

# FALLOPIAN TUBE DISORDERS

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# SALPINGITIS



## What is Salpingitis?

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- ❑ Infection of the fallopian tube is called salpingitis.
- ❑ The following facts are to be borne in mind while dealing with salpingitis:
  - ✓ The infection is usually polymicrobial in nature
  - ✓ Both the tubes are effected
  - ✓ Ovaries are usually involved in the inflammatory process and as such, the terminology of salpingoophoritis is preferred.
  - ✓ Tubal infection almost always affects adversely the future reproductive function.

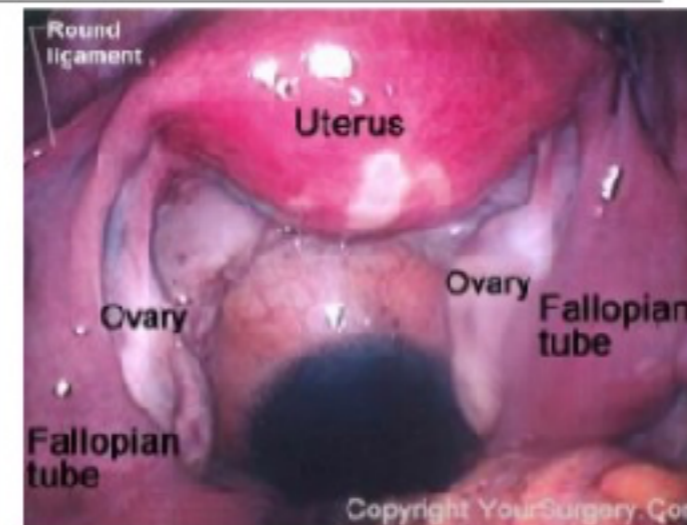
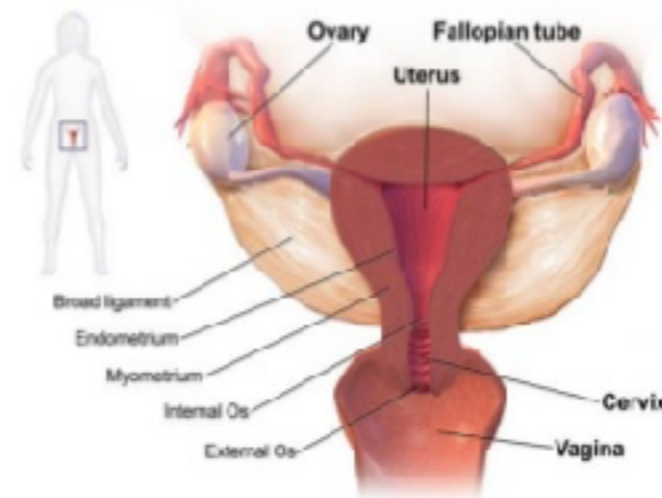


# Anatomy of Fallopian Tube

- ❑ The uterine tubes are paired structures, measuring about 10cm (4") and are situated in the medial three-fourth of the upper free margin of the broad ligaments.
- ❑ Each tube has got two openings, one communicating with the lateral angle of the uterine cavity, called uterine opening and measures 1 mm in diameter, the other is on the lateral end of the tube, called pelvic opening or abdominal ostium and measures about 2mm in diameter.



