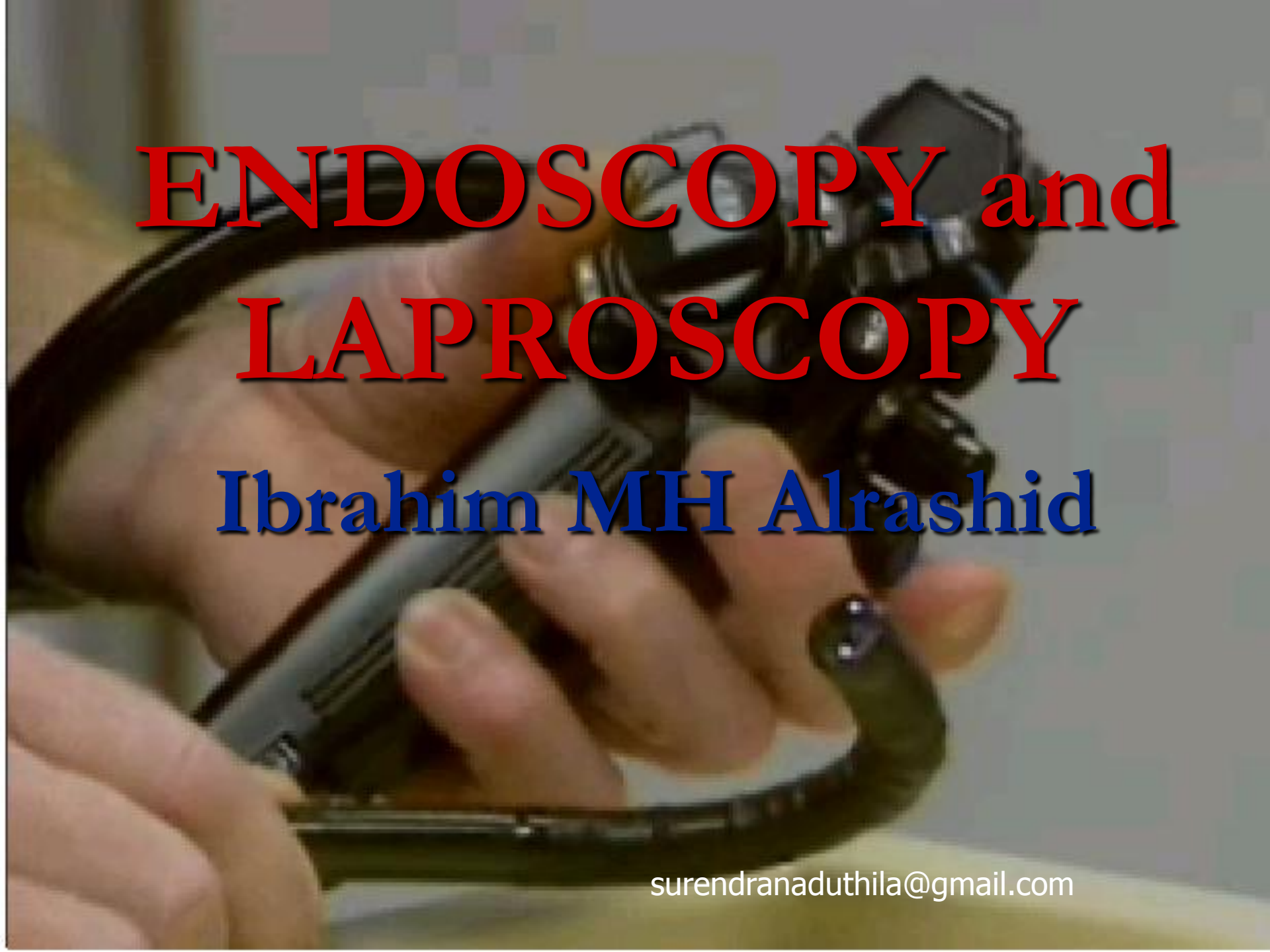

ENDOSCOPY and LAPROSCOPY

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ENDOSCOPY

Endoscopy, is the examination of internal body cavities using a specialized medical instrument called an endoscope.

Physicians use endoscopy to diagnose, monitor, and surgically treat various medical problems.

