Endoscopy in gynecology

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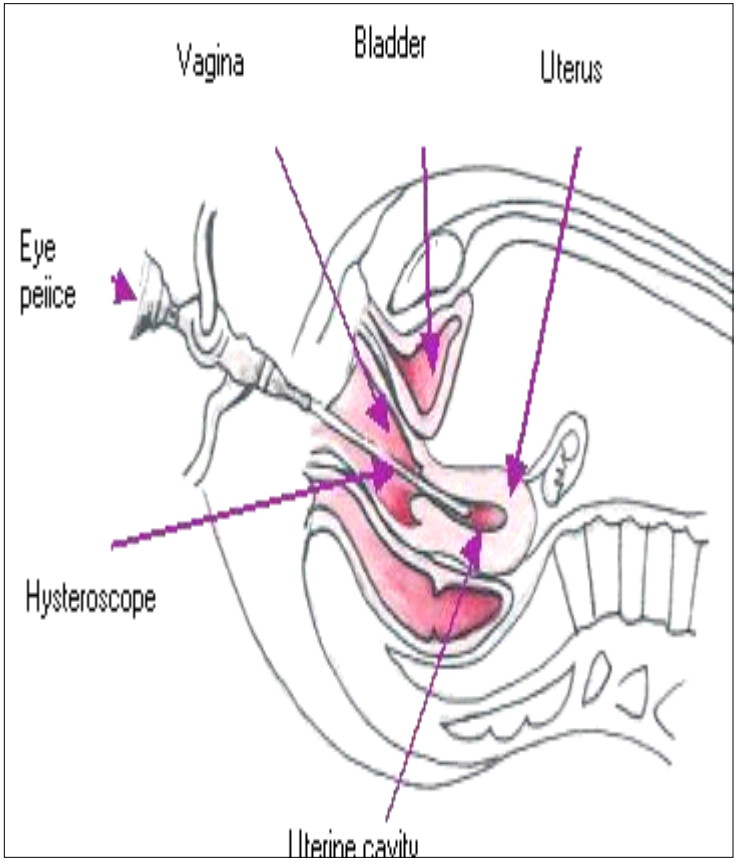
Introduction:

The recent development of sophisticated optic systems providing broader viewing angles, finer resolution and magnification, and significantly improved fiberoptic lighting sources has rapidly advanced the endoscopic aspects of gynecologic diagnosis. The endoscopic investigations include hysteroscopy for the magnified viewing of the uterine cavity, and laparoscopy for the assessment of intrapelvic organ pathology and function.

1- Hysteroscopy:

Diagnostic accuracy and enhanced therapeutic capabilities are achievable with the availability of hysteroscopy for the patient with symptoms pointing to intrauterine pathological conditions.

The procedure: The hysteroscope is a telescope with an outer dimension of up to 8 mm, which is inserted transcervically after dilatation of the cervix, under paracervical anesthesia or G.A. The uterine cavity can be distended with 5% dextrose in water, normal saline, 1.5% glycine, 32 % dextran solution.



The indications for diagnostic hysteroscopy

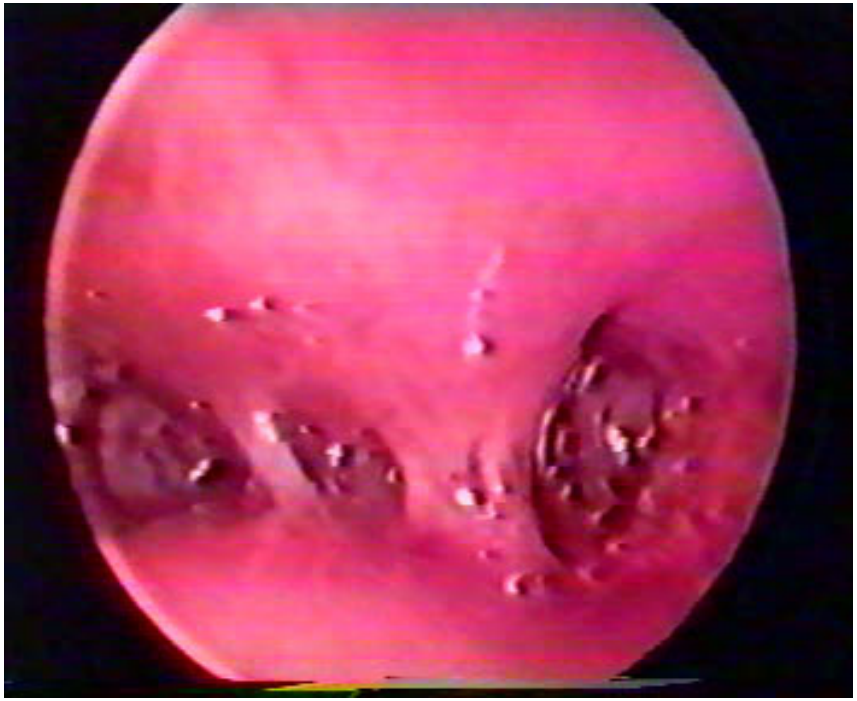
1- Evaluation of abnormal bleeding in the reproductive age or postmenopausal women.

