



Fact Sheet

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The Patient Education Website of the American Society for Reproductive Medicine

Intrauterine Adhesions

What are intrauterine adhesions?

The inside of the uterus is like a pocket with the front and back walls flat against each other. The pocket is lined with tissue called endometrium. During menstruation the superficial (topmost) 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. Asherman syndrome is the term used to describe adhesions inside the uterus. The 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 destruction of the inside of the uterus 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. Dilatation and curettage (D&C) is a common outpatient surgical procedure during which the cervix (neck of the uterus) is opened and the tissue contents of the uterus are emptied. 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. Other possible causes of adhesion formation are infections of the uterine lining (endometritis), removal of fibroids in the cavity of the uterus and endometrial ablation (a surgical procedure that is used to intentionally damage the uterine lining to eliminate menstrual periods or make periods lighter).

What symptoms are associated with Asherman syndrome?

A woman with intrauterine adhesions may have no obvious problems. 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. Less commonly, if the scar tissue blocks 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 sonohysterogram (SHG). Hysteroscopy is the most accurate method to evaluate intrauterine adhesions and is a procedure in which a thin, 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 useful screening tests for adhesions. HSG is an x-ray procedure during which a dye that can be seen on x-ray is placed into the uterine cavity so that the shape of the inside of the uterus can be seen. During a saline ultrasound (SHG), a salt 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 procedures do not require anesthesia, although non-steroidal anti-inflammatory medications (NSAIDs) may be used to decrease the cramping that occurs during the procedure.

How is Asherman syndrome treated?

Surgical removal of intrauterine adhesions with hysteroscopic guidance is recommended. A special operating hysteroscope is used to cut away the scar tissue. This is frequently done under anesthesia. Following removal of the adhesions, many surgeons recommend temporarily placing a device, such as a plastic catheter, inside the uterus to keep the walls of the uterus apart and to prevent adhesions from reforming. Hormonal treatment with estrogen and NSAIDs are frequently prescribed after surgery to lessen the chance of reformation of adhesions. In severe cases, more than one attempt at surgical removal of the adhesions may be necessary.

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

Even after treatment, many 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 (placenta accreta). 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% 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.

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