## Anatomy of Female Reproductive System

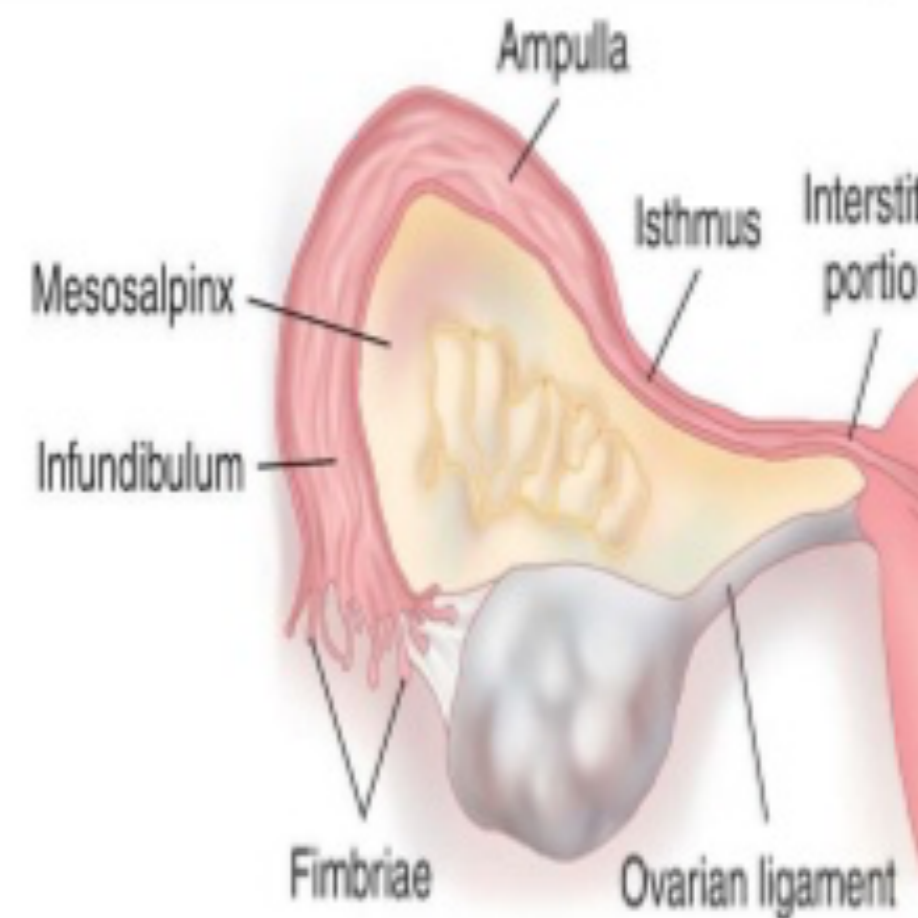




# Anatomy of Fallopian Tube

There are four parts, from medial to lateral, they are—

1. **Intramural or interstitial lying** in the uterine wall and measures 1.25 cm (1/2") in length and 1 mm in diameter;
2. **Isthmus** almost straight and measures about 2.5 cm (1") in length and 2.5 mm in diameter;
3. **Ampulla**—tortuous part and measures about 5 cm (2") in length which ends in wide;
4. **Infundibulum** measuring about 1.25 cm (1/2") long with a maximum diameter of 6 mm. The abdominal ostium is surrounded by a number of radiating fimbriae, one of these is longer than the rest and is attached to the outer pole of the ovary called ovarian fimbria





# Anatomy of Fallopian Tube

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❖ **Functions :** The important functions of the tubes are—

- (1) transport of gametes,
- (2) to facilitate fertilization, and
- (3) survival of zygote through its secretion.

❑ **Blood supply:** Arterial supply is from the uterine and ovarian. Venous drainage is through the pampiniform plexus into the ovarian veins.

❑ **Nerve supply:** The nerve supply is derived from the uterine and ovarian nerves. The tube is very much sensitive to handling.



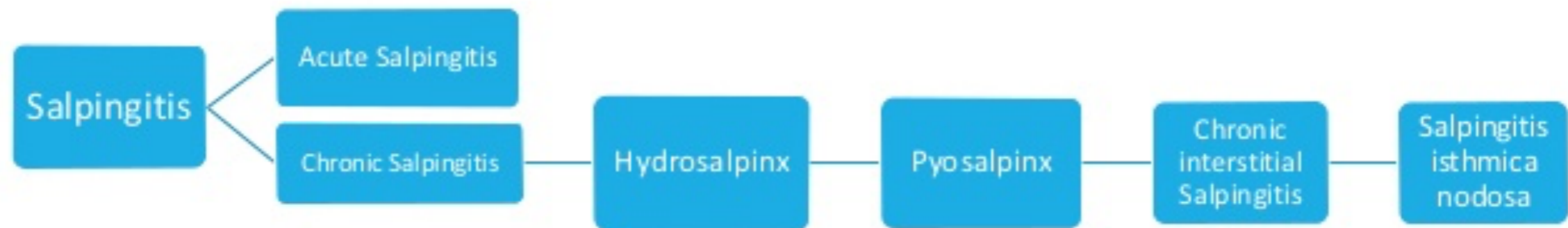
# Etiology

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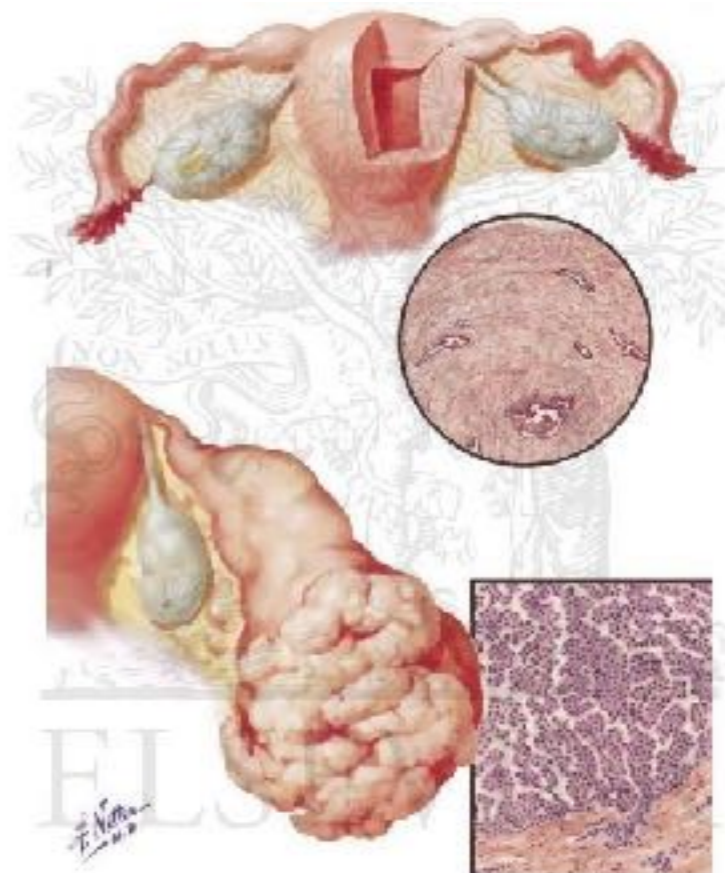
- I. Ascending infection from the uterus, cervix and vagina.  
Pyogenic organisms/ Sexually transmitted infections (STIs).
- II. Direct spread from the adjacent infection. One or both the tubes are affected in appendicitis, diverticulitis, or following pelvic peritonitis. The organisms are usually *E. coli* or *Streptococcus fecalis*. *Bacteroides fragilis* is too often involved whenever abscess is formed.
- III. Tubercular



