CONDITION

Asherman syndrome

Learn how scar tissue inside the uterus can affect periods, fertility, pregnancy, diagnosis, treatment, and follow-up.

WHAT IT IS
Scar tissue bands inside the uterus or cervix

BODY SYSTEM
Reproductive system

MAIN SYMPTOMS
Light or absent periods, pelvic cramping, infertility, repeated pregnancy loss

WHAT CAUSES IT
Uterine lining injury, sometimes infection

HOW IT IS DIAGNOSED
Hysteroscopy

MAIN TREATMENT
Hysteroscopic surgery

CAN IT BE CURED?
Sometimes, adhesions can return after treatment

IS IT AN EMERGENCY?
Sometimes, with very heavy bleeding or fainting

LONG-TERM OUTLOOK
Often treatable, with possible recurrence and pregnancy complications

Overview

Asherman syndrome is a condition in which bands of scar tissue form inside the uterus or cervix. These bands are called intrauterine adhesions. They can partially or completely join surfaces that normally remain separate.

The uterus is lined by the endometrium, a layer of tissue that thickens during the menstrual cycle and supports pregnancy. Injury to the deeper layer of the endometrium can cause healing surfaces to stick together. The adhesions may be thin and easy to separate, or they may be thick, dense, and connected to the muscular wall of the uterus.

Not every person with an intrauterine adhesion has symptoms. The term Asherman syndrome generally refers to adhesions that cause problems such as reduced menstrual bleeding, pelvic pain, infertility, or pregnancy complications.

The condition matters because scarring can reduce the amount of healthy uterine lining and change the shape of the uterine cavity. This may interfere with menstrual flow, embryo implantation, or the development of the placenta. The effect varies greatly. Some people have a small area of scar tissue and mild symptoms, while others have more extensive disease.

Asherman syndrome can often be treated with a procedure that removes or divides the adhesions. However, scar tissue can return, especially when adhesions are extensive. Evaluation and treatment are usually provided by a gynecologist, often one with experience in hysteroscopy or reproductive surgery.

Symptoms

Changes in menstruation are common. Periods may become much lighter, less frequent, or absent. These changes are most meaningful when they begin after a pregnancy-related procedure, uterine surgery, or infection.

Some people continue to have monthly cramping even though little or no blood comes out. This can happen if scar tissue blocks menstrual flow. Others have no pain.

Possible symptoms or effects include:

These symptoms have many possible causes. For example, absent periods can result from pregnancy, hormonal conditions, menopause, major weight changes, intense exercise, stress, or certain medicines. Infertility and miscarriage also have many causes. Symptoms alone cannot confirm Asherman syndrome.

- Periods that become unusually light or stop
- New or worsening cramping around the expected time of a period
- Difficulty becoming pregnant
- Repeated pregnancy loss
- Problems involving the placenta in a later pregnancy
- No noticeable symptoms, with adhesions found during testing for another reason

Causes and risk factors

Asherman syndrome usually develops after the inner surface of the uterus has been injured. The risk is higher when the injury occurs during or soon after pregnancy, when the uterine lining is especially sensitive.

A common setting is dilation and curettage, often called a D&C, performed after a miscarriage, pregnancy termination, delivery, or retained pregnancy tissue. During a D&C, the cervix is opened and tissue is removed from the uterus. Most people who have this procedure do not develop Asherman syndrome, but repeated procedures or procedures involving an infected uterus may increase the chance of scarring.

Other procedures can also injure the endometrium. These include surgery to remove fibroids that project into the uterine cavity, removal of polyps, cesarean delivery, and other operations that enter or affect the cavity. Procedures intended to destroy the uterine lining to control heavy periods, known as endometrial ablation, are designed to produce scarring and are a separate clinical situation.

Uterine infection is another possible cause. Genital tuberculosis is an important cause in areas where tuberculosis is more common. Other severe infections involving the uterus may also contribute. Pelvic radiation is a rare cause.

Risk depends on the location, depth, and extent of injury rather than on a single procedure alone. It may be difficult to identify one definite cause, particularly when a person has had several pregnancies or uterine procedures.

Diagnosis

A clinician will first ask about menstrual changes, pregnancies, miscarriages, infections, and previous procedures involving the uterus. They may also ask whether the symptoms began after a specific event. A pregnancy test and blood tests may be used to look for other reasons that periods have changed.

A standard pelvic ultrasound can assess the uterus and ovaries, but it may not show thin adhesions clearly. Tests that outline the uterine cavity are more useful.

Saline infusion sonography involves placing sterile fluid into the uterus during an ultrasound. The fluid separates the cavity walls, which may make adhesions or other structural problems easier to see.

Hysterosalpingography uses contrast material and X-rays to outline the uterus and fallopian tubes. Adhesions may appear as areas that do not fill with contrast. This test can also provide information about whether the fallopian tubes are open, but it cannot always distinguish adhesions from other abnormalities.

