In The Name Of God

LAPAROSCOPY VERSUS LAPAROTOMY

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advantages of laparoscopy

- shorter operative time (for some, but not all procedures)
- smaller scars
- faster recovery
- decreased adhesion formation
- decreased cost

advantages of laparoscopy

- **27 randomized trials comparing laparoscopy with laparotomy for benign gynecologic:**

- **minor complications** (fever, wound or urinary tract infection)

  lower in women undergoing **laparoscopic procedures**

- **both groups** had the **same risk** of **major** complications

  (pulmonary embolus, transfusion, fistula formation, and major additional unplanned surgery)

PRE OPERATIVE EVALUATION

- **Medical comorbidities** that impact hemostasis or the ability to tolerate surgery. A particular issue in laparoscopic surgery is the ability to **tolerate the increased intraabdominal pressure** due to pneumoperitoneum

- Risk factors for **adhesive disease** or **umbilical or ventral hernia repair**. These may impact the **choice of site** of laparoscopic access and increase the risk of complications related to laparoscopic entry

- **extensive pelvic adhesions** may increase the likelihood of **conversion to laparotomy**, and this possibility should be included in **the informed consent** process

- **Appropriate preoperative testing**, including pregnancy testing in reproductive-age women
- Planning for **antibiotic prophylaxis** and **thromboprophylaxis**, depending upon the patient characteristics and procedure
- **Bowel preparation** is **no longer standard practice** prior to gynecologic surgery
- **Removal of umbilical jewelry** is required prior to laparoscopic surgery

PATIENT POSITIONING &PREPARATION

- It is important to **carefully position** the patient :

- to avoid **neurologic injury**
- provide for **ergonomic surgeon positioning**,
- allow **adequate access** to the vagina

- The patient is placed in a **supine or dorsal lithotomy position** for laparoscopic surgery
- **Dorsal lithotomy** position provides access to the vagina for examination or use of instruments
- If the dorsal lithotomy position is used, the patient's legs are **placed in booted stirrups (Allen-type stirrups)** Stirrups may be fixed or allow for adjustment of the leg position during the procedure
- It is important to maintain **moderate flexion** at the knee and **hip with minimal abduction or external rotation** at the hip

- The **patient's arms** may **be tucked carefully** by her sides with appropriate **padding and access to intravenous lines**
- Many surgeons find this provides the best access to the operative field
- If the arms **are tucked**, they are placed in **military position** (palms facing toward lateral thighs) with padding protecting the posteromedial aspect of the elbows, wrists and hands

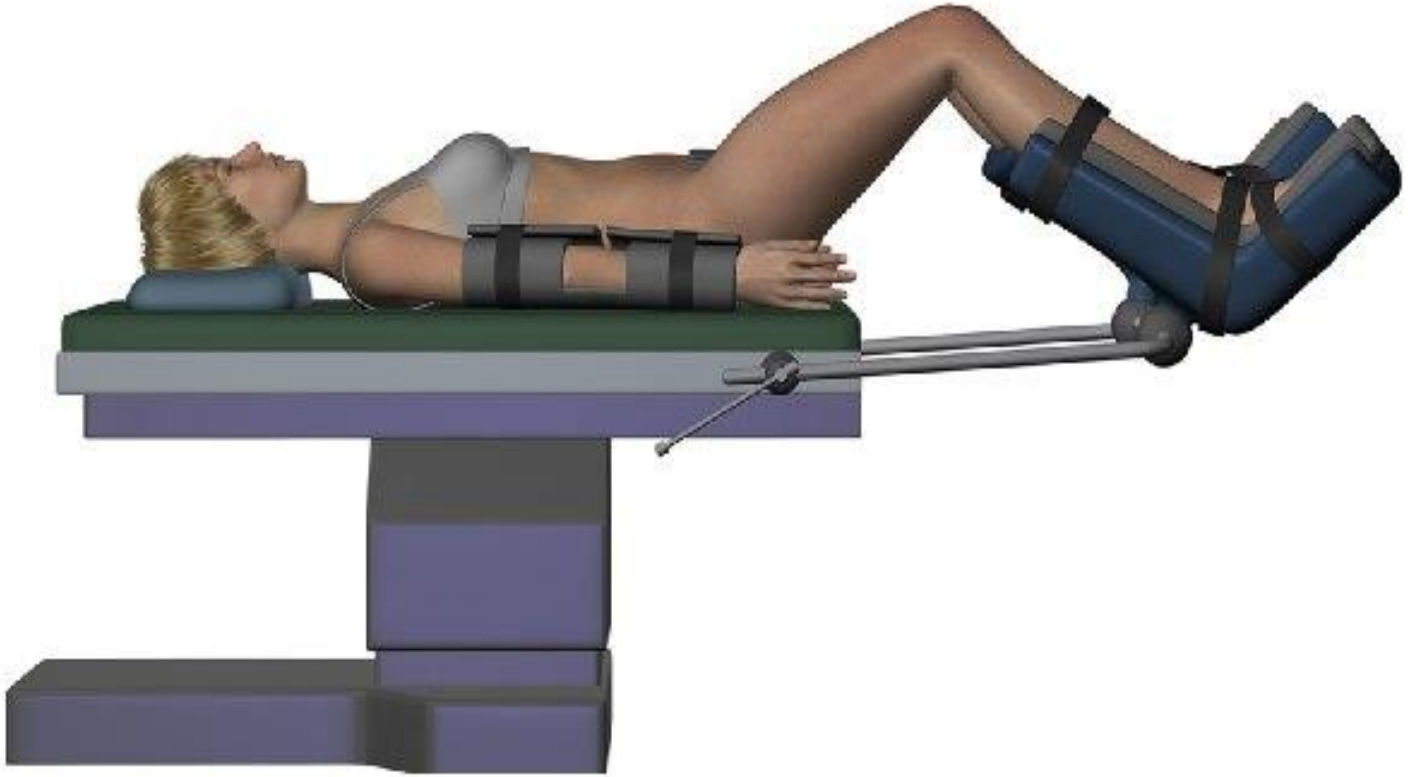
- if the arms are **abducted and placed on arm boards**, careful attention should be paid to maintaining neutral shoulder positioning at a <90° angle to avoid brachial plexus injury

