Safe & Efficient Patient Positioning

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Disclosures

• I have no relevant financial disclosures
Objectives

• Describe a technique for patient positioning for robotic surgery
• Describe controversies associated with patient positioning for robotic surgery
Why is Patient Positioning So Important?

- Prevent postoperative neuropathies
- Perform robot docking efficiently
- Decrease operating room time
- Complete robotic procedures efficiently
Patient Positioning Technique

- Egg Crate Foam
- Bed Sheet
- Boot-type stirrups
Challenges of Patient Positioning

- Neuropathies
- Trendelenburg
Low Lithotomy

Minimal external rotation

Abduction ≤ 90 degrees

Hip Flexion 170 degrees
Avoid the Use of Shoulder Braces

- Insurance company data: 12% of medical malpractice closed claims involve peripheral nerve injuries, of which 57% were ulnar nerve or brachial plexus injuries

Use of anti-skid material and patient-positioning to prevent patient shifting during robotic-assisted gynecologic procedures.


- Median shift **1.3** centimeters (0-7.5)
How Much Trendelenburg Do We Need?

- Commonly manufactured OR tables provide maximum trendelenburg of 25-45 degrees

- Surgeons often ask for the maximum trendelenburg allowed by the OR table

Friedrich Trendelenburg
1844-1924
Blinded Measure of Trendelenburg Angle in Pelvic Robotic Surgery

- 86 robotic gyn surgeries, patients placed in trendelenburg to allow adequate visualization
- A mean trendelenburg angle of 28.0 degrees was adequate to complete most gyn robotic procedures
Trendelenburg Position in Gynecologic Robotic-Assisted Surgery

• 20 benign robotic gyn procedures, surgeons blinded to the degree of trendelenburg, which was measured at the end of the cases
• A mean 16.4 degrees of trendelenburg was used
Intraocular Pressure and Steep Trendelenburg During Minimally Invasive Gynecologic Surgery: Is There a Risk?


- 10 laparoscopic and robotic gyn surgeries, intraocular pressure (IOP) measured supine, after 1 hr & 2 hr trendelenburg
- Significant increase in IOP after 1hr & 2 hr trendelenburg
Conclusions

• Patient positioning for robotic surgery does not have to be complicated
• Develop a routine positioning technique with a team approach
• Utilize only the amount of trendelenburg position needed for the surgery
• Effective patient positioning sets the stage for a safer and more efficient robotic surgery
References


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