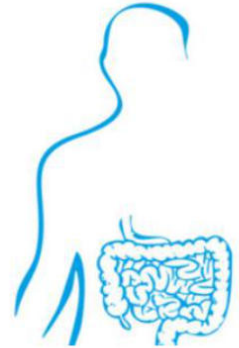


The perfect prolapse treatment ?!



Dr. med. Antje Lechleiter

DARM
ZENTRUM BERN



INSELSPITAL

UNIVERSITÄTSSPITAL BERN
HÔPITAL UNIVERSITAIRE DE BERNE

Universitätsklinik für
Viszerale Chirurgie und Medizin

14.01.2023 Everyday Worries of Coloproctologists

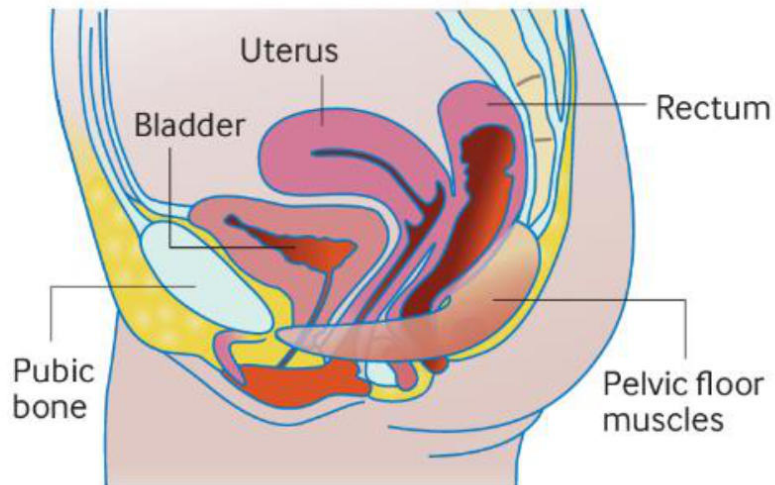
Typical Monday



POP-SS!



Pelvic organ prolapse



Pelvic organ prolapse

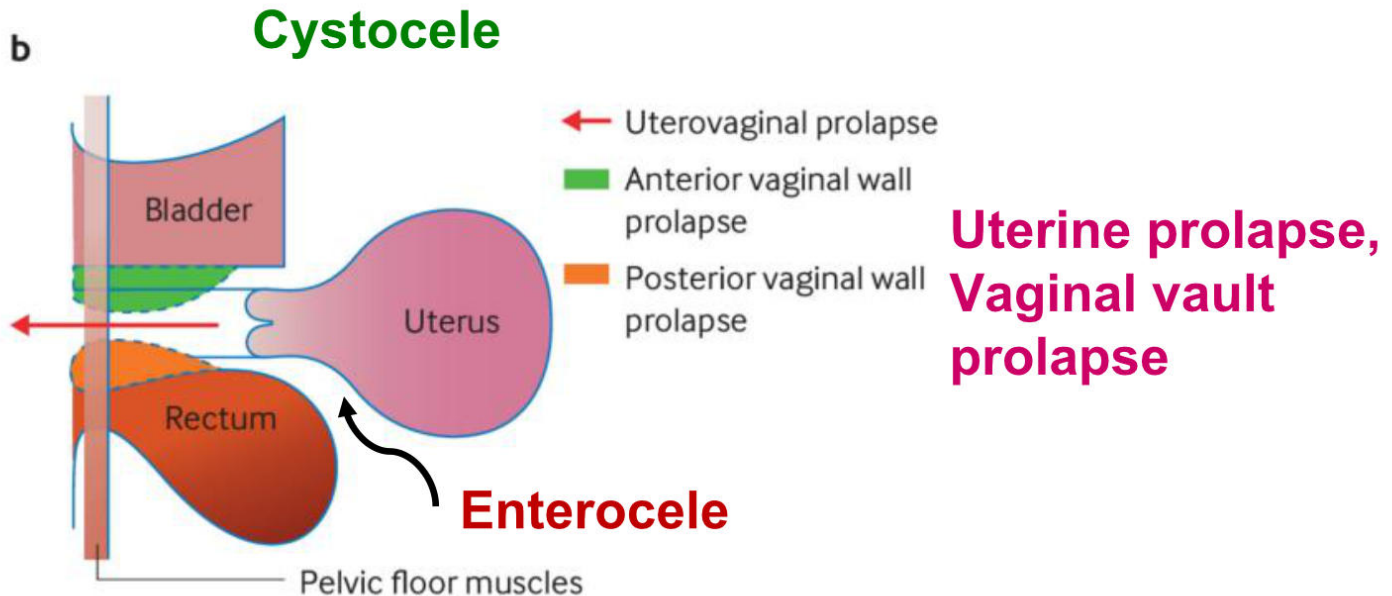
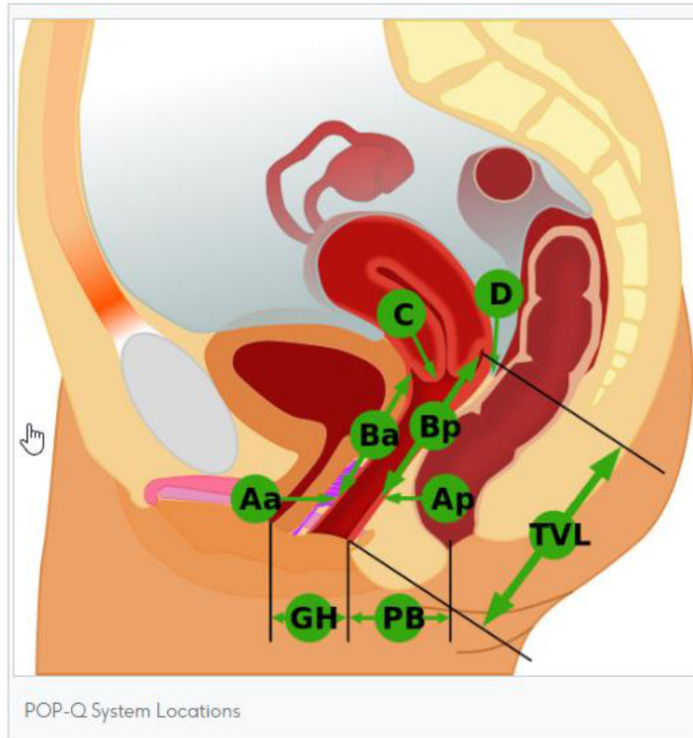


