made, where in, when the patient started to show signs of rupture and was immediately taken up for laparotomy.

## CONCLUSION

This case report attempts to illustrate a case of ruptured non-communicating horn of unicornuate uterus, which may be missed by clinical examination apart from ultrasonography. High level of suspicion for extra-uterine pregnancy should be kept when medical method of abortion fail to improve bishops score or initiate uterine contraction in first or second trimester of pregnancy. Hence it can be concluded that, this rare condition should be kept high in differential diagnosis where the possibility of early detection before rupture is unlikely, as pregnancy in a rudimentary horn carries grave risk to the mother.

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