HYDROSALPINX
Hydrops Tubae

A hydrosalpinx is an abnormal pouch containing liquid in a fallopian tube.

♀ Diagnosis  ♂ Female

Related Diagnoses:
Fallopian tube blockage  |  Endometriosis  |  Hematosalpinx  |  Pyosalpinx  |  Endometrial cancer  |  Pelvic Inflammatory Disease  |  Ovarian cancer  |  Tubal phimosis  |  Pelvic tuberculosis  |  Chlamydia infection  |  Gonorrhea infection

About Hydrosalpinx

A hydrosalpinx is a distally blocked fallopian tube filled with serous or clear fluid. The blocked tube may become substantially distended giving the tube a characteristic sausage-like or retort-like shape. The condition is often bilateral and the affected tubes may reach several centimeters in diameter. The blocked tubes cause infertility.

The major cause for distal tubal occlusion is pelvic inflammatory disease (PID), usually as a consequence of an ascending infection by chlamydia or gonorrhea. However, not all pelvic infections will cause distal tubal occlusion. Tubal tuberculosis is an uncommon cause of hydrosalpinx formation. While the ciliae of the inner lining (endosalpinx) of the fallopian tube beat towards the uterus, tubal fluid is normally discharged via the fimbriated end into the peritoneal cavity from where it is cleared. If the fimbriated end of the tube becomes agglutinated, the resulting obstruction does not allow the tubal fluid to pass; it accumulates and reverts its flow downstream, into the uterus, or production is curtailed by damage to the endosalpinx.

This tube then is unable to participate in the reproductive process: sperm cannot pass, the egg is not picked up, and fertilization does not take place.

Other causes of distal tubal occlusion include adhesion formation from surgery, endometriosis, and cancer of the tube, ovary or other surrounding organs.

Diagnosis
1. Ultrasound
2. Hysterosalpingogram (HSG)
3. Laparoscopy

Hydrosalpinx may be diagnosed using ultrasonography as the fluid filled elongated and distended tubes display their typical echoluent pattern. However, a small hydrosalpinx may be missed by sonography. During an infertility work-up a hysterosalpingogram (HSG), an X-ray procedure that uses contrast agent to image the fallopian tubes, shows the retort-like shape of the distended tubes and the absence of spillage of the dye into the peritoneum. If, however, there is a tubal occlusion at the utero-tubal junction, a hydrosalpinx may go undetected. When a hydrosalpinx is detected by an HSG it is prudent to administer antibiotics to reduce the risk of reactivation of an inflammatory process.

When laparoscopy is performed, the surgeon may note the distended tubes, identify the occlusion, and may also find associated adhesions affecting the pelvic organs. Laparoscopy not only allows for the diagnosis of hydrosalpinx, but also presents a platform for intervention.

A fallopian tube filled with blood is a hematosalpinx, and with pus a pyosalpinx.

http://self.gutenberg.org/articles/Hydrosalpinx
http://www.digplanet.com/wiki/Hydrosalpinx#Prevention
Associated disease

A hydrosalpinx is most commonly associated with an ectopic pregnancy, isolated tubal torsions and acute infection.

Complications

For most of the past century patients with tubal infertility due to hydrosalpinx underwent tubal corrective surgery to open up the distally occluded end of the tubes (salpingostomy) and remove adhesions (adhesiolysis). Unfortunately, pregnancy rates tended to be low as the infection process often had permanently damaged the tubes, and in many cases hydrosalpinges and adhesions formed again.

http://www.digplanet.com/wiki/Hydrosalpinx#Prevention

Risk factors

- pelvic inflammatory disease (PID)

Impact on fertility

The fallopian tubes are conduits through which the egg travels toward the uterus, and it is in these tubes that most fertilization happens. So if hydrosalpinx affects both tubes, infertility can be the result. The leakage of hydrosalpinx fluid into the endometrial cavity was supposed to be the major cause for impaired fertility. However, the underlying mechanisms of hydrosalpinx fluids on implantation and ongoing pregnancy were not fully understood and remain controversial regarding its toxicity. Tubal phimosis refers to a situation where the tubal end is partially occluded, in this case fertility is impeded, and the risk of an ectopic pregnancy is increased.

http://self.gutenberg.org/articles/Hydrosalpinx
http://health.ccm.net/faq/3913-hydrosalpinx-definition
http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0078446

Prevention

As pelvic inflammatory disease is the major cause of hydrosalpinx formation, steps to reduce sexually transmitted diseases will reduce incidence of hydrosalpinx. Also, as hydrosalpinx is a sequel to a pelvic infection, adequate and early antibiotic treatment of a pelvic infection is called for.

http://www.digplanet.com/wiki/Hydrosalpinx#Prevention

Symptoms

Symptoms can vary. Some patients have lower often recurring abdominal pain or pelvic pain, while others may be asymptomatic. As tubal function is impeded, infertility is a common symptom. Patients who are not trying to get pregnant and have no pain, may go undetected.