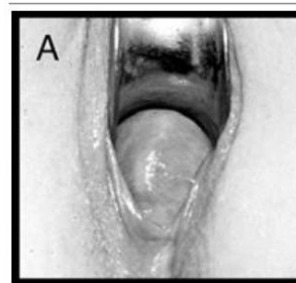
Fig 1 | Anatomy of female pelvic floor (a)* and a schematic diagram (b). Red arrow=uterovaginal prolapse; green lines=anterior wall vaginal prolapse; orange lines=posterior wall vaginal prolapse. B=bladder; U=uterus; R=rectum; PF=pelvic floor. *Adapted from the International Urogynaecology Association¹⁰

**Rectocele,
Intussusception /
Rectal prolapse**

Pelvic organ prolapse



anterior wall Aa	anterior wall Ba	cervix or cuff C
genital hiatus gh	perineal body pb	total vaginal length tvl
posterior wall Ap	posterior wall Bp	posterior fornix D



Grade 1-3

What patients to expect

- **0,5% of the general population**
- **advanced age**
- **female** (women > 50 yrs 6 times more likely)

What else?

- **Parity** (1/3 nullipara!)
- **Menopause**
- **Hysterectomy** (?)
- **Obesity**
- **Elevated intraabdominal pressure**
- **Collagen abnormality** (Ehlers Danlos)

What symptoms to expect

- **Urinary symptoms**
- **Bulge or pressure symptoms**
- **Defaecatory symptoms**
 1. **Outlet problems (constipation, incomplete voiding) (25-50%)**
 2. **Faecal incontinence (50-75%)**
- **Prolapse, leakage of blood / mucus**
- **Pain**

