ROBOTIC REPAIR OF VENTRAL AND INGUINAL HERNIAS

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NO CONFLICTS OF INTEREST

• Any offers?
General Benefits of Robotic Surgery in Hernia Repair

- Drive your own camera
- No need for assistant surgeon
- Better visualization, 3D vision
- **Articulating wrist instruments**
- Potential to perform more complex operations in minimally invasive fashion
- Ability to close ventral hernia defects
- Can suture mesh and avoid tacking
General Preoperative Consideration/Setup

- Patient selection: comorbidities, blood thinners, obesity (>50BMI), smoking, review imaging, Unilateral Inguinal?
- Designated staff familiar with robotic surgical system
- Laparoscopic equipment for entry
- Open equipment available if needed
- General anesthesia
- Arms tucked and patient secured
- OGT
- Foley?
- TAP Block
Robotic Ventral Hernia Equipment

- Laparoscopic: 0 degree camera, 5mm optical view trocar, scissors, 2 graspers, needle driver, 12mm port
- Robotic: 30 degree camera, bipolar grasper, scissors, 2 mega needle drivers
- Sutures: #1 Non-absorbable barbed suture to close fascia, 0 absorbable double-armed barbed suture for mesh fixation
- Mesh: medium-weight wide pore coated permanent mesh; polypropylene (eg. Ventralight ST, Parietene DS) or PTFE (eg. Synecor IP)
- Open equipment available
ROBOT VENTRAL PORT PLACEMENT
Robot Ventral Hernia Intraoperative Consideration

- Lower or upper midline hernias port placement
- Patient cart placed to allow straight line access for docking, 90 degrees to patient
- Equal spacing of robotic arms
- Inferior port at least 2cm superior-medial to ASIS
- Technician has access to 12mm port
- “Burp” arms towards ceiling after docking
Robot Ventral Hernia Intraoperative Consideration

- Take down adhesions
- Reduce omentum/bowel
- Clear surrounding fascia of pre-peritoneal fat, falciform ligament, etc
- Decrease CO2 pressure to 5-8mm Hg during hernia closure
- Measure defect
- Close hernia defect with running #1 barbed, non-absorbable suture
- Catch hernia sac during closure (avoid skin dimpling)
- Mark mesh with permanent marker on “shiny side”
- Place central stay suture if larger mesh and use Carter-Thomason to pull anteriorly
- Suture double-armed 0 absorbable barbed circumferentially and “quilt”
VENTRAL VIDEO
Robot Ventral Hernia Post-Op

- >90% go home same day
- They will be sore
- 4-6 weeks no heavy lifting
- Tylenol, Aleve, Oxycodone
- Shower the next day
Robot TAPP Inguinal Hernia Equipment

- Laparoscopic: 0 degree camera, optical view trocar, 12mm port?, needle driver
- Robotic: 30 degree camera, fenestrated bipolar, scissors, Large needle driver, 3x 8mm ports
- Mesh: Large 3D Max, ProGrip, other
- Suture: 2-0 barbed absorbable for peritoneum closure
Room Configuration
Robotic TAPP Inguinal Hernia Port Placement

**No assistant trocar**
Robot TAPP Inguinal Hernia
Intraoperative Considerations

- 12mm Trocar needed for 3D Max mesh
- Camera port slightly off midline
- Technician with easy access to Right hand instrument port
- Place mesh into abdomen prior to docking robot
- Arms equal spacing
- “Burp” ports towards ceiling
- 30 degree camera UP
Robot TAPP Inguinal Hernia
Intraoperative Considerations

- Start peritoneum dissection at ASIS or just inferior to medial umbilical folds converging
- Dissect to muscle medial to epigastric artery
- Leave fat up lateral to epigastric artery
- Develop Space of Bogros and Space of Retzius
- Expose pubic tubercle and be careful with venus plexus and Corona Mortis
- Reduce hernias
- Dissect peritoneum proximally (more than you think)
- Place mesh with slight overlap onto tubercles, cover both direct and indirect spaces
- Fixation?
- Close peritoneum defect with running 2-0 absorbable
ROBOT TAPP POST-OP

- 99% go home same day, unless medical comorbidities necessitate admission
- Tylenol, Aleve, (most will take 3 or less oxycodone)
- Ok to shower POD0
- No heavy lifting >20-25lbs for 4 weeks.
INGUINAL VIDEO