Robotic-Assisted Surgery in Urogynecology: Beyond Sacrocolpopexy

Marie Fidela R. Paraiso, M.D.
Professor of Surgery
Section Head, Urogynecology and Reconstructive Pelvic Surgery

Cleveland Clinic
Disclosures

- A Cell—522 Postsurveillance Study PI
- Coloplast Corporation—522 Postsurveillance Study PI and Unrestricted Research Grant
- Female Health Awareness-- Research Grant Support
- UptoDate Royalties for Publications
Objective

- To discuss indications for robotic-assisted laparoscopic surgery for pelvic floor disorders
- To demonstrate various surgical procedures and techniques that are robot-enabled
Reasons to Utilize Robotic Assistance in Gynecologic Laparoscopy in My Hands

- Sacrocolpoperineopexy +/- ventral rectopexy
  - Also with posterior rectopexy depending on the indications and surgeon preference
- Dual Mesh Sacral
  - Hysterocervicocolpoperineopexy
    - Including other modifications
- Supracervical hysterectomy and concomitant sacrocolpopexy
  - Especially with lesser skilled assistants
- Sacrocolpopexy + Burch + PVDR
Case #1

- 58 year old s/p previous laparoscopic enterocele repair with uterosacral vaginal vault suspension and rectocele repair with cadaveric fascia lata who complains of outlet dysfunction constipation.

- She splints perineum to defecate

- Examination shows Stage 2 vaginal apex prolapse with recurrent anterior rectocele and perineal descent

- Defocography confirms exam and demonstrates no intussusception
Robotic Sacrocolpoperineopexy

- Video shown with ventral rectopexy due to time constraints
- Surgical technique
Difficult to access perineum with laparotomy, perfect for LSC and Robot
Especially with 30 degree up or down scope
Combined Rectal Prolapse Surgery

- Video
- Surgical technique
- 24% of women have pelvic floor disorders
- Combined rectal and uterine/vaginal apex prolapse is uncommon
- Mucosal prolapse/Intussusception above anus: Ventral rectopexy
- Full thickness prolapse: Posterior dissection and direct attachment of rectosigmoid mesentary to sacrum
Side-docking the Robot is Optimal
Case #2

- 59 year old female with CREST syndrome and chronic Stage IV uterovaginal and full thickness rectal prolapse (9 cm beyond anal verge)
- Plan Robotic-assisted laparoscopic SCH, sacralcolpopexy, and ventral rectopexy
- Segment shows dissection
Videoclips
Sacral Colpoperineopexy
and
Ventral Rectopexy
Hysterosacrococolpopexy

- Video
- Surgical technique
- Cure rates for open procedure are 91-100%
- Improved quality of life and sexual function
- No data regarding laparoscopic or robotic sacro-hysterosacrococolpopexy

E Barranger et al, AJOG 2003
E Constantini et al, European Urol 2005
Video Clips Sacrohysteropexy

- Dissection of RV and VV spaces, formation of broad ligament windows
- Graft measurement and formation
- Graft attachment and tunneling
- Graft attachment to the sacrum
Hysterosacral Colpopexy Pearls

- Understand the contraindications
  - Negative uterine pathology must be confirmed
  - This particular technique is not recommended in women desiring future childbearing
  - Option is biologic graft or tunneling arms underneath Cardinal ligament and ureter

- Review the risks and benefits thoroughly with the patient
  - Future hysterectomy may be more difficult

- The procedure leads to improved anatomical outcomes and resolution of anterior apical vaginal wall and uterine prolapse
Supracervical Hysterectomy with Sacrocolpopexy

- Surgical technique and rationale
- A combination of both procedures but
  - I use bipolar to cauterize the endocervical canal
  - I stitch the canal closed
- Combine TVH or TLH with ASC but
  - Recommend 2 layered closure of cuff
  - If mesh is sewn on vaginally to save time, counsel your patients regarding increased risk of mesh erosion (Menefee et al 2010)
- Make sure that the patient has negative Paps and HPV testing
Conclusion

- Robotic-assisted laparoscopic sacrocolpopexy continues with widespread adoption despite lack of supporting data in RCTs
- This technology has enabled many surgeons to become minimally invasive surgeons
- Suture labor, difficult dissection, difficult access of surgical sites, and ease of manipulation are reasons to utilize this technology compared to conventional laparoscopy
- Sacral colpoperineopexy, sacral hysteropexy, concomitant rectopexy, and combined SCH or Burch+PVDR and ASC are facilitated with robotic assistance