

W9: Combined Rectal Prolapse and Pelvic Organ Prolapse Evaluation and Management: Data, Approaches and Surgical Videos

Workshop Chair: Shannon Wallace, United States
27 September 2023 15:35 - 17:05

Start	End	Topic	Speakers
15:35	15:40	Introduction and Objectives of Workshop	Shannon Wallace
15:40	15:50	Diagnosis and management of rectal prolapse (RP) by urogynecology and female urology	Anna Spivak
15:50	15:55	Questions	All
15:55	16:05	Diagnosis and management of pelvic organ prolapse (POP) by colorectal surgery	Shannon Wallace Heidi Brown
16:05	16:10	Questions	All
16:10	16:20	Data on complications and recurrence after combined RP and POP surgery	Shannon Wallace Anna Spivak
16:20	16:25	Questions	All
16:25	16:55	Surgical approaches to combined PR and POP surgery (with videos)	Shannon Wallace Heidi Brown Anna Spivak
16:55	17:05	Questions	All

Description

Background information:

Pelvic floor weakness can lead to protrusion of the bladder, rectum, small bowel, uterus and/or vaginal cuff through the vagina and/or protrusion of the mucosa or full thickness of the rectum through the anal canal. Patients with severely attenuated pelvic floor support can present with simultaneous prolapse of both the rectum and adjacent pelvic organs. In patients presenting with rectal prolapse (RP), the concurrent rate of pelvic organ prolapse (POP) is between 21% and 34%. The lack of recognition of the interrelated nature of the pelvic organs, muscles, and nerves has perpetuated fragmented care and often-incomplete assessment of pelvic floor dysfunction. With growing awareness of the pathophysiology of pelvic floor disorders, there has been a slow and steady trend toward team-based care of complex health issues, including pelvic floor dysfunction, with an emphasis on identification and surgical treatment of multicompartement pelvic organ prolapse.

In our multidisciplinary pelvic health clinic, we screen patients with urinary complaints, symptomatic prolapse, and defecatory dysfunction for a combined consultation and evaluation. Urogynecologists and female urologists should be trained to screen for rectal prolapse and defecatory dysfunction in their patients. Likewise colorectal surgeons should be trained to screen for pelvic organ prolapse as well as vaginal pressure and urinary symptoms in their female patients.

A thorough pelvic floor history should include questions about bladder and bowel symptoms, urinary and fecal incontinence, feelings of bulge from the vagina or rectum, difficulty emptying the bladder or bowels, sexual function and pain. Standardized tools such as the Pelvic Floor Distress Inventory (PFDI-20) and Pelvic Floor Impact Questionnaire (PFIQ-7) can be used to assess symptom severity and impact on quality of life.

Female Pelvic Medicine Focused History and Examination

A focused history includes questions about previous prolapse and anti-incontinence surgeries, obstetric history such as operative deliveries (forceps/vacuum) and perineal lacerations involving the anal sphincter, and any genitourinary disorders. Daytime and nighttime urinary frequency and urinary incontinence, history of urinary tract infections, a sensation of incomplete bladder emptying, hematuria, vaginal pain, and vaginal bulge/pressure should also be assessed. Abnormal vaginal bleeding or discharge should be addressed as these could be a result of poor vaginal tissue quality (atrophy) or uterine pathologies, such as endometrial hyperplasia or cancer. The vaginal exam is performed in the supine or standing position. A Pelvic Organ Prolapse Quantification (POP-Q) exam is performed to determine the extent of anterior, apical, or posterior vaginal prolapse with Valsalva(14). Vaginal prolapse is staged from 1 to 4, with stage 1 being minimal prolapse and stage 4 being complete eversion of the uterovaginal tissue. Urinary leakage with cough or Valsalva is also determined. The uterus and adnexa are palpated for any masses, and a Kegel squeeze is elicited to determine pelvic floor muscle strength.

Colorectal Focused History and Examination

A focused bowel history should include: bowel consistency and frequency, use of laxative or bowel stoppers, and digital or positional maneuvers required to defecate. The presence of mucus discharge, fecal soiling or leakage, and urgency or passive

incontinence may suggest internal or occult external rectal prolapse, sphincter dysfunction or dyssynergic defecation. Rectal examination can be performed squatting, standing, on the commode, or in the lateral position. Patients are encouraged to bring in a picture of the prolapse in situations where it can be painful or difficult to elicit during examination. Visual inspection of the anus is reported as closed, open, or patulous, and visible contractions of the sphincter with squeeze and movement of the pelvic floor with Valsalva are documented. Anoscopy visualizes the hemorrhoid complex and can help to identify internal or full-thickness rectal prolapse. Colonoscopic evaluation is performed in women who are at risk for colon cancer or for those women over the age of forty-five years old.