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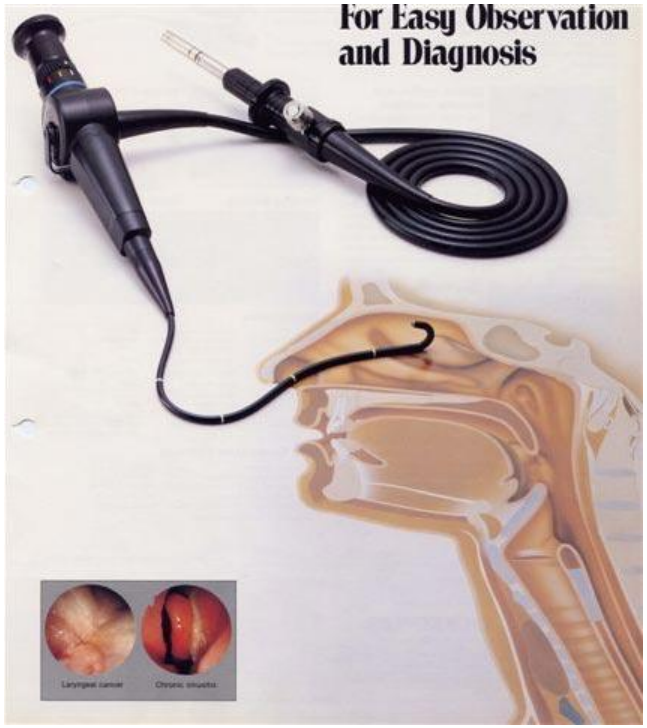
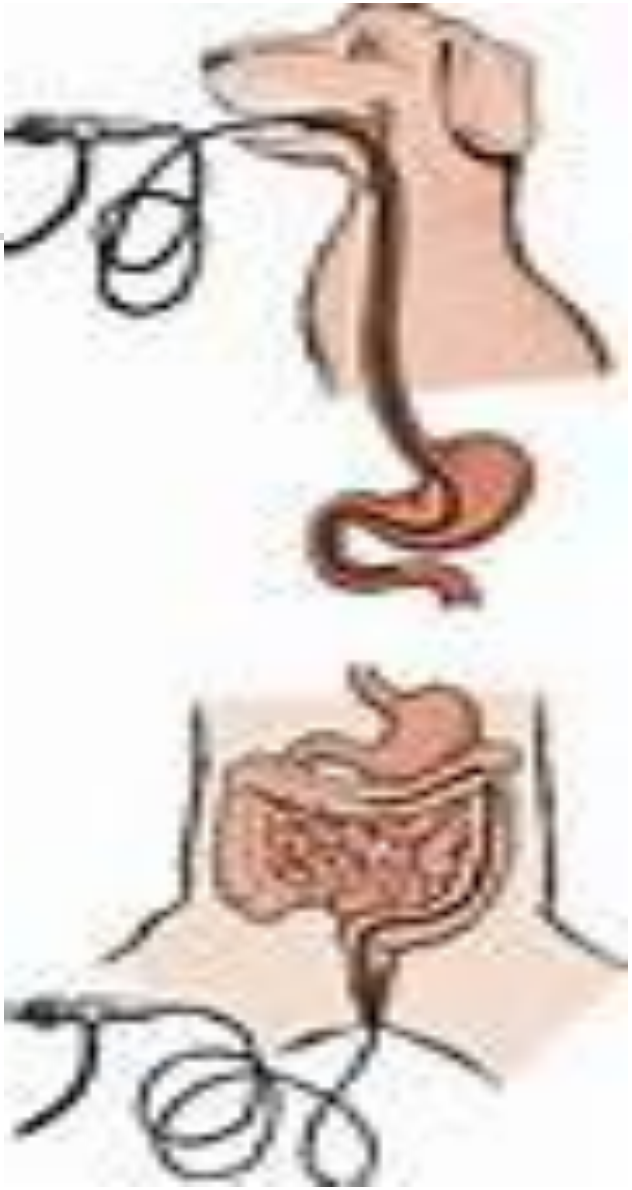
ENDOSCOPY

- An endoscope is a slender, flexible tube equipped with lenses and a light source. Illumination is done by the help of a number of optical fibres.
- Reflected light rays are collected by CCD(Charge coupled device) and electrical signals are produced, which are fed to the video monitor to get image.
- Thorough one channel of endoscope water and air is conducted to wash and dry the surgical site.

