



University of Baghdad

College of Medicine

2022-2023

Title: Laparoscopy and hysteroscopy

Grade: 5th. grade

Module: women health

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Objectives

- define laparoscopy
- Discuss the importance of training
- Describe indications and how to perform laparoscopy and its complications.
- Define hysteroscopy, indications and complications



The gynaecologic surgeon should have a high level of training during residency, followed by an ongoing commitment to retraining and retooling as effective procedures are added or substituted for outdated Ones.

Before any procedure or surgery begins, the most appropriate option (when more than one exists) for an individual patient must be selected, with optimal patient involvement in the decision-making process included as part of informed consent



THE PREPARED CHECKLIST

1. P is the procedure
2. R is the reason or indication
3. E is the expectation
4. P is the preference that the patient may have (e.g., to avoid
5. surgery or regarding the side effects of medication)
6. A is the alternative or alternatives
7. R is the risk or risks
8. E is the expense (hospital costs and surgeon's fees)
9. D is the decision whether or not to perform the procedure

Credentialing, Privileging, and Ongoing Training



The rapid introduction of new technologies can present a challenge to the surgeon, who will need to keep up with the most advanced procedures.

After a surgeon's credentials (diplomas, training certificates, and licenses) have been properly verified, a useful classification for the purpose of privileging stratifies procedures into the following:



- Level 1: procedures not requiring additional training after residency (e.g., dilation and curettage [D&C], cervical conization, adnexal excision, and abdominal or vaginal hysterectomy)
- Level 2: procedures requiring additional training(e.g., laparoscopic myomectomy)
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Level 1: procedures not requiring additional training after residency (e.g., dilation and curettage [D&C], cervical conization, adnexal excision, and abdominal or vaginal hysterectomy)

Level 2: procedures requiring additional training (e.g., laparoscopic myomectomy)

Level 3: procedures requiring advanced training and special skills generally acquired during subspecialty training (e.g. Radical hysterectomy, tubal anastomosis, or oocyte harvesting)



Pelvic Endoscopy



Gynaecologic endoscopy (laparoscopy and hysteroscopy) is widely used for the diagnosis and treatment of reproductive organ disease and dysfunction.

The patient should be thoroughly counselled about surgical risks as part of the process of informed consent



Laparoscopy

The laparoscope is an instrument used for viewing the peritoneal cavity. Both pelvic and upper abdominal structures can be inspected. The attachment of a video camera to the lens of the laparoscope allows more than one surgeon to view the operative site on a video screen and thus to assist during procedures.

Multiple puncture sites through the skin and into the abdominal cavity allow for the insertion of small rigid or flexible instruments directed toward the pelvis. Procedures that were once performed by laparotomy are now routinely carried out less invasively.

Minimally invasive surgery

Key hole





Laser technology can be applied to operative laparoscopic procedures to excise and to vaporize areas of pathology.

Absolute contraindications to laparoscopy include bowel obstruction and large hemoperitoneum with hypovolemic shock.

1-History of multiple previous laparotomies, 2-a history of peritonitis, 3-previous bowel surgery,4- or a lower midline abdominal incision, open laparoscopy is preferable. In these conditions, the peritoneal cavity is opened through a small subumbilical incision under direct visualization before introduction of the trocar and sheath



indications

- 1. Tubal sterilization: The most common indication for the use of the laparoscope in gynaecology is sterilization.
- 2. Ectopic pregnancy: The laparoscope is commonly used for the removal of tubal pregnancies that do not meet the criteria for medical therapy.
- 3. Pelvic infection: Although it is not routinely used for diagnosis of pelvic inflammatory disease (PID), the laparoscope can provide confirmation of a diagnosis when there is a diagnostic dilemma.



- 4. Infertility: Routine laparoscopic evaluation of an infertile woman is widely recommended, but it is controversial because of a lack of controlled evidence of improved outcome. Advanced assisted reproductive techniques, such as IVF and gamete intrafallopian transfer, may involve laparoscopic procedures, although the aspiration of oocytes for IVF is now almost always performed transvaginally using ultrasonic guidance.
- 5. Pelvic pain: Acute and chronic pelvic pain can be investigated by using the laparoscope



- 6. Endometriosis: The laparoscope has become a widely used intervention for the diagnosis, staging, and treatment of ectopic endometrial tissue in both overtly symptomatic (pelvic pain) and silently symptomatic (infertility) patients. Laser coagulation, thermal vaporization, excision of endometriomas, and aspiration of endometriomas result in consistent, but sometimes temporary, improvement of pain and moderate improvement in fertility potential.