# Types of Salpingitis



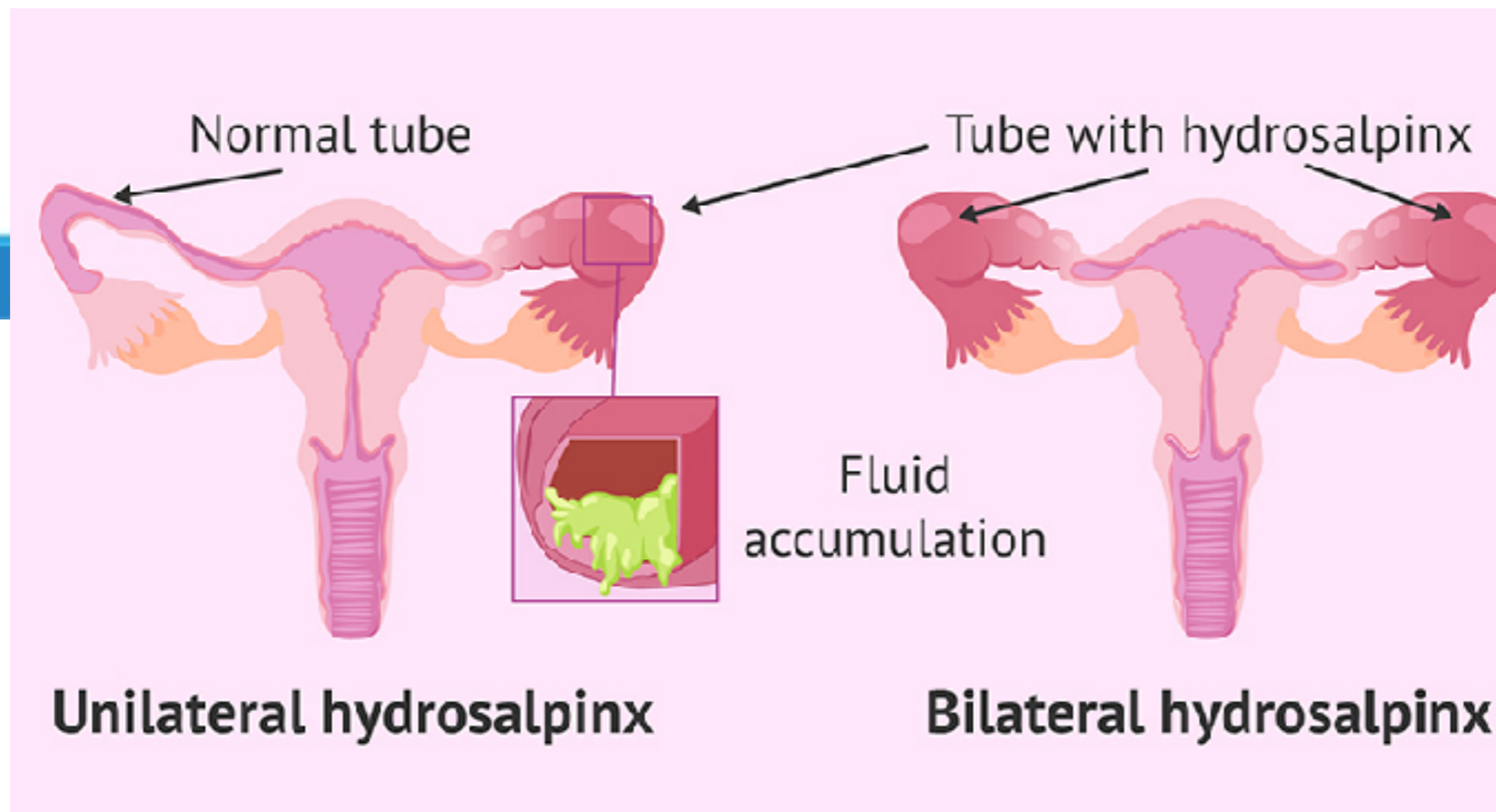
CASE PRESENTATION: SALPINGITIS HYDROSALPINX





# Hydrosalpinx

- ❑ Collection of mucus secretion into the fallopian tube is called hydrosalpinx.
- ❑ Hydrosalpinx is also considered as the end stage of pyosalpinx when the pus becomes liquefied to make the fluid clear.

