Failed Induction in Second Trimester Due to Pregnancy in an Uncommunicated Rudimentary Horn: Case report

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Abstract
Pregnancy in the rudimentary horn of uterus is rare. Uterine rupture is a rare obstetrical catastrophe that occurs before 20 weeks’ gestation in 70% of unicorne uterus cases. A 24-year-old primigravida woman was referred to our hospital due to failed induction-in-17th-weeks-of-her-pregnancy. Fetal-death was confirmed on abdominal ultrasound. Examination under-anaesthesia revealed -pregnancy-in the-trudimentary-horn. It is concluded that careful-evaluation of probable-mullerian-anomaly-should-be considered in every failed-induction.

Key words: Mullerian anomaly, Rudimentary horn, Pregnancy

Introduction
Pregnancy in rudimentary horn is rare. Reported incidence vary from 1/100000 to 1/140000 pregnancies (1). In 70% of the pregnancies in a rudimentary horn, uterine rupture occurs before 20 weeks’ gestation and in a further 20% of cases it ruptures by the end of the second trimester.

Case report
A 24-year-old primigravida woman was referred to our hospital due to failed induction. She was undergone induction with high dose oxytocin after diagnosis of intrauterine fetal demise (IUFD) in 17th weeks of her pregnancy. On abdominal Ultrasonography (USG), fetal death was confirmed and bicornate uterus was diagnosed. One course induction with high dose oxytocin and then with PG E2 {dinoprostone 3 mg} was carried out but the induction failed to terminate the pregnancy.

She became candidate for Dilatation and Evacuation due to failed induction. Vaginal examinations under anesthesia showed one closed cervix with normal size uterus in posterior position and a free mass in the anterior. Second transabdominal ultrasound was performed under anesthesia. It revealed a normal uterus, cervix, but a mass with diameter of 20×16 cm.

Ultrasonography confirmed existence of a dead fetus in the mass without any relation to the cervical canal. Laparotomy was scheduled due to probable diagnosis of mullerian anomaly and pregnancy in rudimentary horn. Laparotomy revealed a left unicorne uterus and non-communicating right rudimentary horn pregnancy (Figure 1). Removal of the right rudimentary horn and right salpingectomy was carried out. Histopathology of the specimen confirmed the diagnosis of pregnancy in uncommunicated rudimentary horn.
Discussion

A unicorrate uterus results from unilateral failure of normal Mullerian system development. In most instances, the abnormal Mullerian duct has partially developed into a rudimentary uterine horn. In 83–90% of cases, there is no direct communication between the horn and the functional portion of the uterus, and fertilization is thought to occur via transperitoneal migration of the sperm or conceptus (2).

The life threatening complication is rupture of uterus in second and third trimester (3-6), although rudimentary horn pregnancies reaching term with birth of a live fetus were reported (7-8). The maternal mortality rate before the advent of Ultrasonography was as high as 47.6%. Rupture of the horn is still common but no case of maternal death has been published since 1960 (1).

Diagnosis of pregnancy in rudimentary horn is difficult because the enlarging horn with a thinned myometrium can often obscure the adjacent anatomic structures. The sensitivity of ultrasound examination for diagnosis has been reported to be as 26% and the sensitivity decreases as the pregnancy advances (6). Tubal pregnancy, cornual pregnancy, intrauterine pregnancy in a bicornuate uterus, and abdominal pregnancy are common sonographic misdiagnoses (7).

The following criteria for early sonographic diagnosis of rudimentary horn pregnancy include (1) pseudo pattern of an asymmetrical bicornuate uterus, (2) absent continuity between the cervical canal and the lumen of the pregnant horn, and (3) the presence of myometrial tissue surrounding the gestational sac. Additionally, hypervascularization typical to placenta accreta may support the diagnosis of rudimentary horn pregnancy (9, 10). MRI can be used for confirmation of diagnosis (11). Our case was misdiagnosed with bicornate uterus on ultrasound. Induction with PG E2 and high dose oxytocin were

Figure 1- Pregnancy in a rudimentary horn
Failed induction due to mullerian-anomaly

failed. Failed induction has several reasons and one of them is obstructive mullerian anomaly. Therefore; in cases with failed induction attention to this entity is recommended (12,13). From the last decade misoprostol is used for pregnancy termination in each of the three trimesters; though; rupture of uterus has been reported (14) after use of misoprostol in rudimentary horn due to misdiagnosing with bicornate uterus. Therefore high index of suspicion to diagnosis of rudimentary horn is necessary for exact diagnosis.

Optimal management of rudimentary horn is removal of horn via laparotomy or laparoscopy. Medical treatment with methotrexate and its resection by elective laparoscopy is reported in cases diagnosed during pregnancy(15).

References