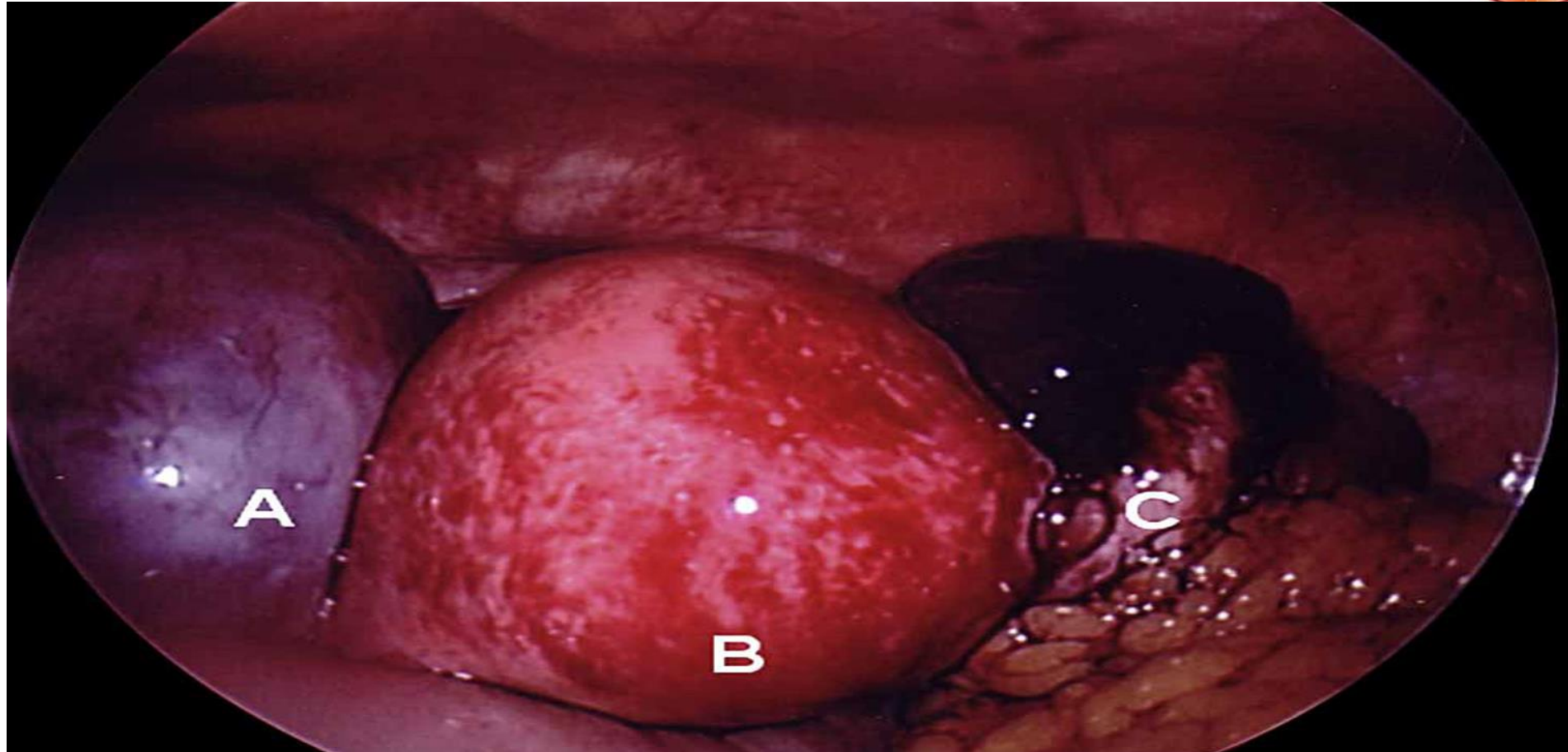
- 7. Ovarian neoplasms: Because of the need to rule out pelvic malignancies, the laparoscope can be used in a less invasive procedure to evaluate a persistent, small adnexal mass.
- Laparoscopic ovarian cystectomy or salpingo-oophorectomy allows a tissue diagnosis to be made. Laparoscopic aspiration of cysts can be dangerous and may result in dissemination of an unsuspected ovarian cancer.
- Ovarian biopsy is seldom indicated, and in premenopausal patients with simple cystic enlargement, a trial of hormonal suppression or observation is indicated instead of immediate surgical intervention.
- Staging can be done by expert hand but port site recurrence is common



- 8. Myomectomy: Advocates of the procedure recommend that fibroids larger than 6 cm in diameter not be removed using the laparoscope and that morcellation of the fibroid not be used, due to the risk of dissemination of an occult sarcoma.
- 9. Urogynecologic procedures: Urethropexy can be performed laparoscopically, with reported success rates comparable to those for procedures performed percutaneously.