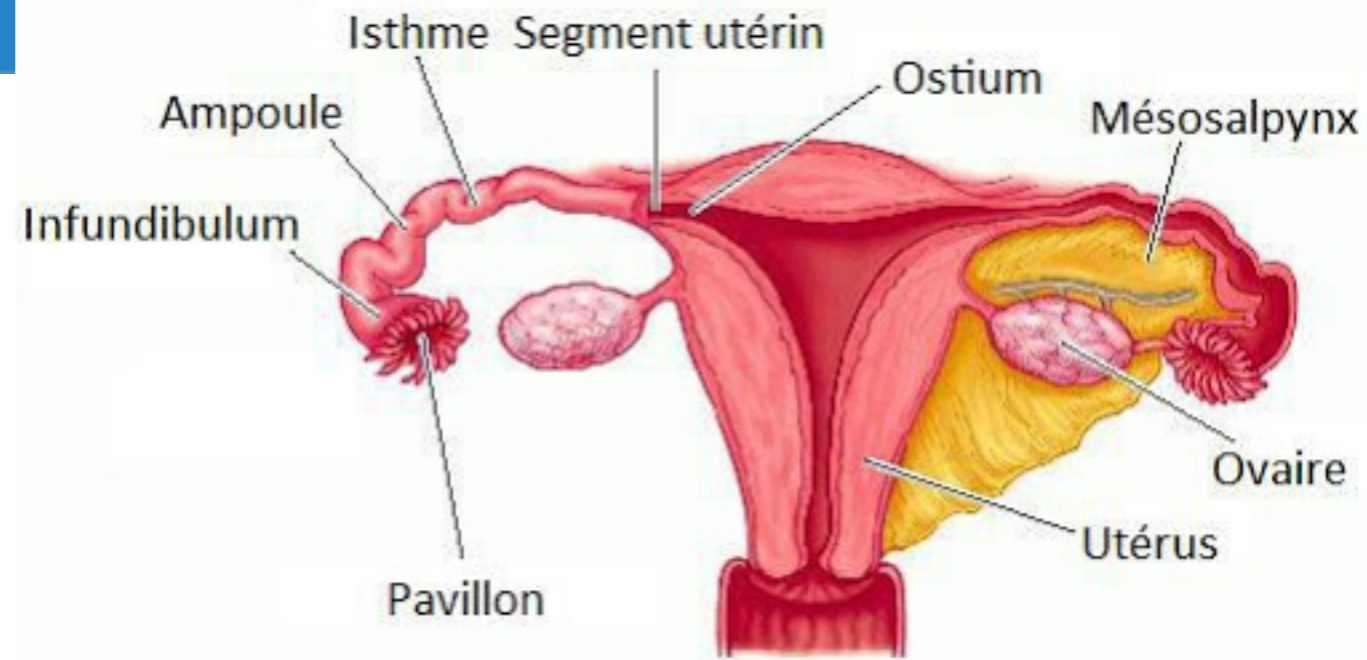






# Pathogenesis

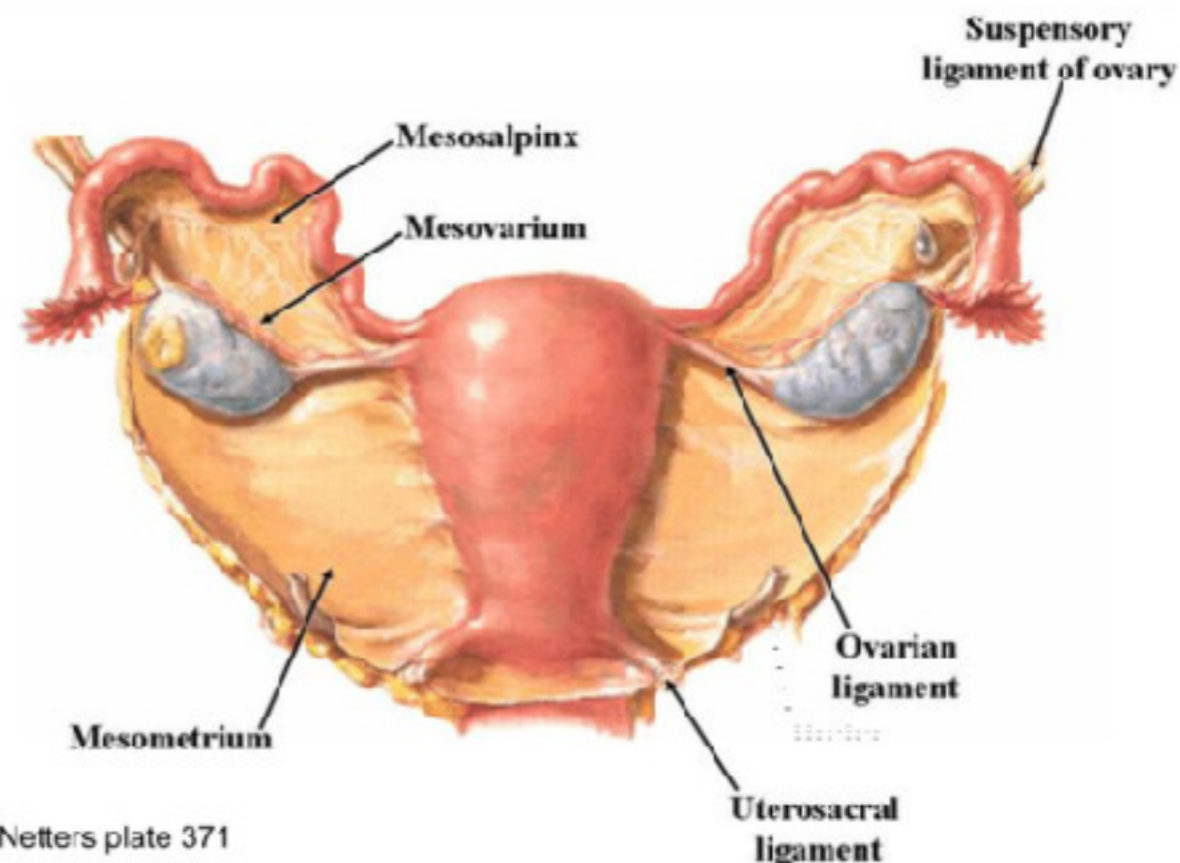
- ❑ It is usually due to the end result of repeated attacks of mild endosalpingitis by pyogenic organisms of low virulence but highly irritant. The organisms involved are Staphylococcus, E. coli, Gonococcus, Chlamydia trachomatis, etc.
- ❑ During initial infection, the fimbriae are edematous and indrawn with the serous surface, adhering together to produce closure of the abdominal ostium.
- ❑ The uterine ostium gets closed by congestion. The secretion is pent up to make the tube distended. The distension is marked on the ampullary region than the more rigid isthmus.





