HEMATOMETRA
Blood In The Uterus

A collection or retention of blood in the uterus, affecting the patient’s fertility.

♀️ Diagnosis ☑️Female

Related Diagnoses:
Uterine malformations | Uterus duplex

About Hematometra

Hematometra is a condition involving collection or retention of blood or blood clots inside the uterus (Pic. 1). Hematometra develops when the uterus becomes distended with blood secondary to obstruction or atresia of the lower reproductive tract—the uterus, cervix or vagina—which would otherwise provide an outflow for menstrual blood.

It is most commonly caused by congenital (present at birth) abnormalities. These include imperforate hymen (a hymen without an opening, therefore obstructing the menstrual blood outflow) and transverse vaginal septum, a rare condition resulting from abnormal development of the vagina. Other causes are acquired, such as cervical stenosis (narrowing of the uterine cervix), intrauterine adhesions (scar formation inside the uterine cavity, also called Asherman’s syndrome), endometrial cancer (tumours arising from the mucous membrane lining the uterine cavity), and cervical cancer. Additionally, hematometra may develop as a complication of uterine or cervical surgery, after abortion or after female genital mutilation.

Hematometra typically presents as cyclic, cramping pain in the midline of the pelvis or lower abdomen. Patients may also report urinary frequency and urinary retention. Premenopausal women with hematometra often experience abnormal vaginal bleeding, including dysmenorrhea (pain during menstruation) or amenorrhea (lack of menstruation), while postmenopausal women are more likely to be asymptomatic. Due to the accumulation of blood in the uterus, patients may develop low blood pressure or a vasovagal response (vagal nerve stimulation, leading to depression in cardiovascular activity and blood pressure). When palpated, the uterus will typically feel firm and enlarged.

Although hematometra can often be diagnosed based purely on the patient’s history of amenorrhea and cyclic abdominal pain, as well as a palpable pelvic mass on examination, the diagnosis can be confirmed by ultrasound (Pic. 1), which will show blood pooled in the uterus and an enlargement of the uterine cavity.

The accumulation of blood in the uterine cavity may lead to several complications. The uterus may become distended, and rarely even compress the organs of the urinary tract, leading to urinary retention. Because of the blood retention, there is an increased risk of infection, and also, the patient may develop a vasovagal response and low blood pressure. If infection sets in, the uterus may become filled with pus instead, resulting in the condition called pyometra, and the infection can spread to abdominal cavity or the whole bloodstream.

Hematometra is usually treated by surgical cervical dilation to drain the blood from the uterus. Other treatments target the underlying cause of the hematometra; for example, a hysteroscopy may be required to resect adhesions that have developed following a previous surgery. If the cause of the hematometra is unclear, a biopsy of endometrial tissue can be taken to test for the presence of a neoplasm (cancer). Antibiotics may be given as prophylaxis against the possibility of infection.
Associated diseases

- abortion
- cervical cancer
- endometrial cancer
- imperforate hymen
- transverse vaginal septum
- Asherman’s syndrome
- pyometra

Complications

Infection

The collection or retention of blood in the uterine cavity presents a potential basis for bacterial growth, leading to inflammation and accumulation of pus in the uterine cavity, a condition called pyometra. If left untreated, the infection may spread to the abdominal cavity (leading to peritonitis, the inflammation of the membrane lining the inside of the abdominal cavity) or to the bloodstream (causing sepsis).

Enlargement of the uterus

The blood may cause the uterus to become enlarged and distended, sometimes compressing other organs in its vicinity. Compression of the urinary bladder may result, leading to more frequent urination and urinary retention.

Risk factors

- endometrial cancer
- cervical cancer
- intrauterine adhesions
- uterine or cervical surgery
- abortion
- cervical stenosis

Impact on fertility

The effect that accumulation of blood in the uterus may have on fertility varies depending on the cause of the condition. If the hematometra is caused by obstruction of the cervical canal by adhesions (scar tissue) or remnants of foetal membranes after abortion, it can usually be surgically managed and fertility can be successfully restored. However, if hematometra occurs as a symptom of cervical or endometrial cancer, it usually means the cancer is advanced and the treatment often includes surgical removal of the cervix or the uterus, leading to infertility.

