



ABNORMAL UTERUS A CAUSE FOR MISCARRIAGE

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ABSTRACT Some women have a congenital uterine abnormality, which is a womb/uterus that is formed in an unusual way before birth. Uterine malformations occur due to a birth defect. In the womb, female infants develop two separate halves of their uterus that merge together before birth. If the two halves fail to merge completely, the woman may be born with a malformed uterus. Uterine malformations make up a diverse group of congenital anomalies that can result from various alterations in the normal development of the Mullerian ducts. It has been found that the prevalence of uterine abnormality is estimated to be 6.7% among general population. About 18% of women who have recurrent miscarriages have some type of uterine abnormality. Uterine conditions don't always show signs or symptoms until one tries to conceive. When a baby girl is developing in the womb, two small tubes call Mullerian ducts come together to form her uterus. For some baby girls, the Mullerian ducts don't come together completely. Symptoms range from amenorrhea, infertility, recurrent pregnancy loss, and pain, to normal functioning depending on the nature of the defect. A uterine malformation that does not usually cause symptoms does not usually require treatment. However, if the malformation if causing problems, then surgery will be considered. Surgical intervention aims to fix the malformation and can often be performed laparoscopically with a hysteroscope.

KEYWORDS : congenital, malformations, uterus, miscarriage, Mullerian ducts.

INTRODUCTION

The uterus or the womb is actually the place inside a female body where her baby grows. Certain conditions called abnormalities or defects here can cause problems before and during pregnancy. An abnormal uterus can some of the time be a danger factor for unsuccessful labor and, sometimes, a reason for intermittent unnatural birth cycles. Nonetheless, just a few sorts of uterine malformations increase the danger of unsuccessful labor and require treatment. Others may not cause any problems with pregnancy at all. The most widely recognized kind of uterine anomalies are brought about by Mullerian ducts. When a baby girl is developing in the womb, two small tubes call Mullerian ducts come together to form her uterus. For some baby girls, the Mullerian ducts don't come together completely. Complete failure is less and results in double vagina, double cervix and double uterus. Variants may occur depending on the degree of malformation of the Mullerian ducts. About 18% of women who have recurrent miscarriages have some type of uterine abnormality.

DEFINITION

Abnormal uterus or uterine malformation is a type of female genital malformation resulting from an abnormal development of the Mullerian ducts during embryogenesis.

PREVALENCE

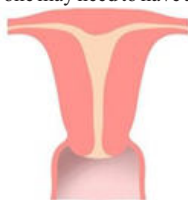
The prevalence of uterine malformation is estimated to be 6.7% in the general population, slightly higher in the infertility population, and significantly higher in a population of women with a history of recurrent miscarriages. They do tend to have a negative impact on a woman's ability to carry a pregnancy to full term. It's estimated that around 1 in 4 women who have had recurring miscarriages or delivered prematurely have a uterine malformation.

TYPES

Depending on the form of the uterus, the chances of abortion or early delivery will be higher. Different uterine malformations are:

ARCuate UTERUS

The arcuate uterus looks very like a normal womb but it has a depression at the top. Arcuate womb does not increase the risk of preterm birth or first trimester miscarriage but it does increase the risk of second trimester miscarriage. In later pregnancy the baby may lie in an awkward position so one may need to have a caesarean birth.



ARCuate UTERUS

SEPTATE / SUBSEPTATE UTERUS

It is the most common congenital uterine anomaly, comprising roughly 55% of mullerian duct anomalies. The septate uterus has a wall of muscle coming down the centre splitting the space in two. Sometimes the wall only comes part-way down the womb (subseptate) and other times it comes the whole way down. Women with subseptate or septate wombs are more likely to have difficulties with conception. There is also an increased risk of first-trimester miscarriage and preterm birth. In later pregnancy the baby may lie in an awkward position.

For women who have a septate uterus, the risk of miscarriage is significant. In fact, in one study nearly 67% of the women in the study with a septate uterus experienced pregnancy loss.

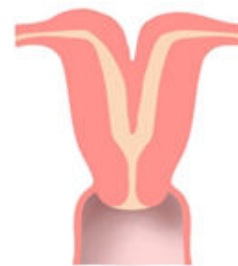


SEPTATE / SUBSEPTATE UTERUS

BICORNUATE UTERUS

A bicornuate womb is heart-shaped essentially a uterus with a dip on top. Women with a bicornuate womb have no extra difficulties with conception or in early pregnancy, but there is a slightly higher risk of miscarriage and preterm birth. It can also affect the way the baby lies in later pregnancy so a caesarean birth might be recommended. Bicornuate uteri (as well as unicornuate and didelphic uteri) are considered mullerian duct abnormalities.

A bicornuate uterus is not believed to increase the risk of a first-trimester miscarriage but it may increase the risk of a second-trimester miscarriage.



BICORNUATE UTERUS

UNICORNUATE UTERUS

A unicornuate uterus is a horn-shaped uterus that causes the uterus to be smaller than normal. It is a congenital malformation in which one side of the uterus does not develop properly. A unicornuate uterus increases the risk of ectopic pregnancy, miscarriage, and preterm delivery. Pregnancy with a unicornuate uterus is generally considered to be high risk, which will mean extra monitoring. The risk of miscarriage in the first trimester was nearly 25% and the risk of preterm birth was, on average, 44%.