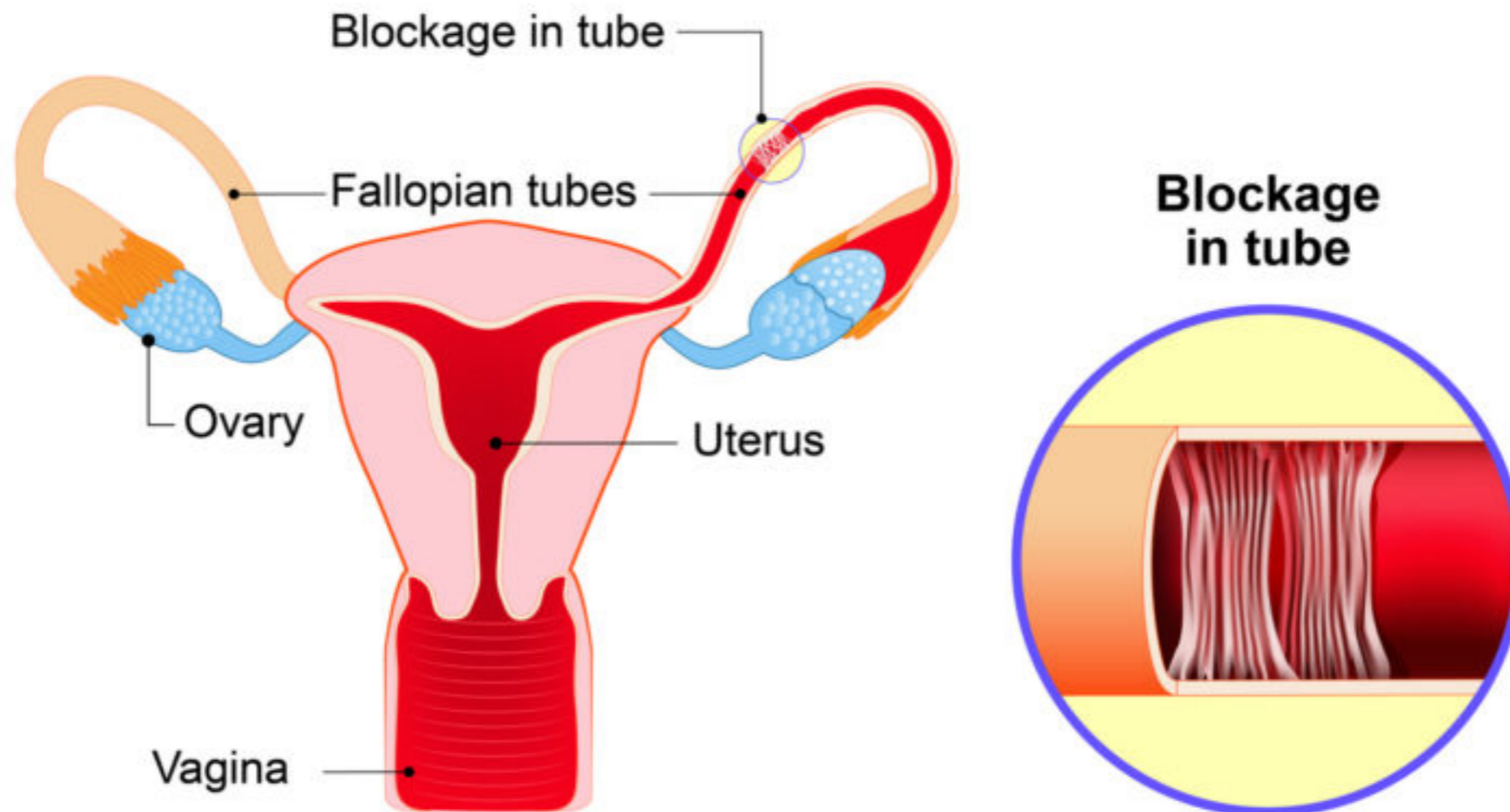
# Pathogenesis

- ❑ As the mesosalpinx is fixed, the resultant distension makes the tube curled and looks 'retort'-shaped. The wall is smooth and shiny containing clear fluid inside, which is usually sterile.
- ❑ The uterine ostium is not closed anatomically, thus favors repeated infection. At times, there is intermittent discharge of the fluid into the uterine cavity (intermittent hydrosalpinx or hydrops tubal profluens).