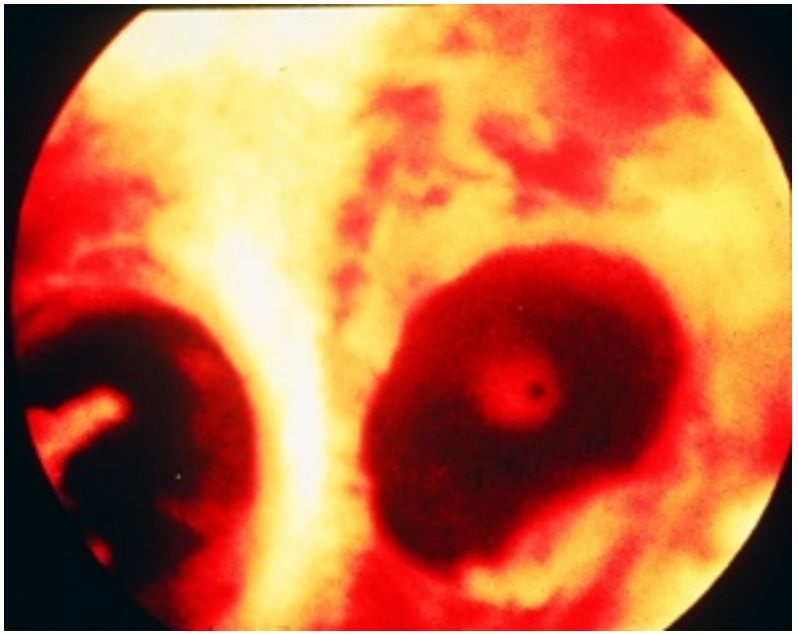
2- Assessment of infertility status.

3-Localization and removal of intrauterine foreign bodies (IUDs or plastic instruments).

4- Evaluation of congenital uterine anomalies or adhesions.

5-Localization and excision of endometrial polyps or submucous leiomyomata





The contraindications to the procedure

- 1-Active infection.
  2-Acute hemorrhage.
  3- Known pregnancy.
- Intrauterine visualization by hysteroscopy has added a significant dimension to the management of patients with relatively common gynecologic problems. The technique increases the accuracy of diagnosis and allows relatively simple therapy in some cases. In particular, the localization and removal of IUDs through the hysteroscope has provided a much needed alternative to the use of x-ray films of the pelvic area and blind intrauterine manipulations for retrieval of devices.

Operative hysteroscopy, has been widely used to incise or remove congenital uterine septa, sumucous myomas, or adhesions for transcervical sterilization and for the ablation of the endometrium in medically compromised patient with refractory menorrhagia.

