

Selective fetal reduction of heterotopic pregnancy in a uterine rudimentary horn: A peculiar management for a peculiar case.

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Introduction

Mullerian anomalies vary from 0.06% to 38% in the normal population, while in women who experienced recurrent pregnancy loss, they reach up to 16.7%.

About 25% of cases having mullerian anomalies suffered from infertility, first-trimester abortions, preterm labor, and fetal abnormal presentation. (1) The pathophysiology of the unicornuate uterus is explained by either complete or partial failure in the development of the Müllerian duct. The ESHRE\ESGE classified unicornuate uterus as (U4) or hemi-uterus where only unilateral uterine development takes place and the contralateral part could be either incompletely formed or absent.

Class U4 is further divided into:

- Class U4a or hemi-uterus with a rudimentary (functional) which has a communicating or non-communicating functional contralateral horn.

- Class U4b or hemi-uterus without rudimentary (functional) cavity characterized either by the presence of non-functional contralateral uterine horn or by aplasia of the contralateral part (2). Most of the complications if not all arise from the presence of a functional cavity in the contralateral part such as hemato-cavity or ectopic pregnancy in the rudimentary horn which may rupture into the peritoneal cavity causing internal hemorrhage jeopardizing the patient's life (3). Proper diagnosis is essential for planning the management of the best outcome, it should be tailored to each patient and varies according to time of diagnosis and whether the case is emergency or elective. Different approaches may be used in such cases including laparotomy, laparoscopy, or any emerging technique such as imaging-guided techniques.

Case Presentation

A 27-year-old female, married for a year, nullipara with a history of a single chemical abortion, her medical and surgical history showed nothing remarkable, presented to our clinic seeking conception, her 3D ultrasound examination revealed a unicornuate uterus which was confirmed by hysterosalpingography. After a discussion of several options offered, a decision to start ovulation induction was made. A regimen of letrozole tablets for five days was applied. The patient presented afterward pregnant at 6 weeks of gestation but the 2D ultrasound revealed a heterotopic pregnancy; a completely normal intrauterine sac with pulsating fetal pole and a rudimentary horn containing a gestational sac with pulsating fetal pole, therefore the patient was scheduled for ultrasound-guided aspiration of the rudimentary horn pregnancy (a selective fetal reduction). (figure1and 2)



Figure 1. The rudimentary horn harbors a gestational sac with an adjacent unicornuate uterus.

Fetal reduction was done as planned under light sedation, using a 17 G Wallace needle. The patient completed her pregnancy with normal cervical length measurements all through the antenatal visits and delivered at 39 weeks through elective CS due to breech presentation. (figure 3)



Figure 2. The intrauterine pregnancy in the unicornuate uterus.



Figure 3. The appearance of the uterus after delivery of the baby by cs with the right rudimentary horn

Discussion

In the presenting case, the diagnostic tool was 3D ultrasonography which revealed an asymmetrical uterus with a cavity of elongated shape, reduced volume, and communicating with a cavity of an adjacent rudimentary horn with overlying myometrium giving the diagnostic appearance of a unicornuate uterus and hysterosalpingography came to confirm our

diagnosis which considered together with ultrasonography as of the diagnostic tools of choice in diagnosing Mullerian anomalies, while MRI has the superiority in the accuracy of the diagnosis of such cases (4,5). Management varies according to several factors mentioned before, for example, Suryawanshi SV et al chose laparoscopic management for their case which suffered from ruptured ectopic pregnancy in rudimentary horn and underwent laparoscopic excision of both ruptured rudimentary horn and ipsilateral hematosalpinx. The presenting case had heterotopic pregnancy that was detected early at 6 weeks of gestation while the case was stable so a less invasive conserving option had to be done to preserve the intrauterine pregnancy and spare the patient from any possible complication that may arise from unnecessary surgery hence, the selective fetal reduction option was offered (6), so a 17 G Wallace needle was used same as the one used in fetal reduction to be directed towards fetal pulsation in the rudimentary horn until fetal asystole is confirmed. The entire procedure occurred transvaginally, ultrasound-guided, and lasted for only minutes then patient was discharged a few hours later with no complaint which makes that approach even superior to laparoscopy in such a case.

Conclusion

To conclude, the case of our concern emphasizes the importance of early diagnosis of such cases and what hazards early management can prevent such as rupture and internal hemorrhage which may endanger the life of the patient. Lines of management are numerous and the choice amongst depends on the clinical scenario the physician faces. Selective Fetal reduction in whether heterotopic pregnancy in unicornuate uterus or early ectopic

pregnancy in rudimentary horn is a very accepted option if it is not the best for early detected and elective cases.

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