Pelvic Floor Testing

Although clinical examination is considered the gold standard when it comes to the diagnosis of prolapse, additional pelvic floor testing can identify occult pathology that can lead to treatment failures. MRI defecography (MRD) helps to identify multicompartiment or occult prolapse, enterocele, sigmoidocele and perineoceles. Anorectal manometry helps to determine anal sphincter pressures, rectal sensation, and muscle coordination.

Urodynamic testing is a combination of procedures to determine bladder and urethral function and can be performed with reduction of vaginal prolapse using vaginal swabs or pessaries. Of women with vaginal prolapse, 40% suffer from stress urinary incontinence (urinary leakage with activity, lifting, or coughing/sneezing) and 37% have overactive bladder (15). In addition, roughly 25% of women who undergo abdominal sacrocolpopexy for vaginal prolapse report bothersome stress urinary incontinence after surgery (16). Correction of anterior and apical vaginal prolapse may “unkink” the urethra and bladder neck, unmasking stress urinary incontinence. Preoperative urodynamic testing may help identify patients at higher risk for de novo postoperative stress urinary incontinence who can be offered prophylactic anti-incontinence procedures at the time of prolapse repair.

For women with both POP and RP, there is an increasing trend to offer concomitant combined surgical repair as part of a multidisciplinary evaluation and treatment approach. A recent American College of Surgeons National Surgical Quality of Improvement Program (ACS NSQIP) study has demonstrated that the number of combined POP+RP surgeries has increased from 2.6% to 7% over the past decade. Combined rectal prolapse and pelvic organ prolapse surgery provides significant quality-of-life benefits as both rectal prolapse and pelvic organ prolapse symptoms improve in the patient. The advantages of one operation include a reduced risk of anesthesia, a single hospital stay and recovery period, decreased pain medications and less time off work for the patient. Despite the longer operative time than rectal prolapse surgery or pelvic organ prolapse surgery alone, costs are less as operating room equipment costs are minimized and the total cost of a second operation is avoided. Taking into account the similar presacral space dissection in both rectopexy and sacrocolpopexy, performing combined rectal prolapse and pelvic organ prolapse surgery can reduce the operative time compared to performing each surgery independently. Correction of the vaginal and rectal anatomy concurrently also maximizes the optimal anatomic position of the pelvic organs. Closure of the peritoneum over the mesh that is fixed to the rectum and vagina ensures proper isolation of the pelvic inlet, closure of the cul de sac and addresses the enterocele/sigmoidocele as well.

Rectal and vaginal prolapse can both be treated with an array of surgical procedures. Repair of concurrent prolapse may be abdominal (robotic, laparoscopic, or open) or perineal. Surgical approach is determined by surgeon preference and experience, patient’s goals, medical comorbidities, frailty, and presence and type of prior prolapse repairs. A perineal approach is recommended for frail patients with perineal proctectomy and colpocleisis. In younger and healthier patients, a laparoscopic or robotic abdominal approach is often preferred and the rectal and vaginal prolapse is frequently repaired by ventral rectopexy and sacrocolpopexy using a mesh or graft.

Outcomes of Combined Repairs

Published data on combined rectal prolapse and pelvic organ prolapse surgical outcomes are limited. Most studies that report outcome data have small cohort sizes, short follow-up periods and primarily describe results of mixed abdominal repairs, including open, laparoscopic and robotic approaches. Data focusing specifically on combined robotic repair is less robust and long-term outcome data on the surgical treatment of concurrent prolapse is scarce.

Recently, large national databases have been utilized to analyze the trends in combined prolapse surgery and to better understand postoperative complications and recurrence rates. Data from the Optum database, a national administrative database, showed that, among patients who underwent combined surgeries between 2003 to 2017, 8.3% of patients had a failed surgery that resulted in a repeat surgical repair. Clinical application of this data is limited as the study included patients who underwent both abdominal and perineal procedures and did not specifically track those patients who received combined robotic repairs.

The ACS National Surgical Quality Improvement Program (NSQIP) is a prospective surgical registry which hospitals use to track their risk-adjusted outcomes after surgery. Data from the NSQIP between 2005 and 2014 identified 3600 women who underwent rectopexy, of which 206 women underwent a combined procedure with a sacrocolpopexy. Overall morbidity was similar between rectopexy only and combined procedure groups (14.8% vs. 13.6%, $p=0.65$). After controlling for the addition of a resection to a rectopexy procedure, elevated BMI, smoking, wound class, ASA class and other patient factors, the addition of

sacrocolpopexy to rectopexy did not increase overall morbidity (OR 1.00, p=0.98). A later NSQIP study of vaginal and rectal prolapse surgeries from 2013 to 2016 found 123 concurrent laparoscopic sacrocolpopexy and rectopexy cases. Complication rates between colpopexy, rectopexy, and concurrent procedures were not significantly different (6.2%, 7.6%, and 8.9%; p=0.058), although concurrent procedures had the highest surgical site and urinary tract infection rates (all p < 0.05). The NSQIP database is also limited as it neither provides long-term morbidity data nor long-term recurrence rates or reoperations.