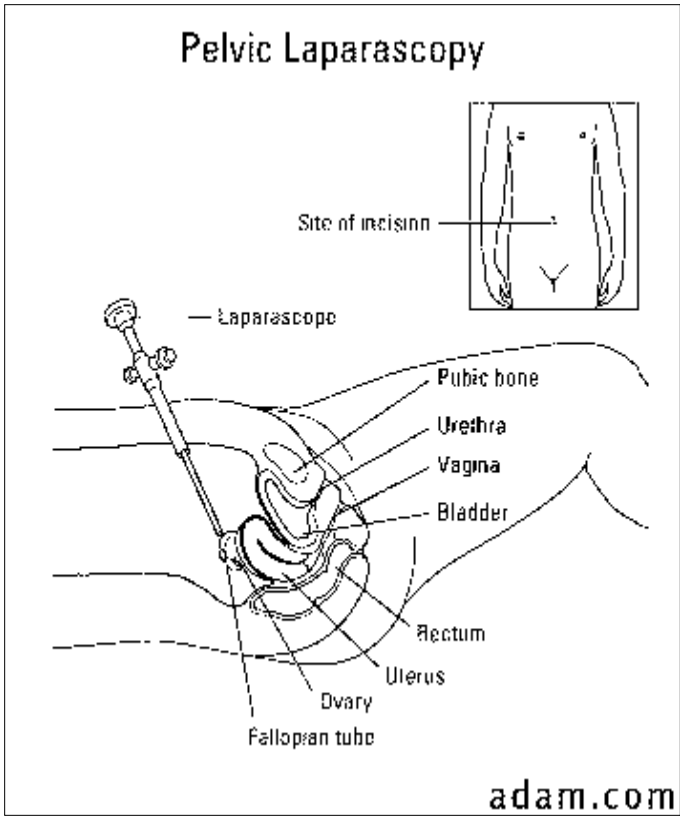
Complications:

- Anesthetic complications
- Perforation of the uterus
- Bleeding due to myometrial vascular trauma.
- Thermal trauma to adjacent structure
- Complication related to distension media:

  Glyceine fluid overload& electrolyte imbalance (fetal)

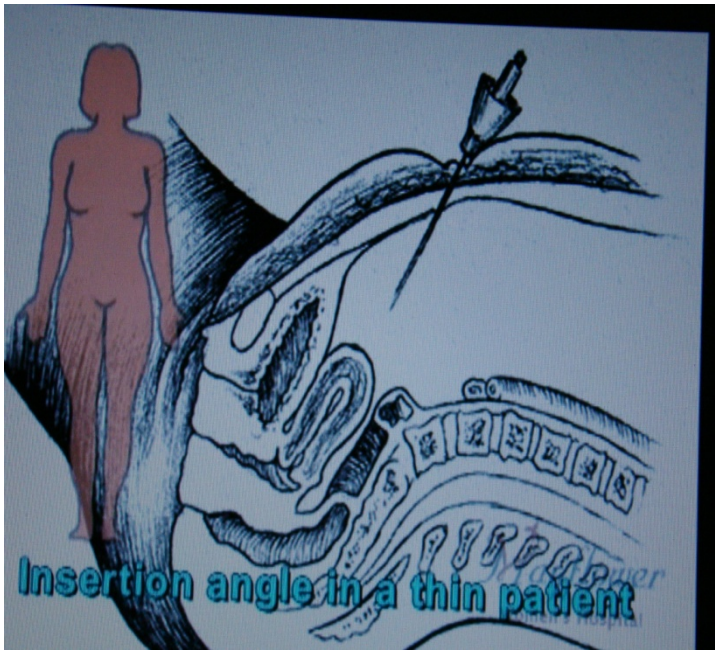
2- Laparoscopy:

The procedure : The patient is anesthetized and placed in a modified lithotomy position, and the bladder is emptied. A Rubin's cannula is inserted into the cervix & uterus and thereby enhance visualization. It also permits the injection of dye to observe tubal patency. Intubation anesthesia is generally advocated because of the steep Trendelenburg position required for upward movement of the intestine and because of the large amount of carbon dioxide that exerts diaphragmatic pressure.