- 10. Hysterectomy: The laparoscope is used by some surgeons to replace an abdominal procedure (laparoscopic hysterectomy), to assist in a vaginal hysterectomy, and to convert an abdominal hysterectomy to a vaginal hysterectomy. Adoption of laparoscopy-associated hysterectomy has been increasing in recent years.







TECHNIQUE

- The procedure is performed with the patient in a modified dorsal lithotomy position (i.e., with knee crutches), usually with general anesthesia. An intrauterine manipulator is inserted to help in the visualization of the pelvic organs.
- A pneumoperitoneum is created by the insertion of a spring-loaded needle, such as a Veress needle, into the peritoneal cavity via the subumbilical fold, together with insufflation with either CO₂ or nitrous oxide. The trocar and surrounding sheath are then inserted through a small subumbilical incision.



- lighted telescope is inserted into the sheath and advanced slowly. With the patient in the Trendelenburg position (upper body lower than the pelvis), visualization of pelvic organs confirms that the peritoneal cavity has been entered. Gas may be added intermittently and automatically to maintain a sufficient pneumoperitoneum.
- To perform a second puncture, which is sometimes necessary, the abdominal wall is transilluminated to identify the position of the inferior epigastric vessels, and a 4- to 6-mm trocar and sheath are inserted under laparoscopic guidance through a small incision at the pubic hairline.



- Upon completion of the procedure, hemostasis is checked, the gas is released from and the instruments are withdrawn. The small skin incisions are closed with a clip or single subcuticular suture.



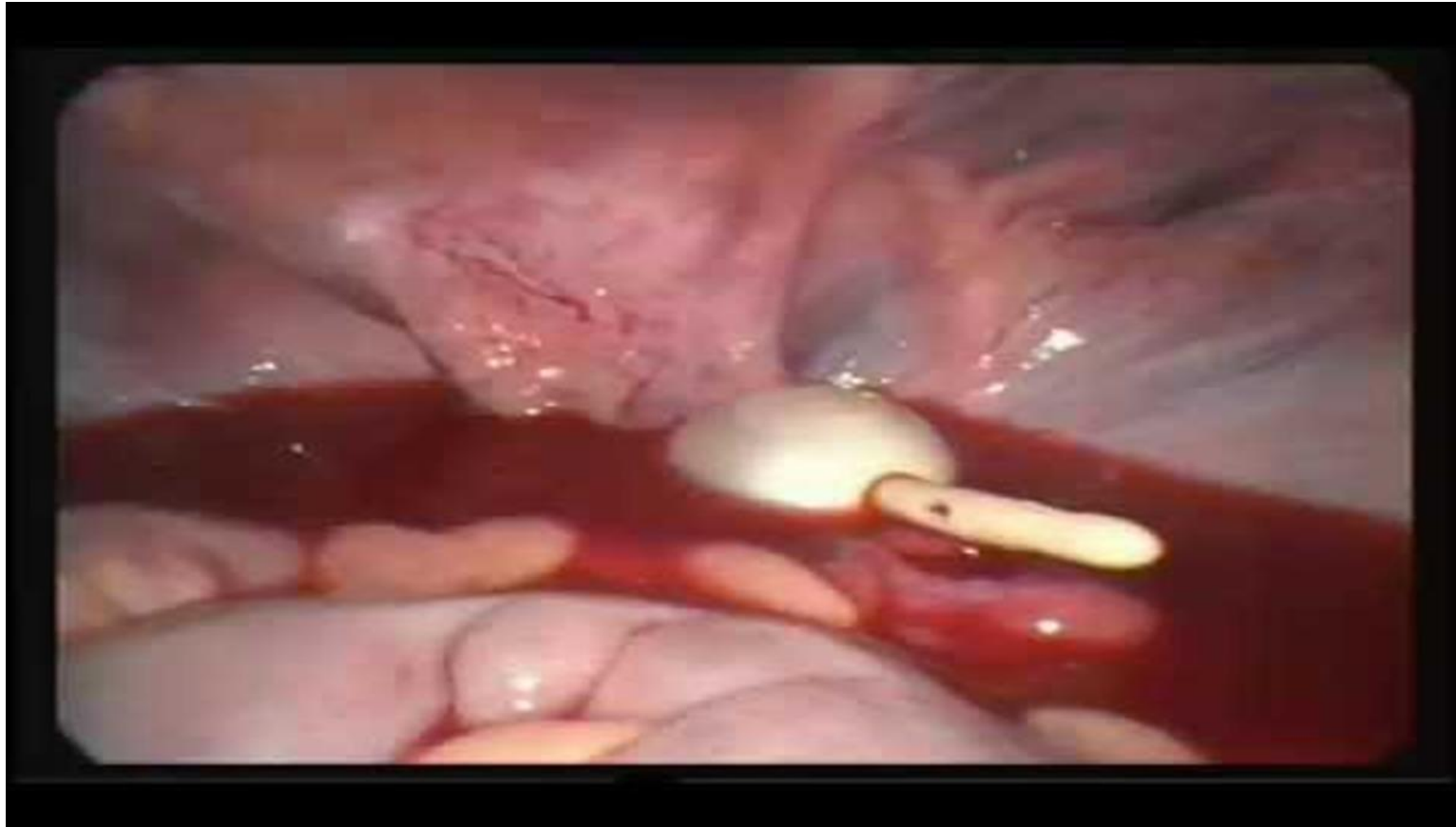
Monitor (The Eye of Surgeon)