Data check

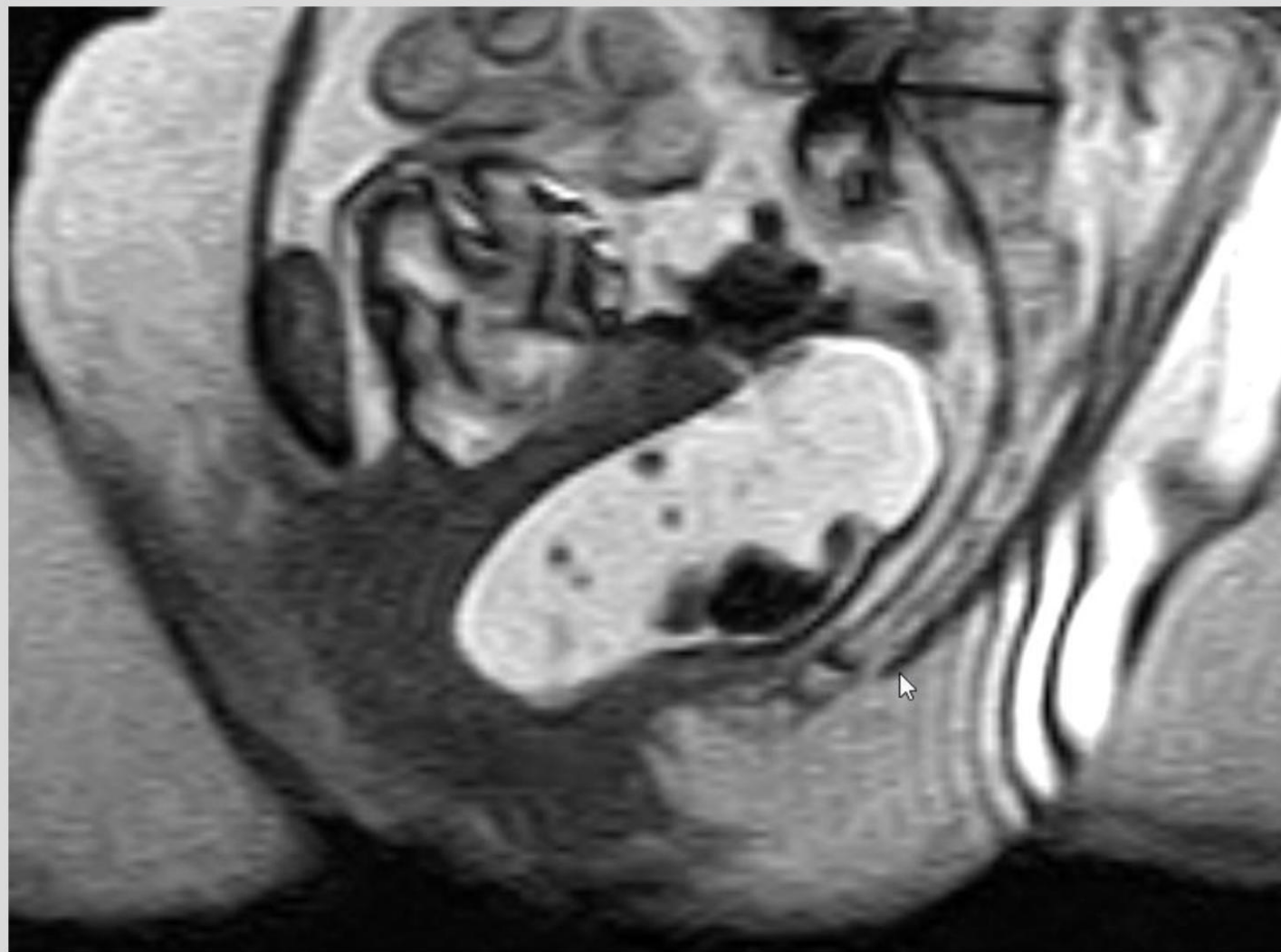
- **Reason for consultation**
- **Colonoscopy / Rectoscopy** (10-15% solitary rectal ulcer)
- **Analrectal manometry**
- **Defaecography (X-ray / MRI)**
- **Urodynamics**

