UTERUS SEPTUS

Uterine Septum, Septated Uterus. Uterine Partition

A form of a congenital malformation where the uterine cavity is partitioned by a longitudinal septum. It is one of Müllerian duct anomalies.

🔍 Diagnosis ♂ Female

Related Diagnoses:
Asherman’s syndrome | Uterine malformations | Uterus duplex

ℹ️ About Uterus septus

The uterus is formed during embryogenesis by the fusion of the two Müllerian ducts. During this fusion a resorption process eliminates the partition between the two ducts to create a single cavity. This process begins caudally and advances cranially, thus a complete septum formation represents an earlier disturbance of this absorption than the incomplete form.

If the two Müllerian ducts have fused, but the partition between them is still present, splitting the system into two parts, then uterus septus is created. The outside of the uterus has a normal typical shape.

With a complete septum the uterus, cervix and the vagina can be partitioned. Usually the septum affects only the cranial part of the uterus. The wedge-like partition may involve only the superior part of the cavity resulting in an incomplete septum or a subseptate uterus, or less frequently the total length of the cavity (complete septum) and the cervix resulting in a double cervix. The septation may also continue caudally into the vagina resulting in a "double vagina".

**An uterine septum is the most common uterine malformation and a cause for miscarriages.** Therefore, it is not surprising that most studies related to uterus septus are based on populations of women who have experienced a pregnancy loss and thus do not address the issue of the prevalence in the general population. A screening study by Woelffer et al. of women without a history of reproductive problems found that about 3% of women had a uterine septation; the most common anomaly was an arcuate uterus (5%), while 0.5% were found to have a bicornuate uterus. In contrast, in about 15% of patients with recurrent pregnancy loss anatomical problems are thought to be causative with the septate uterus as the most common finding.

It is not considered necessary to remove a septum that has not caused problems, especially in women who are not considering pregnancy. If condition ask for that, uterine septum can be corrected by hysteroscopic surgery.

A pelvic examination may reveal a double vagina or double cervix that should be further investigated and may lead to the discovery of a uterine septum. In most patients, however, the pelvic examination is normal. Investigations are usually prompted on the basis of reproductive problems. Usually it is diagnosed by medical imaging techniques, i.e. ultrasound or an MRI. MRI is considered the preferred modality due to its multiplanar capabilities as well as its ability to evaluate the uterine contour, junctional zone, and other pelvic anatomy. A hysterosalpingogram is not considered as useful due to the inability of the technique to evaluate the exterior contour of the uterus and distinguish between a bicornuate and septate uterus.

**Associated disease**

The condition is also associated with abnormalities of the renal system. Further, skeletal abnormalities have been linked to the condition.

**Complications**
Uterus septus is associated with a higher risk of miscarriage, premature birth, and malpresentation.

Risk factors

Uterine malformations are associated with genetic and teratogenic factors. Seen as problematic can be contact with any substance with teratogenic potential during pregnancy. Fetus is the most vulnerable in the period of 2 to 12 weeks.

Impact on fertility

The condition may not be known to the affected individual and not result in any reproductive problems; thus normal pregnancies may occur. However, it is associated with a higher risk for miscarriage, premature birth, and malpresentation. According to the classical study by Buttram there is a 60% risk of a spontaneous abortion, this being more common in the second than in the first trimester. However, there is no agreement on this number and other studies show a lower risk. Woelfer found that the miscarriage risk is more pronounced in the first trimester.

Prevention

None possible, except for avoiding contact with teratogenic factors (e.g. diethylstilbestrol).

Symptoms

Uterus septus is characterized by a wall or septum partially or fully dividing the uterus into two cavities, cervix and the vagina can be also partitioned. Clinically, symptoms may range from being asymptomatic thus remaining undiagnosed, to the development of poor reproductive outcome including:

- ectopic pregnancy
- recurrent miscarriage
- premature delivery or intrauterine fetal growth restriction
- Dyspareunia associated with penetration difficulties can be reported

Therapies

Self therapy

None possible.

Conventional medicine

Pharmacotherapy

Mostly additional to surgical solution, to help epithelization processes, against adhesion development.

Surgical therapy

It is not considered necessary to remove a septum that has not caused problems, especially in women who are not considering pregnancy. There is controversy over whether a septum should be removed prophylactically to reduce the risk of pregnancy loss prior to a pregnancy or infertility treatment. If condition ask for that, a septum can be resected with surgery. Hysteroscopic removal of a uterine septum is generally the preferred method, as the intervention is relatively minor and safe in experienced hands.
Assisted reproduction

In patients for whom IVF-ICSI is indicated, septum resection is required before the beginning of the cycle in order to minimize the adverse effect of the septum on fecundity and early pregnancy. However, a prospective randomized trial is needed to compare IVF outcome in patients with such uterine anomaly after surgical correction versus those without surgical correction. Reproductive outcome of IVF-ET after hysteroscopic correction of incomplete uterine septum anomaly in women with primary infertility is not different from women with normal uterine cavity. Multiple pregnancies may have a negative impact on the likelihood of a full term pregnancy; therefore, every effort should be made to achieve a singleton pregnancy in these patients and only eSET (elective single embryo transfer) is accepted in these patients.