complications

- • Anaesthetic complications caused by pneumoperitoneum
- • Unintended insufflation of the abdominal wall instead of the peritoneal cavity
- • Perforation of a viscus, such as bowel or bladder
- • Bowel burns during fulguration of adjacent tissues, Less common with bipolar current.



Hysteroscopy



- Instrumentation
- The hysteroscope is a telescope consisting of light bundles and a sheath through which the telescope is inserted. For pure diagnostic use, the telescope is inserted alone, whereas for operative capabilities, it is inserted in conjunction with other instruments.
- Two different types of telescopes are used today:
- rigid and flexible fiberoptic. Rigid telescopes are most commonly 1 to 5 mm in diameter for diagnostic procedures, and operative hysteroscopy typically range from 8 to 10 mm in diameter and contain a working element through which operative instruments are inserted.



- scissors, graspers, biopsy forceps, or even laser fibers are inserted through operating channels, which may be part of the outer sheath itself, or through separate devices interposed between the telescope and the outer sheath, which are called bridges.
- The uterine cavity needs distention for adequate visualization through the hysteroscope. Different distention media such as CO₂ gas and both low- and high-viscosity fluid may be used.
- It is critically important for the surgeon to know which media are compatible with electrosurgical or laser energy sources and which ones are prone to fluid overload or anaphylactic shock during the procedure.



- As telescopes have become narrower, they can safely be inserted into the cervical canal with minimal pain.
- These allow the performance of hysteroscopy with little more than a paracervical block in patients who are bleeding, and they do not cause the shoulder pain and uterine spasm that often accompany use of CO₂ as a distention medium. A significant number of hysteroscopies today are being performed as office procedures



indications

1- infertility: when abnormalities such as intrauterine synechiae or septa are found, hysteroscopic correction is associated with a high rate of success. Probably the most rewarding of all hysteroscopic procedures is the excision of an intrauterine septum, a congenital anomaly that occurs in up to 1% of women.

Usually performed as an outpatient procedure, excision of the septum is a relatively short procedure, with minimal bleeding and minimal risks. It is best performed with mechanical scissors, as opposed to electrical or laser devices



2-abnormal uterine bleeding: hysteroscopy uncovers the presence of submucous myomas or endometrial polyps.

Small endometrial polyps can be removed very easily by using hysteroscopic scissors or grasping forceps.

3-endometrial ablation: is the destruction of the uterine lining for the treatment of chronic menorrhagia.

Two methods of endometrial ablation have emerged. The first type requires hysteroscopic visualization and employs electrical or laser energy to shave, vaporize, or coagulate the endometrial surface.



A more recent method of endometrial ablation does not require hysteroscopic visualization. These techniques use either a reservoir for the delivery of heat to the endometrial surface or microwave energy directed at the endometrium to render it unresponsive to hormonal stimulation.

