

The Vanishing Triplet

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Abstract

Vanishing fetuses are frequently encountered in pregnancies results from *in vitro* fertilization. Ultrasound scans taken at the 4-5th weeks showed multiple gestation has occurred, it frequently happens that more than one amniotic sac can be seen in early pregnancy, whereas a few weeks later there is only one to be seen and the other has disappeared. Whereas the triplet pregnancy evolved into a normal twin gestation, and may further evolve into a singleton gestation. These very high resorption rates, which can be explained on the basis of the intense fetal competition for space, nutrition, or other factors during early gestation with frequent loss of the other fetus. Here, we report a case of a vanishing triplet of spontaneous pregnancy, one fetus vanished in the first month of pregnancy while another fetus disappeared at the end of second month. The normal pregnancy of the singleton was followed up until six months.

Keywords: Multiple pregnancy; Threatened abortion; Vanishing fetus

Introduction

Spontaneously, approximately 50% of triplet pregnancies will experience at least one embryo resorption. The incidence of multiple conceptions is higher than the incidence of multiple deliveries. The "vanishing fetus" is a relatively new concept being a direct result of the advent of ultrasonography. Early first trimester loss of one or more conceptuses accounts for this phenomenon. In most instances, the patient may be presented heavy vaginal bleeding and abdominal cramps. We report a case of a vanishing fetus in a multiple gestation of greater than twins. In this patient, one fetus vanished in the first month of pregnancy while another fetus disappeared at the second month. The phenomenon was observed up to the 12th week of pregnancy and ongoing pregnancy was followed up till 24 weeks later.

Case Notes

A 26-year-old woman with a history of primary infertility, complained of irregular mense and much facial acnes. Six months earlier, the patient received clomid ovulation and got pregnant by dating coitus. She suffered from abnormal vaginal spotting since early pregnancy. Transvaginal ultrasound revealed three gestation sacs (Figure 1) with uncertain of fetal pole at the fourth week of pregnancy.

Subsequently, the patient experienced heavy vaginal bleeding for one day, she came to our emergency department with the complaint of diffuse pain over pelvic and back, transvaginal ultrasound disclosed a residual intact two sacs (Figure 2).

Because of the spontaneous abortion of one among the triplet pregnancy was impressed, she was treated with progesterone 50 mg intramuscular to stabilize the uterus and a combination of oral utrogestan which was prescribed at a dosage of 100 mg three times per day for 7 days after discharge. However intermittent vaginal spotting

for one month and ultrasound revealed that one miscarriage with the vanishing twin (Figure 3).

One sac with cardiac activity was noted (Figure 4) and ongoing one pregnancy with normal fetal growth after regular follow up. Vanishing fetuses are frequently encountered in pregnancies results from *in vitro* fertilization. Ultrasound scans taken at the 4-5th weeks showed multiple gestation has occurred, it frequently happens that more than one amniotic sac can be seen in early pregnancy, whereas a few weeks later there is only one to be seen and the other has disappeared. Whereas the triplet pregnancy evolved into a normal twin gestation, and may further evolve into a singleton gestation. Approximately 50% of triplet pregnancies will experience at least one embryo resorption. These very high resorption rates, which can be explained on the basis of the intense fetal competition for space, nutrition, or other factors during early gestation, with frequent loss of the other fetus.

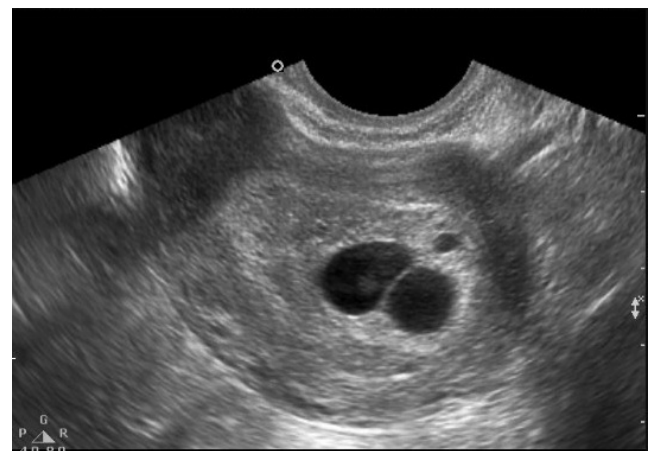


Figure 1: Initial three sacs in uterus.