Prevention

The risk of hematometra is significantly lower in women, who have not undergone cervical or uterine surgery, female genital mutilation, and haven’t suffered from cervical or endometrial cancer. These events all increase the risk of forming adhesions in the genital tract, creating an obstruction for the menstrual blood outflow and potentially giving rise to hematometra.

In women with imperforate hymen, accumulation of mucus and menstrual blood in the uterus and in the vagina (hematokolpos) may be prevented by surgical reconstruction of the opening in the hymen.

Symptoms

- cyclic cramping pain
- abnormal vaginal bleeding
- amenorrhea (absence of menstrual bleeding)
• dysmenorrhea (painful menstruation)
• low blood pressure
• enlarged uterus on palpation
• urinary retention

### Therapies

#### Self therapy

There is no definitive self-therapy technique for the condition.

#### Conventional medicine

The treatment of hematometra depends on the cause of the condition. In patients with an obstruction of the uterine cervix or in the uterine cavity, it is usually treated by surgical dilation to drain the blood from the uterus. Other approaches may be required to remove the cause of the obstruction, mostly adhesions. Antibiotics are used as prophylaxis against the possibility of infection.

##### Pharmacotherapy

#### Antibiotics

Antibiotics are usually given as prophylaxis against the possibility of infection, which readily thrives in the accumulated blood and tissue residues.

#### Anti-inflammatory drugs

Taking inflammation-supressing drugs, like NSAIDs (non-steroidal anti-inflammatory drugs) can relieve the cramping pain often felt by patients with this condition.

#### Surgical therapy

##### Surgical dilation

Hematometra is usually treated by surgical dilation to drain the blood from the uterus. This treatment is effective for patients who develop hematometra because of stenosis (narrowing) or obstruction of the cervix or the uterine cavity.

##### Targeted surgical therapy

Other surgical approaches target the underlying cause of the hematometra. These include the resection of adhesions, often developed after a previous operation, blocking the flow of menstrual blood, or surgical removal of a tumour. If the cause of the hematometra is unclear, a biopsy of endometrial tissue can be taken to test for the presence of a neoplasm (cancer).

#### Assisted reproduction

Depending on the underlying cause, hematometra may be a major obstacle in achieving pregnancy. If conservative medical treatments fail to achieve a pregnancy, the physician may suggest the patient to use the methods of assisted reproduction.

Assisted reproductive technology (ART) is the technology used to achieve pregnancy in procedures such as fertility medication, artificial insemination, in vitro fertilization and surrogacy. It is reproductive technology used primarily for infertility treatments, and is also known as fertility treatment. It mainly belongs to the field of reproductive endocrinology and infertility, and may also include intracytoplasmic sperm injection (ICSI) and cryopreservation. Some forms of ART are also used with regard to fertile
couples for genetic reasons (preimplantation genetic diagnosis). ART is also used for couples who are discordant for certain communicable diseases; for example, HIV to reduce the risk of infection when a pregnancy is desired.

IVF and ART generally start with stimulating the ovaries to increase egg production. Most fertility medications are agents that stimulate the development of follicles in the ovary. Examples are gonadotropins and gonadotropin releasing hormone. After stimulation, the physician surgically extracts one or more eggs from the ovary, and unites them with sperm in a laboratory setting, with the intent of producing one or more embryos. Fertilization takes place outside the body, and the fertilized egg is reinserted into the woman's reproductive tract, in a procedure called embryo transfer.

Infertile couples may also resort to egg donation or embryo donation when the female partner cannot have genetic children because her own eggs cannot generate a viable pregnancy. Surrogacy via a gestational carrier is also an option when a patient's medical condition prevents a safe pregnancy, when a patient has ovaries but no uterus due to congenital absence or previous surgical removal, and where a patient has no ovaries and is also unable to carry a pregnancy to full term.

The rate of success for IVF is correlated with a woman’s age. More than 40 percent of women under 35 succeed in giving birth following IVF, but the rate drops to a little over 10 percent in women over 40.

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**Find more about related issues**

### Diagnoses

**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](http://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](http://www.fertilitypedia.org/therapy/diag/uterus-duplex)

### 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](http://www.fertilitypedia.org/edu/therapies/egg-donation)

**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](http://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](http://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](http://www.fertilitypedia.org/edu/therapies/standard-ivf)
Pic
Transvaginal ultrasound of a hematometra after childbirth, seen as the darker area within the uterus.

Sources

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