Find more about related issues

Diagnoses

Asherman's syndrome
A medical condition, where the walls of the uterus stick to one another due to bands of scar tissue.
Learn more at: www.fertilitypedia.org/therapy/diag/asherman-s-syndrome

Uterine malformations
A type of female genital malformation resulting from an abnormal development of the Müllerian duct(s) during embryogenesis.
Learn more at: www.fertilitypedia.org/therapy/diag/uterine-malformations

Uterus duplex
Congenital uterine malformation where both Müllerian ducts develop but fail to fuse, thus the woman has a "double uterus".
Learn more at: www.fertilitypedia.org/therapy/diag/uterus-duplex

Organs

Cervix
The narrow inferior portion of the uterus that projects into the vagina.
Learn more at: www.fertilitypedia.org/edu/organs/cervix

Fallopian tubes
Two very fine tubes that transport sperm toward the egg, and allow passage of the fertilized egg back to the uterus for implantation.
Learn more at: www.fertilitypedia.org/edu/organs/fallopian-tubes

Uterus
The uterus is the largest and major organ of the female reproductive tract that is the site of fetal growth and is hormonally responsive.
Learn more at: www.fertilitypedia.org/edu/organs/uterus

Vagina
Sex organ that is a part of the female genital tract having two primary functions: sexual intercourse and childbirth.
Learn more at: www.fertilitypedia.org/edu/organs/vagina

Reproductive cells

Endometrial cell
Cells composing an inner layer of the uterine lining.
Learn more at: www.fertilitypedia.org/edu/reproductive-cells/endometrial-cell
Endometrium
The innermost layer of uterus forming the uterine lumen where the implantation of an oocyte happens.
Learn more at: www.fertilitypedia.org/edu/reproductive-cells/endometrium

Biological control

Estrogen
The primary female sex hormone responsible for the development and regulation of the female reproductive system and secondary sex characteristics.
Learn more at: www.fertilitypedia.org/edu/biological-control/estrogen

Reproductive functions

Implantation
The very early stage of pregnancy at which the embryo adheres to the wall of the uterus.
Learn more at: www.fertilitypedia.org/edu/reproductive-functions/implantation

Symptoms

Double vagina
Longitudinal division of the vagina into two separate organs.
Learn more at: www.fertilitypedia.org/edu/symptoms/double-vagina

Infertility
The failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse.
Learn more at: www.fertilitypedia.org/edu/symptoms/infertility

Painful sexual intercourse
The painful feelings during sexual intercourse.
Learn more at: www.fertilitypedia.org/edu/symptoms/painful-sexual-intercourse

Preterm birth
A birth of the baby before 37 completed weeks of gestational age.
Learn more at: www.fertilitypedia.org/edu/symptoms/preterm-birth

Recurrent miscarriage
A disease distinct from infertility, defined by two or more failed pregnancies.
Learn more at: www.fertilitypedia.org/edu/symptoms/recurrent-miscarriage

Therapies

Egg donation
Process by which a woman donates eggs for purposes of assisted reproduction or biomedical research.
Learn more at: www.fertilitypedia.org/edu/therapies/egg-donation

Elective single embryo transfer
The procedure of transfer one single good quality embryo in cleavage stage or in stage of blastocyst that was selected as the most appropriate.
Learn more at: www.fertilitypedia.org/edu/therapies/elective-single-embryo-transfer-1

ICSI
A micromanipulative fertilization technique in which a single sperm is injected directly into an egg.
Learn more at: www.fertilitypedia.org/edu/therapies/icsi
Sperm donation
The procedure in which a man (sperm donor) provides his sperm for fertility treatment.
Learn more at: www.fertilitypedia.org/edu/therapies/sperm-donation

Standard IVF
A process in which an egg is fertilised by sperm outside the body: in vitro. Own or donated gametes may be used.
Learn more at: www.fertilitypedia.org/edu/therapies/standard-ivf

Gallery

Uterus septus
The uterine cavity is partitioned by a longitudinal septum.

Sources

“Hysteroscopic treatment of partial and complete uterine septum. (http://www.epistemonikos.org/documents/023882db96e9c29cfa13780a79c6b136cfd7795f/)” — by Valle licensed under CC BY 3.0

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“Vaginal Septoplasty in Septate Uterus with Double Cervix (http://www.hindawi.com/journals/criog/2014/367360/)” — by Barbanti et al. licensed under CC BY-SA 3.0


“Uterus septus - diagram (uploads/b38/c25/3a9/b38c253a99be4875f03290c666b84be3d69c0ee15.jpe)” — by Rosenkranzova, created for Fertilitypedia.org licensed under CC BY-SA 4.0