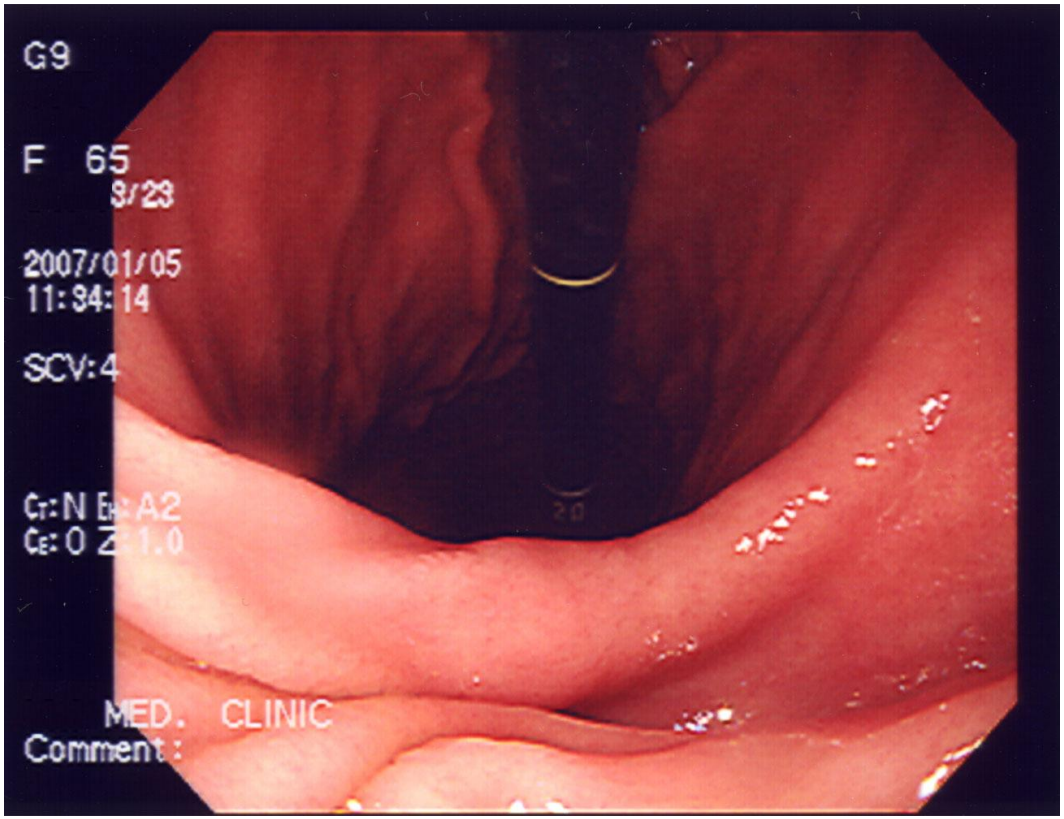


ENDOSCOPY

- The endoscope also has a channel through which surgeons can manipulate tiny instruments, such as forceps, surgical scissors, and suction devices.
- A variety of instruments can be fitted to the endoscope for different purposes.
- A surgeon introduces the endoscope into the body either through a body opening, such as the mouth or the anus, or through a small incision in the skin.



ENDOSCOPY



- The endoscope gives visual evidence of the problem, such as ulceration or inflammation
- It can be used to collect a sample of tissue; remove problematic tissue, such as polyps
- It is used to take photograph of the hollow internal organs

ENDOSCOPY

- Depending on the body part, each type of endoscopy has its own special term, such as

  laparoscopy (abdomen, uterus, fallopian tube),
  laryngoscopy (vocal cords),
  bronchoscopy (lungs),
  colonoscopy (colon),
  arthroscopy (joint) and
  Gastroscopy (Stomach).

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Laproscopy

- It is a minimally access procedure allowing endoscopic access to peritoneal cavity after insufflation of gas to create space between the anterior abd. Wall & viscera for safe manipulation of instruments & organs.

TYPES

1. Intraperitoneal
2. Extraperitoneal
3. Abd wall retraction (gasless laproscopy)
4. Hand assisted (Hassans tech.)

What operations can we do Laparoscopically

- Diagnosis
- Colorectal carcinoma
- Caecal carcinoma
- Colonic carcinoma
- Gastric carcinoma
- Oesophageal carcinoma

- Operation
- Anterior resection/ APR
- Right Hemicolectomy
- Left/Sigmoid Colectomy
- Gastrectomy
- Oesophagogastrectomy

ADVANTAGES

1 Minimal pain & illeus
2 Improved cosmesis
3 Shorter hospital stay , faster recovery & rapid return to work
4 Non muscle splinting incision & less blood loss
5 Post op respiratory muscle function returns to normal more quickly
6. Wound complications i.e. infection & dehiscence are less
7 Lap surgery can be done as day care surgery