Hysteroscopy is the most accurate way to evaluate the uterine cavity. A clinician passes a narrow camera through the cervix to view the inside of the uterus directly. It can show the location and thickness of scar tissue. In many cases, diagnosis and treatment can occur during

the same procedure.

Magnetic resonance imaging, or MRI, is not routinely needed. It may be considered when the cavity is completely blocked or when other tests do not provide enough information.

Clinicians may describe Asherman syndrome as mild, moderate, or severe, but classification systems differ. The amount of scarring, the menstrual pattern, and whether healthy endometrium remains can all influence treatment and outlook.

Treatment and management

Treatment depends on symptoms, the extent of scarring, and the person's goals. Someone without symptoms who is not planning a pregnancy may not need an immediate procedure. A gynecologist can explain whether monitoring is reasonable.

When treatment is needed, hysteroscopic adhesiolysis is the main approach. During this procedure, the clinician looks inside the uterus with a hysteroscope and carefully divides the adhesions. Fine scissors or other surgical instruments may be used. Direct visualization helps reduce injury to the remaining healthy endometrium.

Thin adhesions may be treated in an office or outpatient setting. Dense or extensive adhesions may require an operating room, anesthesia, ultrasound guidance, or more than one procedure. Attempting to open a severely scarred cavity can carry risks, including bleeding, infection, and making a hole in the uterine wall, called uterine perforation.

The uterine walls can stick together again while healing. To reduce this risk, a clinician may temporarily place a balloon catheter or another physical barrier inside the uterus. Certain anti-adhesion gels may also be considered. The choice depends on the anatomy, the procedure, available evidence, and the clinician's experience.

Hormonal treatment with estrogen is sometimes used after surgery to encourage regrowth of the endometrium, often followed by a progesterone-type medicine to produce a withdrawal bleed. Evidence has not established one best regimen for every patient. These medicines should be discussed with the treating clinician rather than started without medical guidance.

Antibiotics like amoxicillin or doxycycline may be used when there is a specific infection concern or for selected procedures. Research has not established that routine antibiotics prevent adhesions from returning in every patient.

Management may also include fertility care. Removing adhesions can improve the shape of the cavity and may help periods return, but treatment does not guarantee pregnancy. Age, egg supply, sperm factors, fallopian tube health, the amount of healthy endometrium, and other conditions also affect fertility.

People who do not wish to become pregnant should discuss contraception. Ovulation can still occur when periods are absent or very light, so menstrual changes do not reliably prevent pregnancy.

Complications

Asherman syndrome may interfere with fertility by reducing healthy endometrial tissue or making it difficult for an embryo to implant. It may also be associated with miscarriage. The level of risk depends in part on how much of the cavity is affected and whether the lining recovers after treatment.

Pregnancy after Asherman syndrome may require closer obstetric monitoring. Scarring can be associated with placenta previa, in which the placenta covers or approaches the cervix, and placenta accreta spectrum, in which the placenta attaches too deeply to the uterine wall. Retained placenta, heavy bleeding after delivery, and preterm birth may also occur.

These complications are possible, not inevitable. A person who becomes pregnant should tell their prenatal care clinician about the history of intrauterine adhesions and any hysteroscopic surgery. Early review allows the care team to plan appropriate imaging and follow-up.

Treatment itself can cause complications, although serious problems are uncommon when hysteroscopy is performed by an experienced clinician. Possible risks include infection, bleeding, fluid-related complications, cervical injury, uterine perforation, and new scar formation.

Adhesions can return after treatment. Recurrence is more likely when the original scarring was dense or extensive. Some people need a repeat procedure to restore the cavity as fully as possible.

Follow up

Follow-up is important because symptoms alone do not always show whether the cavity has healed. Periods may become heavier after treatment, but this does not prove that all adhesions are gone. Likewise, light bleeding does not always mean that treatment failed.

A clinician may recommend a repeat hysteroscopy or an imaging test after healing begins. This is sometimes called a second-look procedure. It can identify recurrent adhesions while they are still relatively thin and may allow them to be treated.

Routine follow-up may include discussion of:

Contact the treating clinician promptly for fever, worsening pelvic pain, foul-smelling discharge, or bleeding that is heavier than expected after a procedure. These symptoms may need urgent assessment.

Seek emergency care for very heavy bleeding, fainting, severe or rapidly worsening pain, difficulty breathing, confusion, or other signs of serious illness. During pregnancy, urgent assessment is also appropriate for significant bleeding, severe abdominal or pelvic pain, shoulder pain, marked dizziness, or fainting. These symptoms are not specific to Asherman syndrome, but they can signal a pregnancy or bleeding emergency.

- Changes in menstrual bleeding or cramping
- Results of repeat cavity testing
- Whether additional treatment is needed
- Plans for pregnancy or contraception
- The timing of fertility evaluation
- Pregnancy monitoring after treatment

Sources

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