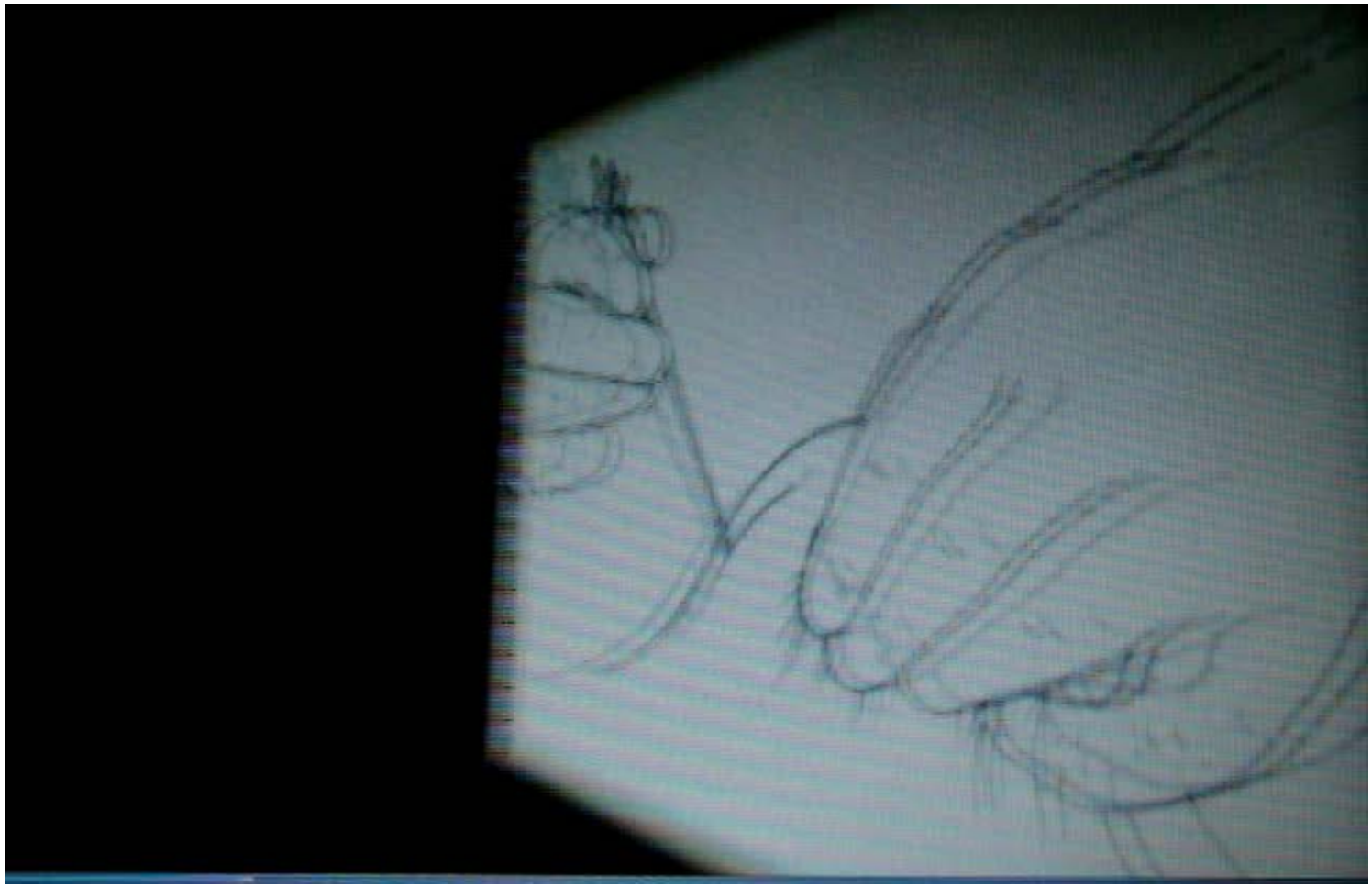


2- Laparoscopy (cont.)

A needle is inserted just below the umbilicus in the midline, and carbon dioxide is instilled under controlled pressure to an intraabdominal pressure of 15-20 mmHg.