DISADVANTAGES

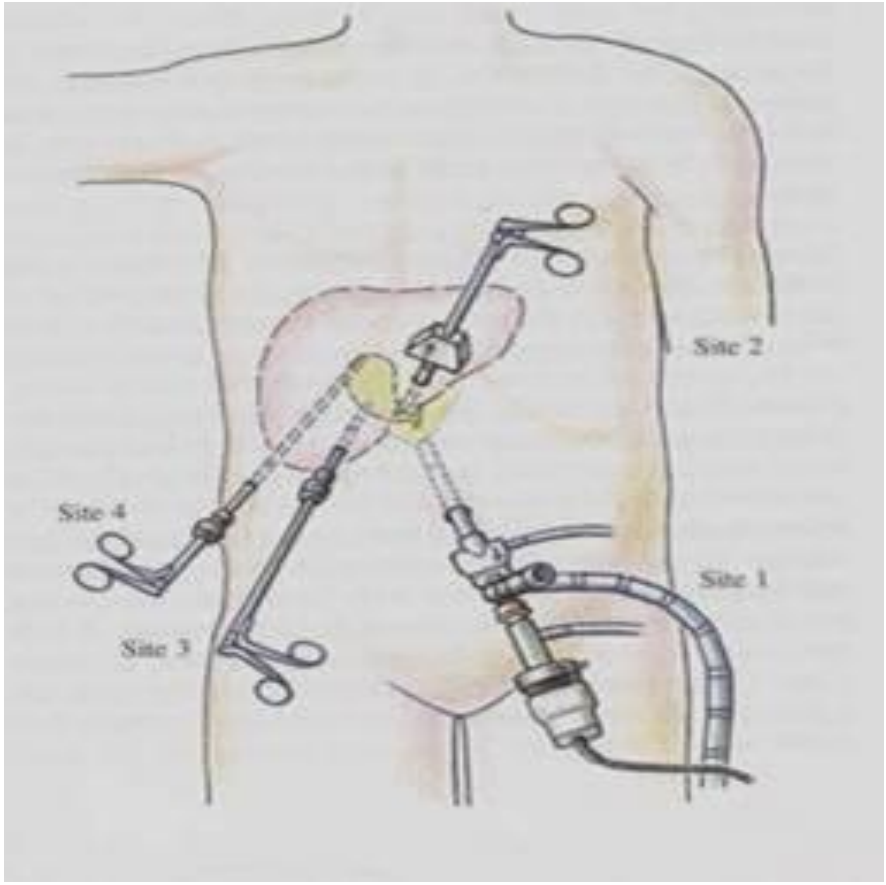
1 Longer duration of surgery

2 Loss of 3D view, impaired touch sensation

3 poor dexterity, fulcrum effect, risk of visceral / vsl. Injury (may go unrecognised)

4 Long learning curve for surgeons

Laparoscopic surgery



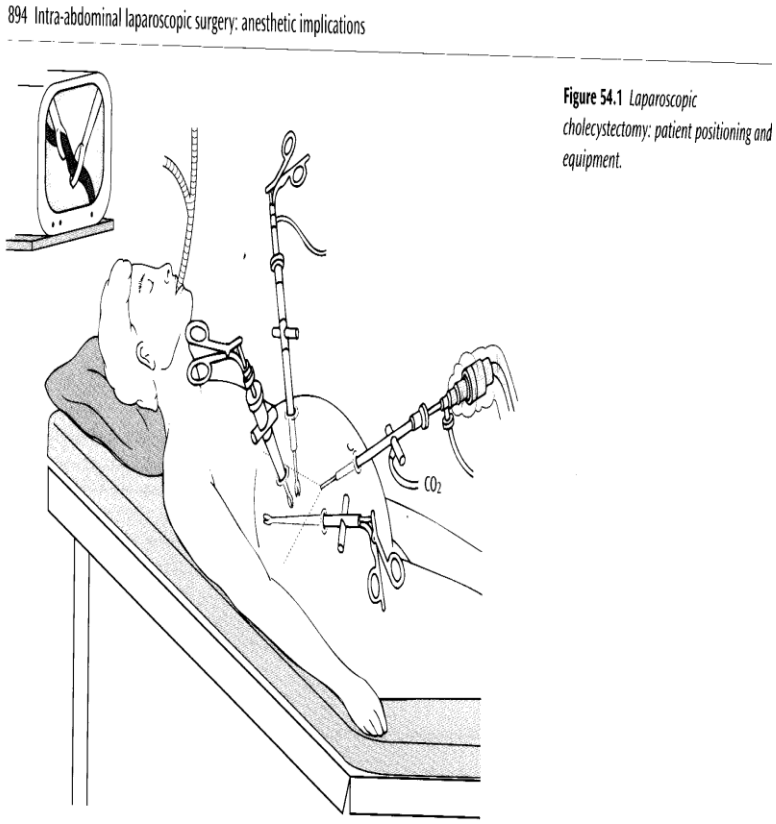


Figure 54.1 *Laparoscopic cholecystectomy: patient positioning and equipment.*

PROPERTIES OF OTHER GASES USED

- **Gas**
  - **1 Air**
  - **2 Oxygen**
  - **3 Nitrogen**
  - **4 N_2O**
  - **5 CO_2**
  - **6 He**
  - **7 Argon**

Principle Differences between laparoscopic and open surgery

- Magnified view often better than obtained via an incision allows precise dissection.
- Altered (but not absent) tactile response
- Two dimensional (flat screen) view.
- Usually (but not always) longer operating time
- Need to develop entirely different operating technique
- Adaptation of principles of open surgery to laparoscopic surgery.

Equipment

Camera

Light Source

Insufflator

TV Monitor

Telescopes

Light Guide Cable


Thank You!