IUDs (an intrauterine device is a small contraceptive device), endometriosis, and abdominal surgery sometimes are associated with the problem. As a reaction to injury, the body rushes inflammatory cells into the area, and inflammation and later healing result in loss of the fimbria and closure of the tube. These infections usually affect both fallopian tubes, and although a hydrosalpinx can be one-sided, the other tube on the opposite side is often abnormal. By the time it is detected, the tubal fluid usually is sterile, and does not contain an active infection.

http://self.gutenberg.org/articles/Hydrosalpinx
https://en.wikipedia.org/wiki/Intrauterine_device
**Therapies**

**Self therapy**

**Self/alternative therapy**

**Chinese medicine**

Traditional Chinese medicine can treat chronic pelvic inflammatory disease and salpingitis that reached the effect of eliminating hydrosalpinx and curing infertility.

Herbal medicine named Fuyan Pill is a new option for women whose infertility is caused by tubal blockage and hydrosalpinx. Fuyan Pill is a good option to help one eliminate inflammation and expel the abnormal odor of the discharge.

**Conventional medicine**

For most of the past century patients with tubal infertility due to hydrosalpinx underwent tubal corrective surgery to open up the distally occluded end of the tubes (salpingostomy) and remove adhesions (adhesiolysis). Unfortunately, pregnancy rates tended to be low as the infection process often had permanently damaged the tubes, and in many cases hydrosalpinges and adhesions formed again. Further, ectopic pregnancy is a typical complication. Surgical interventions can be done by laparotomy or laparoscopy.

Non-infertile patients who suffer from severe chronic pain due to hydrosalpinx formation that is not relieved by pain management may consider surgical removal of the affected tube(s) (salpingectomy) or even a hysterectomy with removal of the tubes, possibly ovaries.

- **Surgical therapy**

  Surgical cure can be performed through two operative procedures.

  These are:

  - **Salpingostomy**

    It involves a surgical incision in the fallopian tube. This process is performed to eliminate an tubal pregnancy or to repair a damaged fallopian tube.

  - **Salpingectomy**

    Salpingectomy involves removing part of your fallopian tube. Salpingectomy has traditionally been done via a laparotomy; more recently however, laparoscopic salpingectomies have become more common as part of minimally invasive surgery. The tube is severed at the point where it enters the uterus and along its mesenteric edge with hemostatic control. It is considered a better treatment than other laparoscopic procedures for hydrosalpinx, and it is frequently done before an attempt at in vitro fertilization.


**Assisted reproduction**

In vitro fertilization and embryo transfer (IVF-ET) is the best option for patients with hydrosalpinx. However, if hydrosalpinges is not pre-treated, the therapeutic outcomes of IVF-ET would be
compromised. With the advent of IVF which bypasses the need for tubal function a more successful
treatment approach has become available for women who want to conceive. IVF has now become the
major treatment for women with hydrosalpinx to achieve a pregnancy. Several studies have shown that
IVF patients with untreated hydrosalpinx have lower conception rates than controls and it has been
speculated that the tubal fluid that enters the endometrial cavity alters the local environment or affects
the embryo in a detrimental way.

Therefore, many specialists advocate that prior to an IVF attempt, the hydrosalpinx should be
removed.

http://www.digplanet.com/wiki/Hydrosalpinx#Prevention

https://www.scienceopen.com/document/vid/68537b0e-7574-4025-90b8-b0eab29bb8f6

Find more about related issues

Diagnoses

**Fallopian tube blockage**
An obstruction prevents the egg or sperm from traveling down the tube, thus making fertilization impossible.
Learn more at: www.fertilitypedia.org/therapy/diag/fallopian-tube-blockage

**Endometriosis**
A state in which pieces of the tissue alike to the lining of the uterus (endometrium) grow in other parts of the body.
Learn more at: www.fertilitypedia.org/therapy/diag/endometriosis