# HYDROSALPINX/BLOCKED FT

## Fallopian tube obstruction





# Symptoms

Often, cases of salpingitis are asymptomatic. They may be caught during a regular pelvic exam. When symptoms do appear, they typically begin after period, and can include:

- Pelvic pain, especially during ovulation and menstruation
- Bloating
- Changes in the color or smell of vaginal discharge
- Lower back pain
- Fever
- Nausea or vomiting
- Painful intercourse

CASE PRESENTATION: SALPINGITIS, HYDROSALPINX



## Diagnosis-Clinical Examination



Depending on tubal diameter, hydrosalpinx may be mild <11 mm; moderate 15-30 mm; severe > 30 mm

Color Doppler scan (TV) showing ovary and the tube with hydrosalpinx change

## HYDROSALPINX

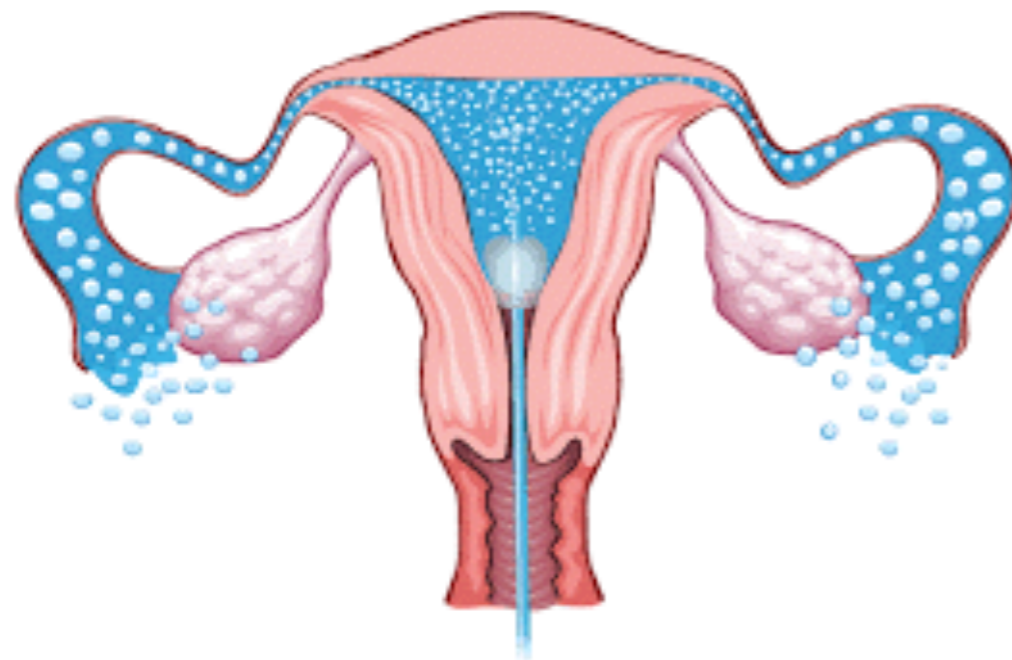


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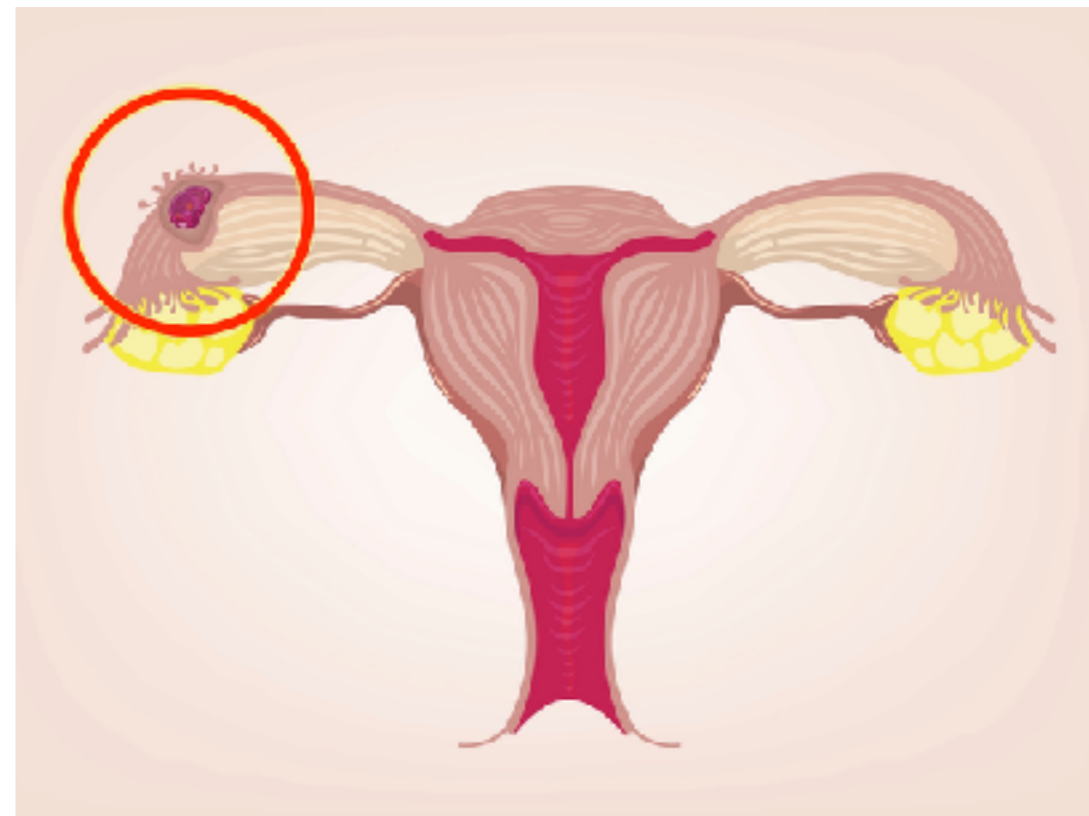


## Diagnosis-Clinical Examination

- ❑ An HSG—a special kind of x-ray—can show tubal blockages.
- ❑ To determine if the blockage is a hydrosalpinx, a **sonohysterosalpingography** may be needed. This procedure involves passing saline fluid and sterile air through the cervix and into the uterus. Then transvaginal ultrasound is used to visualize the reproductive organs.
- ❑ Ultrasound and Color Doppler (TVS): Sausage-shaped complex cystic structure with reduced resistance index (RI) in the adnexal region is suggestive of the diagnosis.