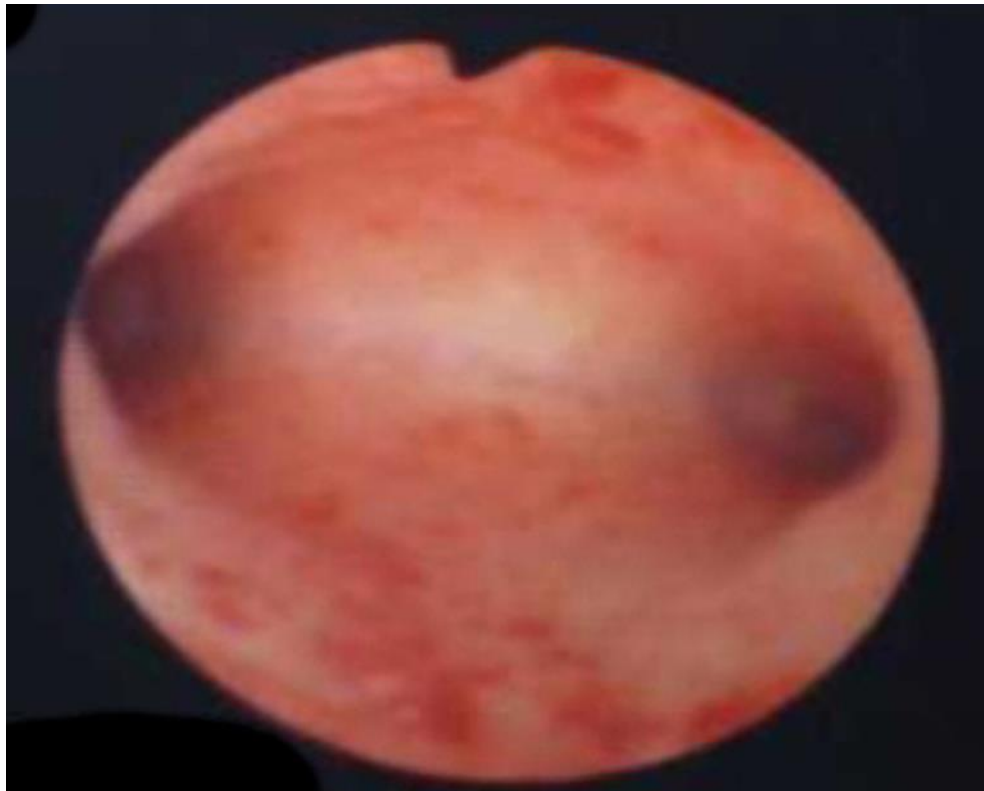
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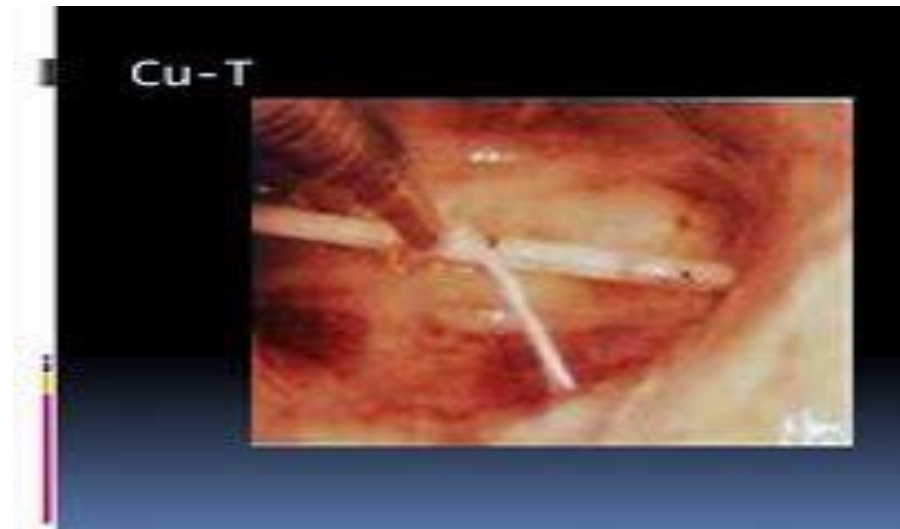
5-persistent discharge