Most recently, van Zanten et al have published long term outcomes of their prospective cohort of 53 patients who underwent robotic-assisted sacrocolporectopexy. In this cohort, the median follow-up time was 48.2 months and 10 patients had prolapse recurrence: 2 (3.8%) had vaginal apical prolapse and 8 (15.1%) had internal rectal prolapse. Two (3.8%) patients underwent rectal prolapse reoperation and 1 (2.0%) patient had a vaginal mesh erosion which was managed conservatively.

As surgeons have become more experienced with combined prolapse surgery technique, complication rates and reoperation for recurrent prolapse have decreased. In 2020, Campagna et al published on their prospective cohort of 98 patients who underwent laparoscopic sacrocolpopexy plus ventral rectopexy for concurrent prolapse. No patients had intraoperative complications or required conversion to open. Post-operatively, 1 (1.0%) patient developed a urinary tract infection which was treated with antibiotics and 1 (1.0%) patient developed a fever which resolved with paracetamol. Patients were followed for a median length of 12 months (range 12-36 months). No patients had recurrent rectal prolapse and 1 (1.0%) patient had recurrent posterior vaginal wall prolapse which did not require reoperation.

Counseling patients regarding outcomes after combined rectal prolapse and pelvic organ prolapse surgery can be challenging due to the heterogeneity of surgical approaches as well as the wide range of complication and recurrence rates. Follow-up times vary as do the definitions of prolapse recurrence. Researchers may choose to define prolapse recurrence by symptoms, physical examination or need for reoperation and these definitions are inconsistent in the literature. The risk of complications also differs based on surgical approach, surgeon experience and patient frailty and health status.

Surgical Decision Making

Factors that need to be considered when offering procedures to women with combined prolapse include: health status/ frailty, prior abdominal surgeries that could lead to a hostile surgical abdomen, presence of uterus, and patients' feelings about mesh or biological graft. A perineal procedure is recommended for frail individuals at high risk for abdominal surgery or for those women whose abdominal access is known to be treacherous.

Key learning points

1. Multicompartment pelvic organ prolapse is common yet frequently underreported and unrecognized.
2. Although not life-threatening, the impact on quality of life and daily functioning can be significant
3. Multidisciplinary evaluation and treatment with specialists in colorectal and urogynecologists/female urologists help to identify patients who will benefit from surgical treatment of vaginal and rectal prolapse
4. Both abdominal and perineal combined procedures can be offered to patients with a single operation and concurrent recovery period without increasing complications.
5. Outcomes after combined rectal prolapse and pelvic organ prolapse surgery can be challenging due to the heterogeneity of surgical approaches as well as the wide range of complication and recurrence rates.
6. Recent data suggests that patients who are candidates for combined POP and RP surgery can be counseled that they are likely to have similar postoperative complication rates and POP recurrence rates compared to those patients undergoing POP surgery alone.

Take home messages

Combined rectal and pelvic organ prolapse causes significant patient distress and requires a multidisciplinary management approach. Treating these patients while working in concert with other specialties is rewarding and educational. Consideration of patient factors and goals are necessary for successful surgical management and perioperative care.

Aims of Workshop

This workshop focuses on the diagnosis and management of combined rectal prolapse (RP) and pelvic organ prolapse (POP). Patients with POP are likely under screened for RP and patients with RP are likely under screened for POP. We will highlight which POP patients should undergo further work-up for RP and which RP patients should undergo further work-up for POP. We will briefly discuss conservative management and more thoroughly discuss surgical management of combined prolapse. Outcomes data on the complications and prolapse recurrence after combined RP and POP surgery will be presented. We will then discuss surgical approaches and techniques to combined surgery through videos.

Educational Objectives

Rectal prolapse is likely under-screened and under-diagnosed in our patients with pelvic organ prolapse and likewise pelvic organ prolapse is likely under-screened and under-diagnosed in our patients with rectal prolapse. This workshop is designed to

educate providers who evaluate these patients and assist them in diagnosing and managing these concomitant pelvic floor disorders. In addition, surgical videos and techniques will be presented which workshop attendees can then use during their own surgical cases.

Participants will have the opportunity to ask questions to the panelists and comment on the surgical videos. The first half of the workshop has broad appeal as it provides background on the clinical presentation and work-up of concomitant prolapse which can be useful to nurses, nurse practitioners, physiotherapists, urogynecologist, female urologists and colorectal surgeons. The last half of the workshop is aimed at surgeons who are performing these procedures and provides data on surgical outcomes and surgical videos.