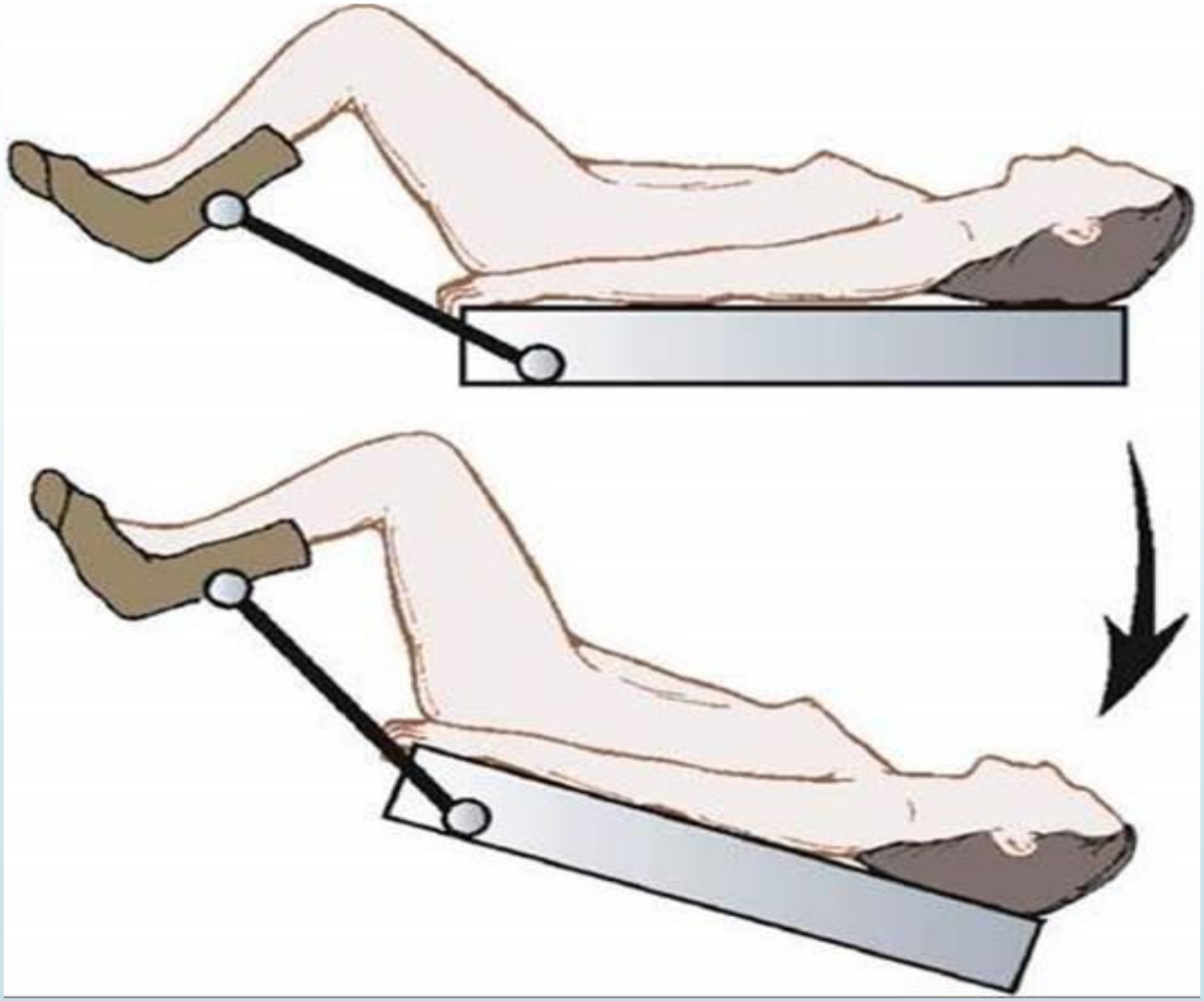
- It may also be **helpful** to utilize a **bolster underneath** the patient's buttocks to **elevate the hips** and enhance mobilization **of intestines into the upper abdomen**

- The buttocks should be a few centimeters beyond the edge of the table to allow uterine manipulation

Fig. 5

Proper patient positioning with appropriate relative angles and padding of upper and lower limb sensitive areas: side view.





- At the start of the procedure, the table should be in level position, with the height lowered to allow for relaxed arm

- positioning for all operators. We find it convenient to place a video monitor directly facing each surgeon **at or 15° below eye level** to decrease neck strain with a **distance of approximately 60 cm**

- This is based on emerging evidence of work-related **musculoskeletal disorders** due to improper ergonomics during laparoscopic surgery
- In a study of gynecologic oncologists, **88 percent** reported pain as a result of performing laparoscopic surgery and **29 percent** of those sought treatment
- **Trendelenburg position** is typically used to displace the intestines to allow visualization of the pelvic viscera
- Several methods may be used to prevent migration in Trendelenburg position: **egg-crate foam directly** beneath the patient
- a vacuum-beanbag mattress, or shoulder braces. Steep Trendelenburg (30° to 45°) and the use of braces may contribute to brachial plexus injury

- **A bladder catheter** is useful to decompress the bladder

- Bladder distension increases the risk of bladder **perforation** and may obscure the **operative field**

Thanks