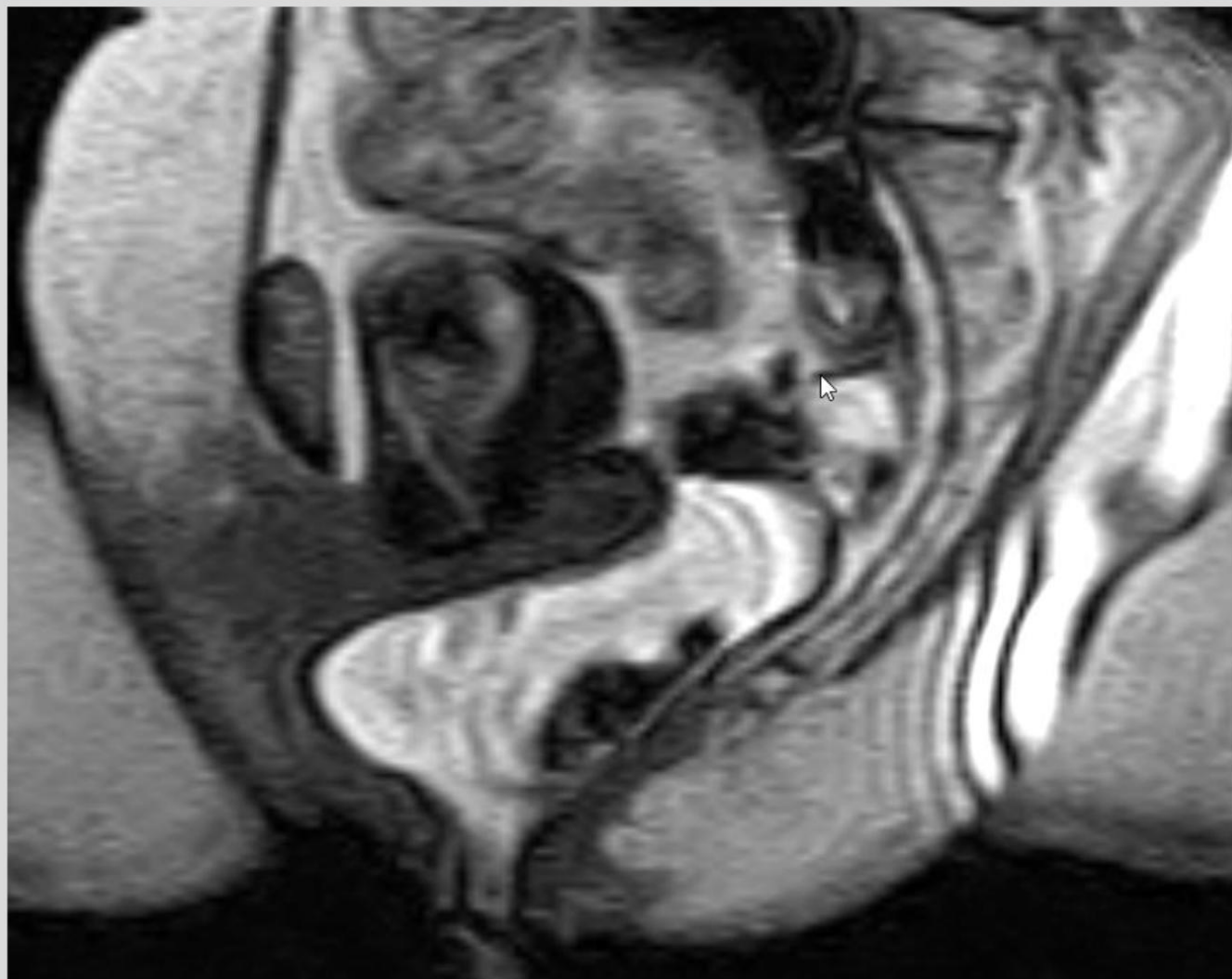
1st patient

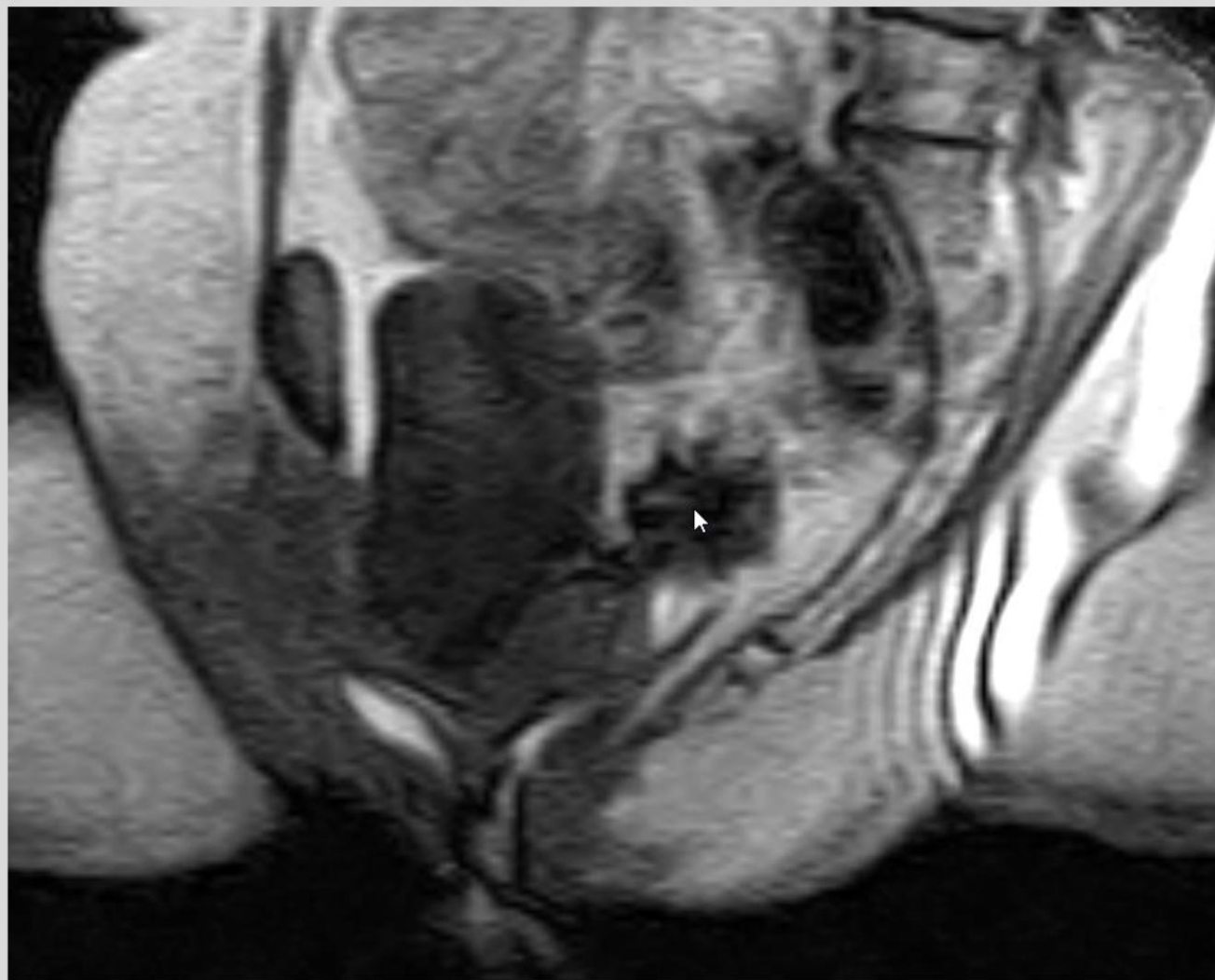
- Mrs RA 65 yrs old
- difficult stool voiding, no incontinence
- recurrent urinary infections
- uneventful spontaneous births (3x)
- BMI 27 kg/m²
- 12/2019 Laparoscopic supracervical hysterectomy, bilateral cervico-sacropexy (CESA)