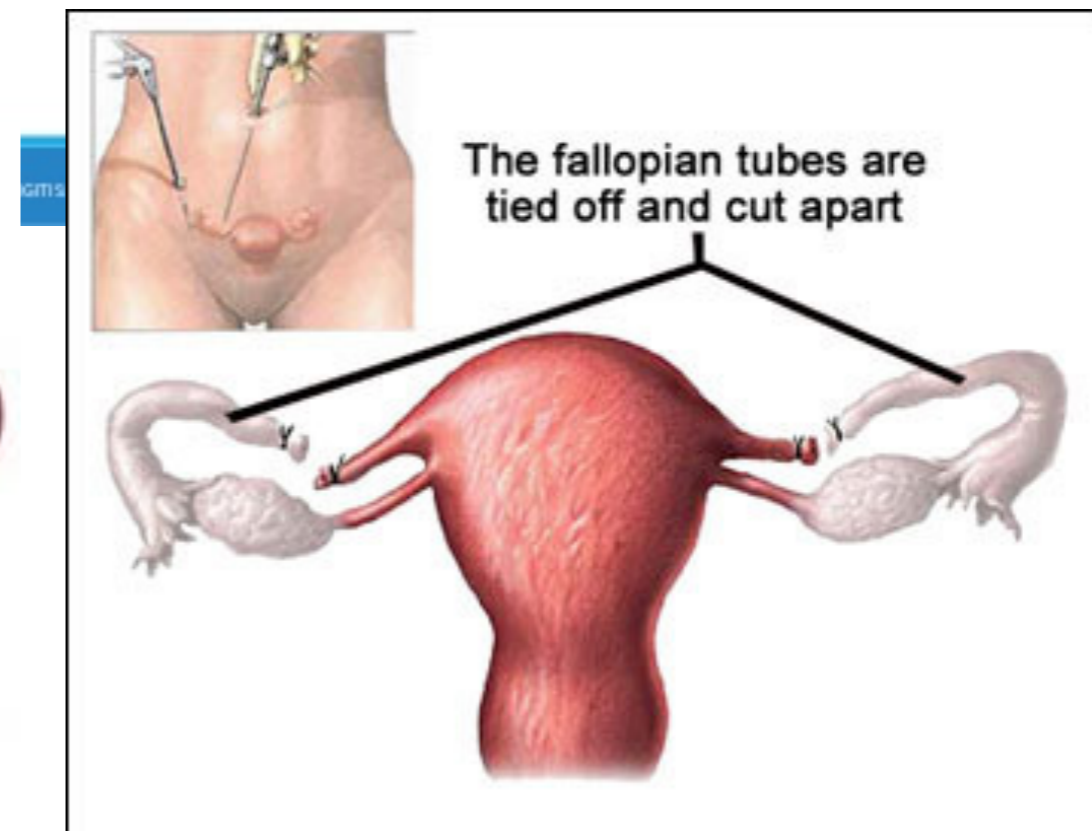
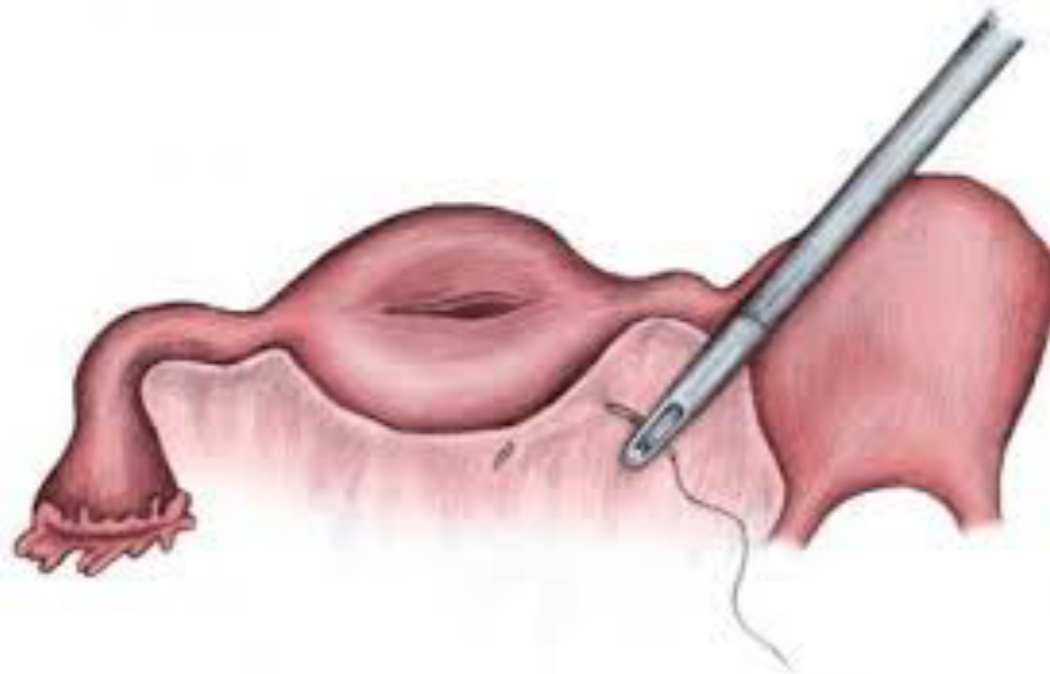
- CHRONIC PELVIC PAIN
- CHRONIC ABDOMINAL PAIN
- TRANSMISSION
- SCARRING
- TUBO OVARIAN ABSCESS
- INFERTILITY
- RISK OF ECTOPIC PREGNANCY
- 