**Hematosalpinx**
Hematosalpinx is a medical condition involving bleeding into the fallopian tube.
Learn more at: www.fertilitypedia.org/therapy/diag/hematosalpinx

**Pyosalpinx**
A distally blocked Fallopian tube filled with pus.
Learn more at: www.fertilitypedia.org/therapy/diag/pyosalpinx-do-rf

**Endometrial cancer**
Cancer that arises from the endometrium, the lining of the uterus.
Learn more at: www.fertilitypedia.org/therapy/diag/endometrial-cancer

**Pelvic Inflammatory Disease**
Infection of the upper part of the female reproductive system and a common complication of some sexually transmitted diseases.
Learn more at: www.fertilitypedia.org/therapy/diag/pelvic-inflammatary-disease-do-rf

**Ovarian cancer**
A type of cancer in which abnormal cells begin to grow in one or both of a woman’s ovaries.
Learn more at: www.fertilitypedia.org/therapy/diag/ovarian-cancer

**Tubal phimosis**
The type of blockage that affects the part of the fallopian tube end towards the ovary.
Learn more at: www.fertilitypedia.org/therapy/diag/tubal-phimosis
Pelvic tuberculosis
An infectious disease caused by the bacterium Mycobacterium tuberculosis and one of cause female infertility.
Learn more at: www.fertiltypedia.org/therapy/diag/pelvic-tuberculosis

Chlamydia infection
A common sexually transmitted disease (STD) caused by the Chlamydia trachomatis bacteria that can lead to serious reproductive morbidity.
Learn more at: www.fertiltypedia.org/therapy/diag/chlamydia-infection

Gonorrhea infection
A sexually transmitted infection caused by the bacterium Neisseria gonorrhoeae.
Learn more at: www.fertiltypedia.org/therapy/diag/gonorrhea-infection

❤️ Organs

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.fertiltypedia.org/edu/organs/fallopian-tubes

Ovary
The ovum-producing organs of the internal female reproductive system
Learn more at: www.fertiltypedia.org/edu/organs/ovary

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.fertiltypedia.org/edu/organs/uterus

⋈ Reproductive cells

Oocyte
A female germ cell involved in reproduction.
Learn more at: www.fertiltypedia.org/edu/reproductive-cells/oocyte

똑 Reproductive functions

Fertilization
The fusion of an ovum with a sperm to initiate the development of a new individual organism.
Learn more at: www.fertiltypedia.org/edu/reproductive-functions/fertilization

Foliculogenesis
Development of ovarian follicles from primordial to tertiary under the stimulation of gonadotropins.
Learn more at: www.fertiltypedia.org/edu/reproductive-functions/foliculogenesis

Oogenesis
The process of the maturation of the female gametes through the meiotic division.
Learn more at: www.fertiltypedia.org/edu/reproductive-functions/oogenesis

Ovulation
The release of egg(s) from the ovaries.
Learn more at: www.fertiltypedia.org/edu/reproductive-functions/ovulation

⚠️ Risk factors
Abdominal surgery
Surgical procedures that involve opening the abdomen.
Learn more at: www.fertilitypedia.org/therapy/rf/abdominal-surgery

Ectopic pregnancy
A complication of pregnancy in which the embryo attaches outside the uterus.
Learn more at: www.fertilitypedia.org/therapy/rf/ectopic-pregnancy

Intrauterine device
A small birth control device that is inserted into a woman’s uterus to avoid unintended pregnancy.
Learn more at: www.fertilitypedia.org/therapy/rf/intrauterine-device

Sexually transmitted diseases
Illnesses that have a significant probability of transmission between humans by means of human sexual behavior and that may impact fertility.
Learn more at: www.fertilitypedia.org/therapy/rf/sexually-transmitted-diseases

 Symptoms

Abdominal pain
A pain that occurs between the chest and pelvic regions.
Learn more at: www.fertilitypedia.org/edu/symptoms/abdominal-pain

Chronic pelvic pain
Pain in the area of the pelvis, that lasts more than six months.
Learn more at: www.fertilitypedia.org/edu/symptoms/chronic-pelvic-pain-1

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

 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

Fallopian tubes removal
Surgical removal of a Fallopian tube(s).
Learn more at: www.fertilitypedia.org/edu/therapies/fallopian-tubes-removal-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
Traditional Chinese medicine
A broad range of medicine practices sharing common concepts which have been developed in China and are based on a tradition of more than 2000 years.
Learn more at: www.fertilypedia.org/edu/therapies/traditional-chinese-medicine