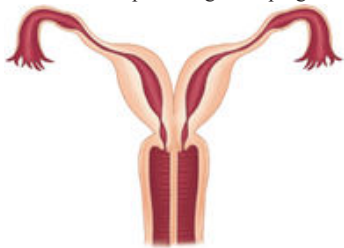


UNICORNUATE UTERUS

DIDELPHIC UTERUS

A Didelphic or "double" Uterus is a condition in which there are two uteri, and sometimes also two cervixes and two vaginas. This condition is quite rare and appears to have a genetic origin (it runs in families). Most women do not have any symptoms prior to becoming pregnant, though some have heavy menstrual periods. In addition to increasing the risk of miscarriage, a Didelphic Uterus increases the risk of preterm delivery.

It's recommended that women who are living with this condition and want to conceive consult an expert in high-risk pregnancy.



DIDELPHIC UTERUS

T-SHAPED UTERUS

A T-shaped uterus is another type of congenital malformation of the uterus that is associated with recurrent miscarriages and an increased risk of preterm labor. Some women who have a T-shaped uterus do not experience problems, while others do. This specific malformation is sometimes found in women whose mothers took a synthetic estrogen called diethylstilbestrol (DES), which was prescribed to some pregnant women between 1938 and 1971. DES can also cause an increased risk of other pregnancy problems.



T-SHAPED UTERUS

CAUSES

Uterine malformations develop during pregnancy, and the main factors have a genetic cause or prenatal environmental factors.

SYMPTOMS

In some cases these malformations do not show symptoms, so women get the diagnosis in routine gynecological examinations or some do not

realize until after getting pregnant. Some women with malformed uteruses don't have difficulty getting pregnant and do not usually discover their unusually shaped uterus until they have a prenatal ultrasound. Others may be diagnosed during an infertility evaluation. In other cases, the most common symptoms of uterine malformations are:

- Pain before or during menstruation
- Irregular blood loss
- outside of menstruation
- Pain during sexual intercourse
- Repeated miscarriages
- Premature births

COMPLICATIONS

- Premature birth. This is birth that happens too early, before 37 weeks of pregnancy.
- Birth defects that may be caused by restricting (limiting) the growth of parts of a baby in the womb. Birth defects are health conditions that are present at birth. Birth defects change the shape or function of one or more parts of the body. They can cause problems in overall health, how the body develops, or in how the body works.
- Slow growth in your baby
- Breech position or other problems with the baby's position in the womb. Breech position is when your baby's bottom or feet are facing down right before birth. The best position for birth is when your baby is head-down.
- Needing to have a cesarean birth (also called c-section). This is surgery in which your baby is born through a cut that your doctor makes in your belly and uterus.
- Miscarriage. This is the death of a baby in the womb before 20 weeks of pregnancy.

DIAGNOSIS

Uterus anomalies are often recognized at the onset of puberty, when an adolescent girl begins menstruation or when a young woman fails to get her menstrual period. The condition may also be diagnosed when a woman has trouble getting pregnant, or maintaining a pregnancy. Most women are unaware that they may have an abnormal shaped womb when they become pregnant. Some uterine anomalies can be accurately diagnosed with ultra sound, such as absent uterus or didelphic uterus, in which there are two widely separated uterine horns and two cervixes. Two-dimensional ultra sound may not be accurate, however, in the diagnosis of other uterine anomalies. It is difficult to distinguish a bicornuate uterus from a septate uterus because it may be impossible to assess the external fundal contour of the uterus. A bicornuate uterus should have a deep fundal indentation of 1 cm or greater, whereas a septate uterus has a normal outer fundal contour. Magnetic resonance imaging (MRI) or three-dimensional US is more accurate in making the appropriate diagnosis and guiding treatment planning.

- Generally diagnosis can be done by any one of the following:
 - Ultrasound examination
 - Hysteroscopy
 - Laparoscopy
 - MRI scan
- With the advancement of newer imaging techniques, now the doctors are able to make very precise and accurate diagnoses of congenital uterine malformations and their complications, including identification of type of uterine malformation

MANAGEMENT

Many women with uterine anomalies do not require treatment. If pain, miscarriage, or infertility is an issue, a physician may recommend correcting the anomaly surgically. Most cases of uterine anomalies can be corrected through minimally invasive techniques, such as laparoscopy or hysteroscopy. Surgical intervention aims to fix the malformation and can often be performed laparoscopically with a hysteroscope. On the other hand, many women with uterine malformations turn to assisted reproduction technology to improve their fertility and to be able to have children. The most common technique used in these cases is In Vitro Fertilisation (IVF). Surgical intervention depends on the extent of the individual problem. Surgery can repair the defect, eliminate discomfort during menses or sexual relations and improve fertility and pregnancy outcomes. Surgery is usually not recommended for women with unicornate, bicornate, or didelphic malformations. A uterine septum can be resected in a simple out-patient procedure that combines laparoscopy and hysteroscopy. This procedure greatly decreases the rate of miscarriage for women with this anomaly.

CONCLUSION

The actual prevalence of uterine malformations has been difficult to evaluate because some defects may be considered normal variants of uterine anatomy, for example, Arcuate Uterus. The Septate Uterus and Bicornuate Uterus are the most common congenital uterine anomalies

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