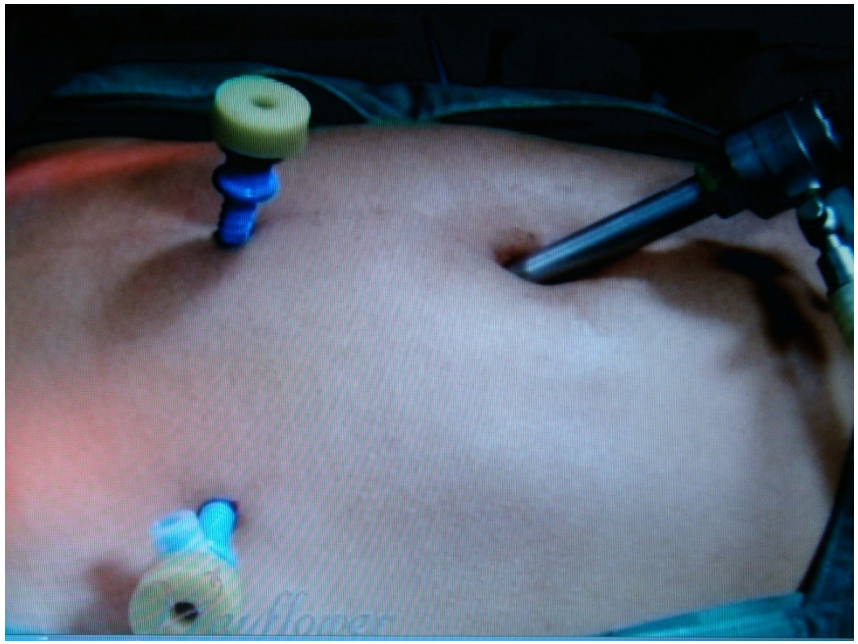


Verres needle insertion

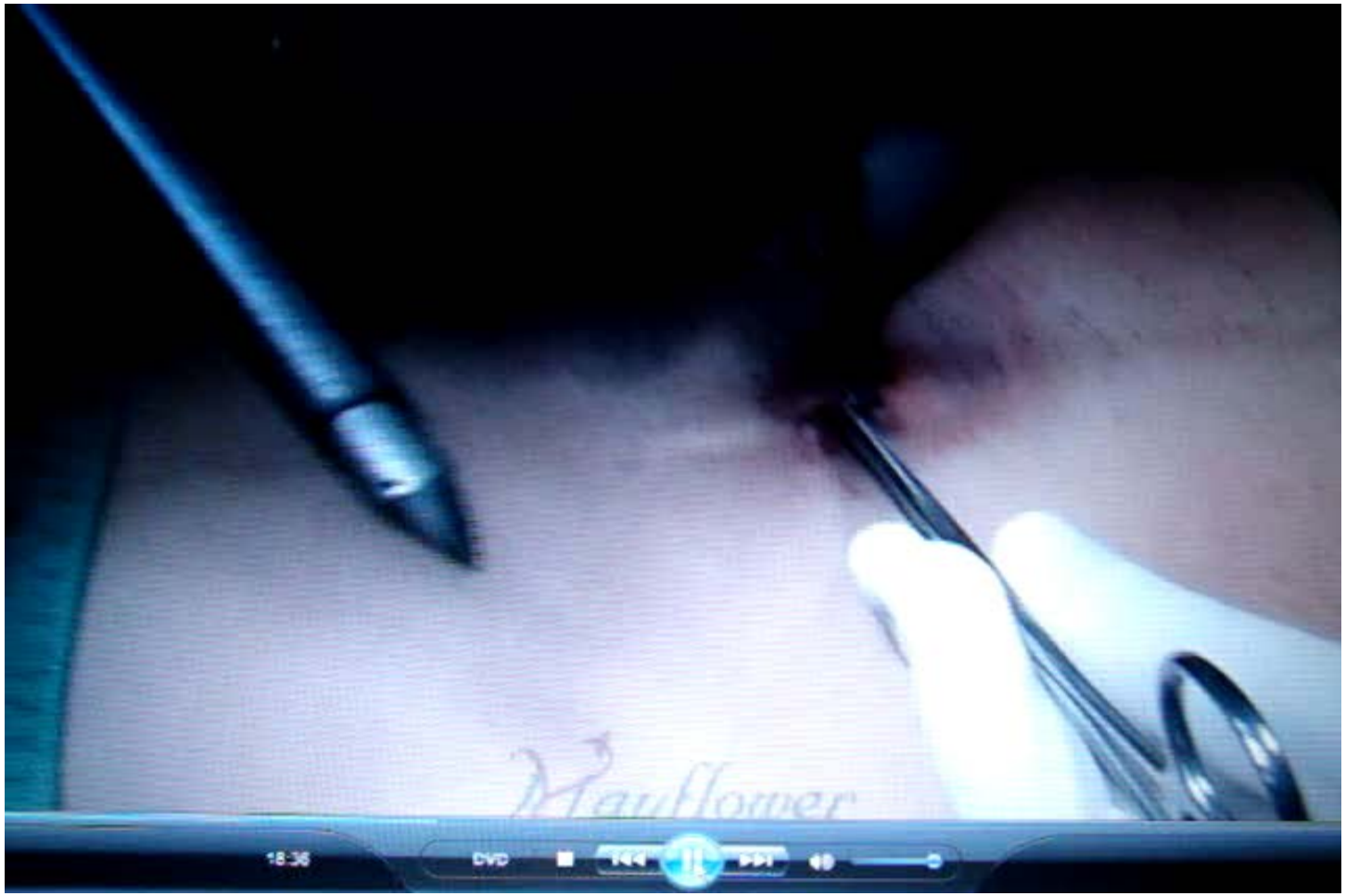


2- Laparoscopy (cont.)

- After abdominal distention, the needle is withdrawn. The small intraumbilical incision is enlarged and a trocar with its sheath is introduced through the same opening.



Primary trocar insertion



2- Laparoscopy (cont.)

- Continuous gas insufflation under controlled pressure maintains abdominal distention. The trocar is then removed and replaced by the laparoscope. Fiberoptic light sources are attached to the laparoscope and pelvic visualization is begun. It is often both helpful and necessary to introduce a blunt probe through a separate small trocar incision to assist in manipulation of the pelvic organs for complete examination.

Indications for laparoscopy:

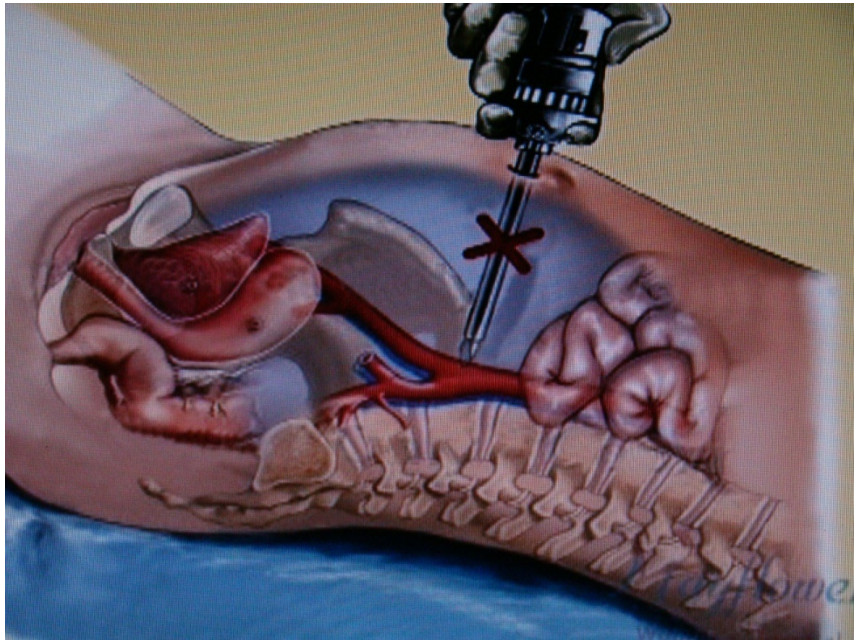
Include investigation of infertility, evaluation of pelvic pain, diagnosis of occult endometriosis, evaluation of pelvic pain ,evaluation of early unruptured ectopic pregnancy and diagnosis of congenital abnormalities of the genital tract .

Contraindications to the procedure:

Include cardiac or pulmonary disease; prior history of major abdominal surgery, particularly of intestinal type; pelvic tuberculosis; widespread pelvic malignancy; extensive pelvic inflammatory disease; large abdominal mass; and advanced pregnancy.

Complications of laparoscopy:

- Include soft tissue trauma to intra-abdominal organs with the insufflation needle or trocar; bleeding from manipulation; emphysema of the abdominal wall or retroperitoneal tissues by carbon dioxide instillation; insufflations of bowel with carbon dioxide; and thermal injuries to surrounding organs during tubal cauterization. As noted above, meticulous technique, careful patient selection, and clinical experience will reduce the risk of these complications to a minimal level.



Any question?

- Thank you