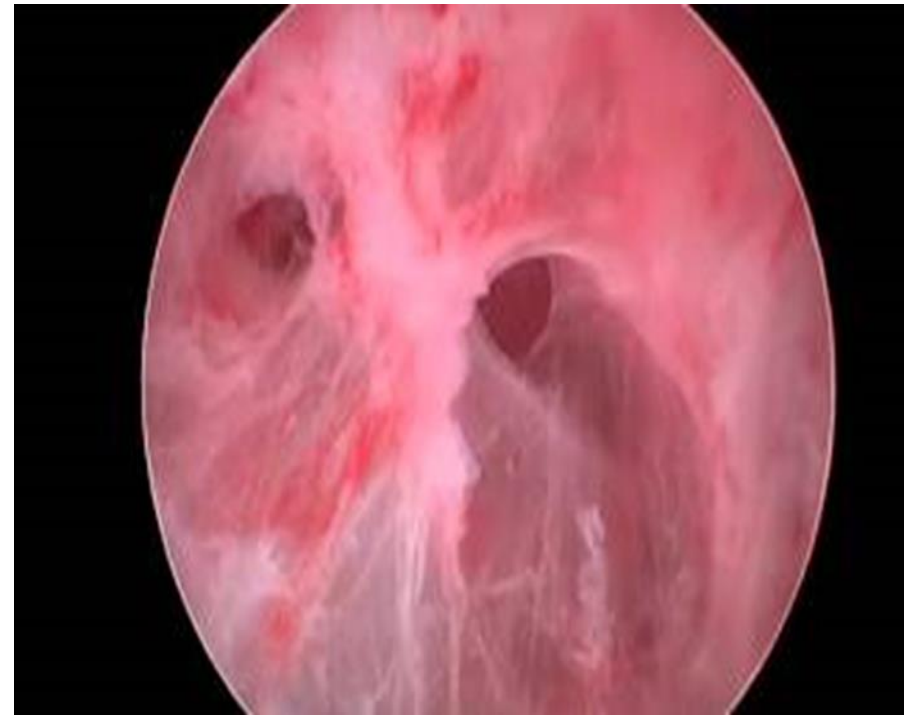
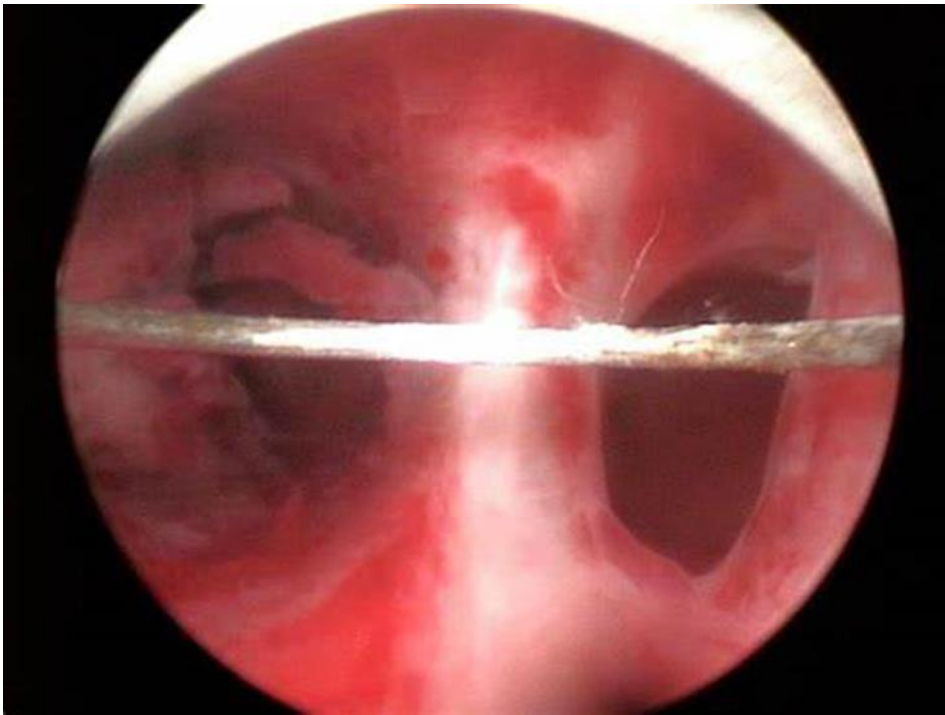


complications

- Overall complication rate is about 2%
- • Major complications occur <1% of cases
- • Uterine perforation, excessive bleeding, and distention media hazards.
- • Far less common; infection, cervical laceration, and cervical stenosis









References

- Hacker N F, Gambone J C, Hobel C J:essentials of obstetrics and gynaecology.in Gambone J gynaecological procedures, sixth edition elsevier2016;356-368.
- Bickerstaff H, Kenny L C:Gynaecology by ten teachers. In Tincello D:gynaecological surgery and therapeutics20th edition;229-247



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