

Vanishing Twin Syndrome

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Abstract: A Vanishing twin, also known as Twin resorption, is a fetus in a multi gestation pregnancy that dies in utero and is then partially or completely reabsorbed. In some instances, the dead twin is compressed into a flattened, parchment-like state known as fetus papyraceus. Vanishing twins occur in up to one of every eight multi fetus pregnancies and may not even be known in most cases. High resorption rates, which cannot be explained on the basis of the expected abortion rate, suggest intense fetal competition for space, nutrition, or other factors during early gestation, with frequent loss or resorption of the other twins. In pregnancies achieved by in vitro fertilization, "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 'vanished'."

Keywords: Twin Resorption, Fetus Papyraceus, In Vitro Fertilization, Ultrasonography, Fetus compressus

1. Introduction

Vanishing twin syndrome was first recognized in 1945. This occurs when a twin or multiple disappears in the uterus during pregnancy as a result of a miscarriage of one twin or multiple. The fetal tissue is absorbed by the other twin, multiple, placenta or the mother. This gives the appearance of a "vanishing twin."¹

Vanishing twin syndrome or disappearing twin syndrome is a term used to describe the spontaneous loss, or miscarriage, of one developing baby early in a multiple pregnancy

The "vanishing" twin on the ultrasound scan



Figure 1: USG Scan of Vanishing Twin

2. Statistics

The vanishing twin phenomenon appears to be common. Research suggests that vanishing twin syndrome occurs before the 12th week of pregnancy in:

- Around 36 percent of pregnancies with two gestations
- More than 50 percent of pregnancies with three or more gestations

Researchers suspect, however, that vanishing twin syndrome may be even more common, because it may frequently occur without detection.

In multiple pregnancies that have continued beyond 20 weeks, researchers estimate that about 2.6 percent of twin gestations and 4.3 percent of triplet gestations will be affected by fetal death, although these are generally not considered vanishing twin pregnancies.

3. Identification

Before the use of ultrasound, the diagnosis of the death of a twin or multiple was made through an examination of the placenta after delivery. Today, with the availability of early ultrasounds, the presence of twins or multiple fetuses can be detected during the first trimester. A follow-up ultrasound may reveal the "disappearance" of a twin.

For example, a woman may have an ultrasound at 6 or 7 weeks gestation. The doctor identifies two fetuses, and the woman is told she is having twins. When the woman returns for her next visit, only one heartbeat can be heard with a Doppler. A second ultrasound is conducted, and only one fetus is observed. Additionally, some women may have symptoms that would indicate a miscarriage, although an ultrasound reveals a single baby in the uterus.²

Vanishing twin syndrome has been diagnosed more frequently since the use of ultrasonography in early pregnancy. Estimates indicate that vanishing twin syndrome occurs in 21-30% of multi fetal pregnancies.

4. Etiology

In most cases, the cause of vanishing twin syndrome is unknown. Abnormalities that result in the vanishing twin appear to be present from early in development rather than from a sudden occurrence or a chromosomal anomaly

Analysis of the placenta and/or fetal tissue frequently reveals chromosomal abnormalities in the vanishing twin, while the surviving twin is usually healthy. Improper cord implantation may also be a cause.³

The increase in birth defects in a surviving twin appear to be most common with the loss (vanishing) of a co-twin between six and eight weeks gestation. These outcomes may include:

- Gestational diabetes mellitus
- A higher risk of congenital defects such as cerebral palsy
- Intrauterine growth restriction (IUGR) - IUGR is a condition in which the baby does not grow as well as it should during pregnancy.

- Very low birth weight
- Low Apgar scores
- Perinatal mortality (infant death)

Effects of Vanishing Twin Syndrome on the Mother and Surviving Twin

If the loss occurs within the first trimester, neither the remaining fetus nor the mother generally have clinical signs or symptoms. The prognosis of the surviving twin is usually excellent, but this depends on the factors that contributed to the death of the other twin.

If the twin dies in the second or third trimester, there are increased risks to the surviving fetus, including a higher rate of cerebral palsy. When a twin dies after the embryonic period of gestation, the water within the twin's tissues, the amniotic fluid, and the placental tissue may be reabsorbed. This results in the flattening of the deceased twin from the pressure of the surviving twin.⁴

At delivery, the deceased fetus may be identified as fetus compressus (compressed enough to be noticed) or as fetus papyraceus (flattened remarkably through loss of fluid and most of the soft tissue).

Signs of a Possible Vanishing Twin Syndrome

Research indicates more cases in women over the age of 30. Symptoms usually begin early in the first trimester and include bleeding, uterine cramps, and pelvic pain.

Symptoms

In very early cases of vanishing twin syndrome, the woman might never know that the condition occurred. In other cases, the loss of the twin might be accompanied by some miscarriage symptoms such as vaginal bleeding and HCG levels that rise more slowly than in normally developing twin pregnancies, that rise more slowly than in normally developing twin pregnancies.

Care for vanishing twin syndrome - No special medical care is necessary with an uncomplicated vanishing twin in the first trimester. Neither the surviving twin nor the mother would require medical treatment. If the fetal death is in the second or third trimester, the pregnancy may be treated as high-risk. Pregnant women should seek medical care if they are experiencing bleeding, cramping, and pelvic pain. Ultrasound should be used to determine that no viable fetus remains before deciding if a D&C might be indicated.

The woman can choose to wait for a natural miscarriage in many cases.

5. Conclusion

If a mother has been diagnosed with vanishing twin, probably she has a lot of mixed emotions. It's normal to grieve when a baby is lost while also feeling relief that she is still pregnant with other baby. Mother should not feel that she has to pick and choose between her emotions. While continuing to eagerly anticipate for healthy baby. It's also important to be aware that there can be some problems in the remaining twin, but that in most cases of a vanishing twin,

the surviving baby is born healthy and without any congenital problems.

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