



Fact Sheet

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The Patient Education Website of the American Society for Reproductive Medicine

Intrauterine adhesions: what are they?

What are intrauterine adhesions?

The inside of the uterus is like a balloon with the front and back walls flat against each other. The pocket is lined with tissue called endometrium. During menstruation the superficial (top) layer of the endometrium is shed. When a woman becomes pregnant, the embryo implants in the endometrium. Injury to and/or infection of the endometrium may damage the lining and cause formation of adhesions (scar tissue) between the inner walls of the uterus where the walls abnormally adhere or stick to each other. Asherman syndrome is a term used to describe adhesions inside the uterus. This scarring can be mild with thin stretchy bands of scar tissue or more severe with formation of thick bands. In the most severe cases, partial or total occlusion or destruction of the inside of the uterine cavity can occur.

What are potential causes of Asherman syndrome?

The most common cause of intrauterine adhesions is injury following a surgical procedure involving the cavity of the uterus. Dilation and curettage (D&C) is a common outpatient surgical procedure during which the cervix (opening or neck of the uterus) is stretched and the tissue contents of the uterus are removed. Intrauterine adhesions may form following a D&C performed for pregnancy complications, such as uterine bleeding following childbirth or miscarriage or, less commonly, for gynecologic problems that involve the uterus such as abnormal bleeding. Other, less common, possible causes of adhesion formation are infections of the uterine lining (endometritis), surgical removal of fibroids in the cavity of the uterus, cesarean sections, and endometrial ablation (a surgical procedure that is used to intentionally damage the uterine lining to make menstrual periods lighter or eliminate them entirely).

What symptoms are associated with Asherman syndrome?

A woman with intrauterine adhesions may have no obvious problems or symptoms. Many women, however, may experience menstrual abnormalities such as absent, light, or infrequent periods. Other women may be unable to achieve pregnancy or may experience recurrent miscarriages. They may also experience complications at the time of delivery due to abnormal implantation of the placenta (afterbirth). If the scar tissue partially or completely blocks the menstrual blood flow, Asherman syndrome can cause pelvic pain or painful menstrual periods.

How do you make a diagnosis of Asherman syndrome?

Asherman syndrome can be diagnosed by hysteroscopy, hysterosalpingogram (HSG), or saline sonohysterogram (SHG). Hysteroscopy is the most accurate method to evaluate intrauterine adhesions and is a procedure in which a thin, lighted telescope-like instrument is inserted through the cervix to allow the doctor to see directly inside the uterus. It can be performed in the office or may be done in the operating room. HSG and SHG are also

useful screening tests for intrauterine adhesions. HSG is an x-ray procedure during which a dye that can be seen on x-ray is infused into the uterine cavity so that the shape of the inside of the uterus can be seen. During a saline sonohysterogram (SHG), a salt water solution similar to normal body fluid is infused through the cervix into the uterus and a sonogram machine is used to see the uterine cavity. In both HSG and SHG, the adhesions are seen as "filling defects," spaces where the fluid does not flow freely. These office-based procedures do not require anesthesia, although non-steroidal anti-inflammatory medications (NSAIDs) may be used to decrease the cramping that may occur during the procedure.

How is Asherman syndrome treated?

Surgical treatment of intrauterine adhesions with hysteroscopic guidance is recommended. A special operating hysteroscope is used to cut the scar tissue. This is frequently done under anesthesia but, in some circumstances, may be performed in a physician's office. Following cutting of the adhesions, many surgeons recommend temporarily placing a device, such as a plastic catheter or balloon, inside the uterus to keep the walls of the uterus apart and to decrease the chance of adhesions reforming. Hormonal treatment with estrogen and sometimes NSAIDs and/or antibiotics are often prescribed after surgery to further reduce the chance that the adhesions will return. In severe cases, it may be necessary to have more than one surgery to remove adhesions and sometimes office hysteroscopy is used instead of the balloon as a treatment to help maintain a normal cavity.

Are there any long-term issues that I need to be concerned about?

Even after treatment, some patients continue to have difficulty with absent or infrequent periods. Pregnancies that occur after treatment are more likely to be complicated by miscarriage, preterm labor, third-trimester bleeding, and/or abnormal attachment of the placenta to the uterine wall. The chance of successful pregnancy after treatment correlates with the type and extent of the adhesions. After treatment, patients with mild-to-moderate adhesions usually experience return of normal menstrual function and have successful full-term pregnancy rates of approximately 70% to 80%. Alternatively, patients with severe adhesions or extensive destruction of the endometrial lining may have full-term pregnancy rates of only 20% to 40% or lower after treatment. Women with extensive damage to the endometrium that does not improve after treatment may consider other options such as adoption or in vitro fertilization (IVF) using a "gestational carrier," where another woman carries the pregnancy for the mother using the patient's eggs.

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