Learning Objectives

1. To better understand the clinical presentation and work-up of patients with combined rectal prolapse (RP) and pelvic organ prolapse (POP)
2. To better understand the current outcomes data on complications and prolapse recurrence after combined RP and POP surgery
3. To better understand the surgical approaches and techniques to combined RP and POP surgery

Target Audience

Urology, Urogynaecology and Female & Functional Urology, Bowel Dysfunction

Advanced/Basic

Intermediate

Suggested Learning before Workshop Attendance

1. Altman, D., et al., Pelvic organ prolapse and urinary incontinence in women with surgically managed rectal prolapse: a population-based case-control study. *Dis Colon Rectum*, 2006. 49(1): p. 28-35.
2. Naldini, G., et al., Complex pelvic organ prolapse: decision-making algorithm. *Int J Colorectal Dis*, 2019. 34(1): p. 189-192
3. Geltzeiler, C.B., et al., Combined rectopexy and sacrocolpopexy is safe for correction of pelvic organ prolapse. *Int J Colorectal Dis*, 2018. 33(10): p. 1453-1459.
4. van Iersel, J.J., et al., Robot-Assisted Sacrocolporectopexy for Multicompartment Prolapse of the Pelvic Floor: A Prospective Cohort Study Evaluating Functional and Sexual Outcome. *Dis Colon Rectum*, 2016. 59(10): p. 968-74.
5. Campagna, G., et al., Laparoscopic sacrocolpopexy plus ventral rectopexy as combined treatment for multicompartment pelvic organ prolapse. *Tech Coloproctol*, 2020. 24(6): p. 573-84.
6. Speed, J.M., et al., Trends in the Diagnosis and Management of Combined Rectal and Vaginal Pelvic Organ Prolapse. *Urology*. 2020. 150: p 188-93.
7. van Zanten, F., et al., Long-term Anatomical and Functional Results of Robot-Assisted Pelvic Floor Surgery for the Management of Multicompartment Prolapse: A Prospective Study. *Dis Colon Rectum*, 2020.
8. Reddy, J., et al., Robotic sacrocolpoperineopexy with ventral rectopexy for the combined treatment of rectal and pelvic organ prolapse: initial report and technique. *J Robot Surg*, 2011. 5(3): p. 167-73.
9. Ayav, A., et al., Surgical management of combined rectal and genital prolapse in young patients: transabdominal approach. *Int J Colorectal Dis*, 2005. 20(2):173-9.
10. Collopy, B.T., et al., Abdominal colporectopexy with pelvic cul-de-sac closure. *Dis Colon Rectum*, 2002. 45(4): p: 522-9.
11. Kiyasu, Y., et al., Laparoscopic ventral rectopexy with sacrocolpopexy for coexisting pelvic organ prolapse and external rectal prolapse. *J Anus Rectum Colon*, 2018. 1(4): p:141-146.
12. Lim, M., et al., Surgical management of pelvic organ prolapse in females: functional outcome of mesh sacrocolpopexy and rectopexy as a combined procedure. *Dis Colon Rectum*, 2007. 50(9): p. 1412-21.
13. Popp, L., et al., Pelvic floor-lifting: an interdisciplinary repair of combined rectal and vaginal prolapse-5 years' experience. *Arch Gynecol Obstet*, 2013. 288(1): p. 83-90.
14. Riansuwan, W., et al., Combined surgery in pelvic organ prolapse is safe and effective. *Colorectal Dis*, 2010. 12(3): p. 188-92.
15. Sagar, P.M., et al., Feasibility and functional outcome of laparoscopic sacrocolporectopexy for combined vaginal and rectal prolapse. *Dis Colon Rectum*, 2008. 51(9): p. 1414-20.
16. Slawik, S., et al., Laparoscopic ventral rectopexy, posterior colporrhaphy and vaginal sacrocolpopexy for the treatment of recto-genital prolapse and mechanical outlet obstruction. *Colorectal Dis*, 2008. 10(2): p. 138-143.
17. Wallace, S.L., et al., Surgical approach, complications, and reoperation rates of combined rectal and pelvic organ prolapse surgery. *Int Urogynecol J*, 2020; 31(10): p. 2101-8.
18. Watadani, Y., et al., Sacrocolpopexy with rectopexy for pelvic floor prolapse improves bowel function and quality of life. *Dis Colon Rectum*, 2013. 56(12): p. 1415-22.
19. Yang, S.J., et al., Laparoscopic Vaginal Suspension and Rectopexy for Rectal Prolapse. *Ann Coloproctol*, 2017. 33(2): p. 64-9.