# Treatment

- ❑ Surgery (Salpingectomy) is the most common treatment for hydrosalpinx, with IVF treatment after to aid in conception. Most often, the fallopian tube is removed completely. Depending on the root cause of the hydrosalpinx, surgery may also involve removal of other adhesions, scar tissue, or endometrial growths.
- ❑ If PID is responsible for the hydrosalpinx, antibiotics can be used to treat lingering infections.



# PARATUBAL CYST

A paratubal cyst is an encapsulated, fluid-filled sac.

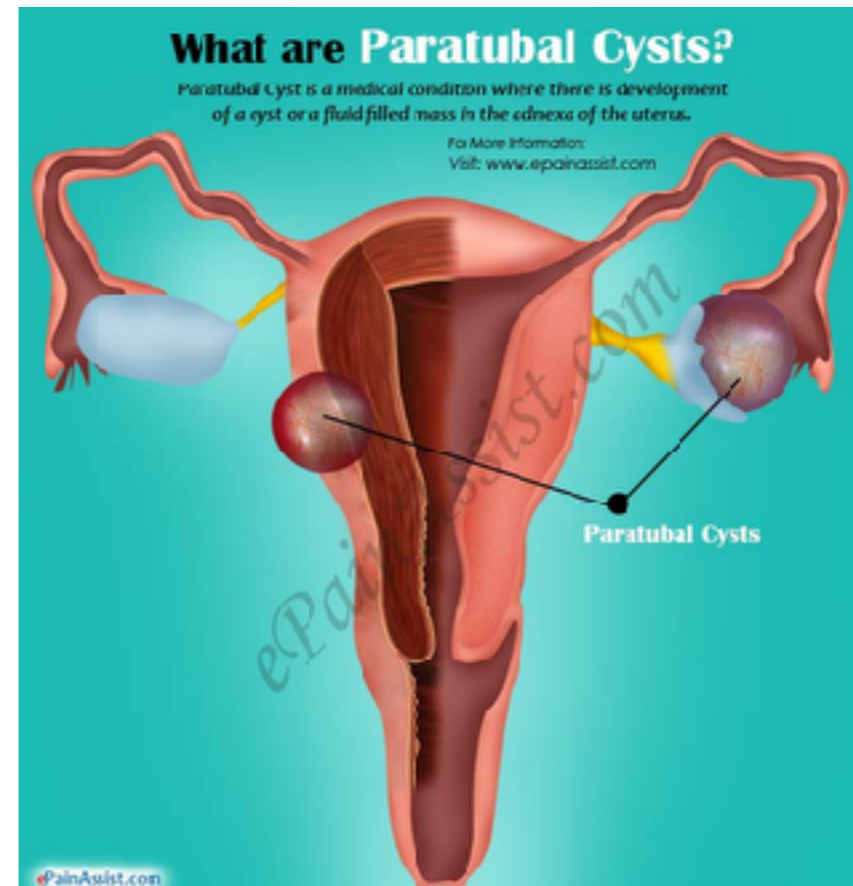
They're sometimes referred to as paraovarian cysts.

This type of cyst forms near an ovary or fallopian tube, and won't adhere to any internal organ.

These cysts often dissolve on their own, or go undiagnosed, so their origin is unknown.

Small, paratubal cysts are common in women between the ages of 30 and 40.

Enlarged cysts are more common in girls and younger women.





## What are the symptoms?

- Paratubal cysts are typically small in size, ranging from two to 20 millimeters in diameter.
- When they remain that size, they're usually asymptomatic. It may discover during a gynecological exam or unrelated surgical procedure
- Large, ruptured, or twisted para tubal cysts can cause pelvic or abdominal pain.



- **Pelvic ultrasound or abdominal ultrasound :**

- These **medical imaging tests** use ultrasonic frequency vibrations to transmit visual images of the pelvic region to a computer screen.

- **MRI. :**

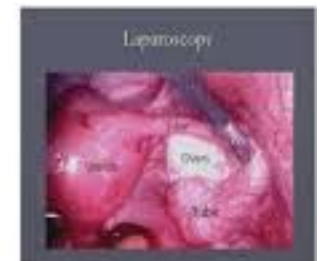
- **This test** helps your doctor determine whether a cyst is malignant.
- It may also be used to follow a cyst's growth.

- **Blood tests :**

- If malignancy is suspected, may order blood tests, such as a complete blood count (CBC) and tumor marker test.

- **Laparoscopy :**

- Paratubal cysts can look similar to ovarian cysts on ultrasound, may also suggest this surgical test.
- A diagnostic laparoscopy requires a small incision in the abdomen.
- doctor will insert a tube, which has a tiny video camera attached to its tip, into the incision.
- This allows your doctor to see your entire pelvic region.



# Surgical management

- **CYSTECTOMY**
- **LAPAROSCOPY**
- This procedure requires a small abdominal incision. It may be done under a local anesthetic or general anesthesia.
- **LAPAROTOMY** : This procedure is more invasive, requiring a large abdominal incision.