Figure 2: Residual two sacs in uterine cavity.



Figure 3: Intact two sacs with one fetal pole.



Figure 4: Ongoing one pregnancy with cardiac activity.

Discussion

Although the phenomenon of the "vanished twin" has been reported frequently through the literature and no more confirmatory evidence has been discussed about vanishing triplet previously. This has raised questions concerning the vanishing triplet syndrome. In the most cases, a triplet intrauterine pregnancy was diagnosed ultrasonographically four weeks after *in vitro* fertilization (IVF), but only a single fetus and placenta were delivered at term. Our case had spontaneous pregnancy in which three gestational sacs were identified with vaginal ultrasound between 28 and 56 days after clomid ovulation. Weekly follow-up visits were scheduled during the first trimester due to vaginal spotting off and on. After medication, the course from vanishing triplet to the normal singleton pregnancy was impressed.

Pregnancy after IVF has attracted much more attention. Overall, pregnancy rates are about 30–40% with three transferred embryos. Abortion rates are high before 12 weeks of gestation, in 8% of intrauterine pregnancies, as well as ectopic pregnancies. An average of 50% pregnancies can result in twins and triplets. Heterotropic pregnancies are rare. In case of quadruplets and quintuplets the rate of spontaneous abortion is more and may be even higher in cases of fetal aneuploidy [1]. The histological evidence of vanished triplet has been revealed by Ultrasonic Examination [1]. It clearly showed the chorion lined sac containing an unknown amorphous matter, which is surrounded by degenerated chorionic villi on a normal amniochronic membrane [2].

Vanishing Triplet is a fetus in a multigestation pregnancy which dies inside the uterus and then partially or completely reabsorbed. It is also known as fetal reabsorption. After the *in vitro* fertilization, the incidence of total reabsorption in the report of triplet gestations associated with the triplet delivery rate was found to be 69.2%. Similarly, the twin birth rate was found to be 19.2% and singleton birth rate was found to be 11.6% [3]. The incidence of death of vanished triplet was mainly due to poorly implanted placenta, and developmental anomalies that may cause major organs to fail or to be missing completely, or there may be a chromosome abnormality incompatible with life. At the very earliest stages of embryogenesis, the vanishing sac becomes a blighted ovum, the one that never develops. Embryo resorptions were mainly observed during the first 7 weeks of gestation period and it almost disappeared after the 14th week as per our case finding [4].

A vanishing triplet, also known as fetal resorption, is a fetus in a multi-gestation pregnancy which dies in utero and is then partially or completely reabsorbed. The incidence of spontaneous embryo reduction as the report of triplet gestations after *in vitro* fertilization was associated with a total triplet delivery rate of 69.2%, a twin incidence of 19.2%, and a singleton birth rate of 11.6% [3]. The vanished triplet can die owing to a poorly implanted placenta, and developmental anomalies that may cause major organs to fail or to be missing completely, or there may be a chromosome abnormality incompatible with life. Frequently the vanishing sac is a blighted ovum, one that never developed beyond the very earliest stages of embryogenesis. Embryo resorptions were observed mainly during the first 7 weeks of gestation and did not occur beyond the 14th week as the finding in our case [4].

In case of complete fetal absorption, there are usually no further complications to the pregnancy, other than first trimester vaginal bleeding. However, if the event occurs in the second or third trimester,

serious complications include premature labor, infection due to the death of the fetus, and antepartum hemorrhage. During the end of the pregnancy, papyraceus which is a low lying fetus may block the cervix and the living fetus can be delivered by a cesarean section. The effect of vanishing triplet is more that of singleton pregnancy. The ongoing technique on triplets was more complex and even more expensive perinatal management. Hence it would be better to recommend a more detailed ultrasound examination for the couples who were ready to receive the ovulation induction in invitro centres.

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