1st Patient

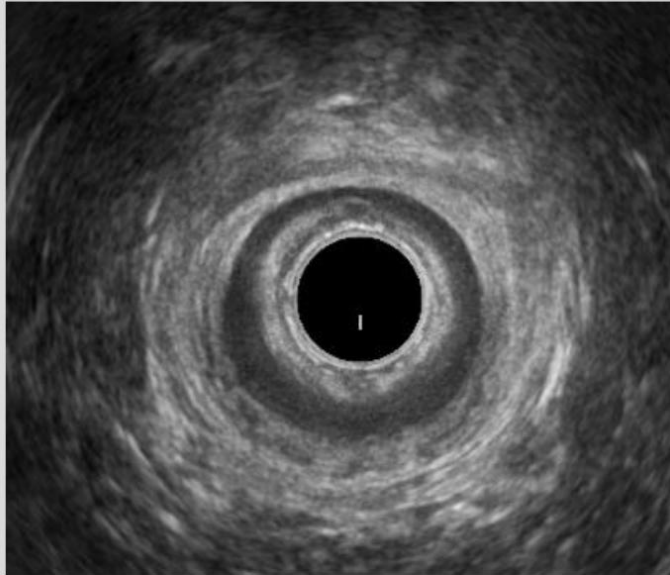
- MRI Pelvis
- Colonoscopy – sigmoid diverticulosis
- Hinton Test – slow transit
- Anorectal manometry – normal
- MR Defaecography







- Endosonography

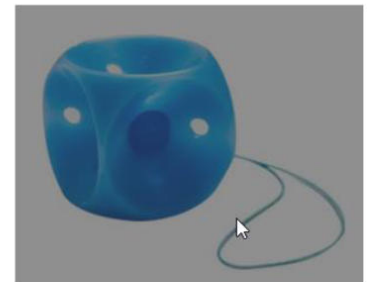


- **to operate or not to operate ?**
- **abdominal or perineal procedure ?**
- **foreign material ?**
- **synthetic or biologic meshes ?**
- **open / laparoscopic / robotic ?**
- **combined procedure with the gynaecologists ?**

That is the question...

Conservative Treatment

- Life style changes (lose weight, treat constipation, avoid straining, stop smoking, avoid heavy lifting)
- Pelvic floor muscle training
- Estrogen therapy
- Vaginal pessaries



Operation Techniques



Goals

- **Eliminate the prolapse and restoration of normal anatomy**
- **Correct associated functional abnormalities of constipation or incontinence**
- **Avoid the creation of de novo bowel dysfunction**

Operation Techniques

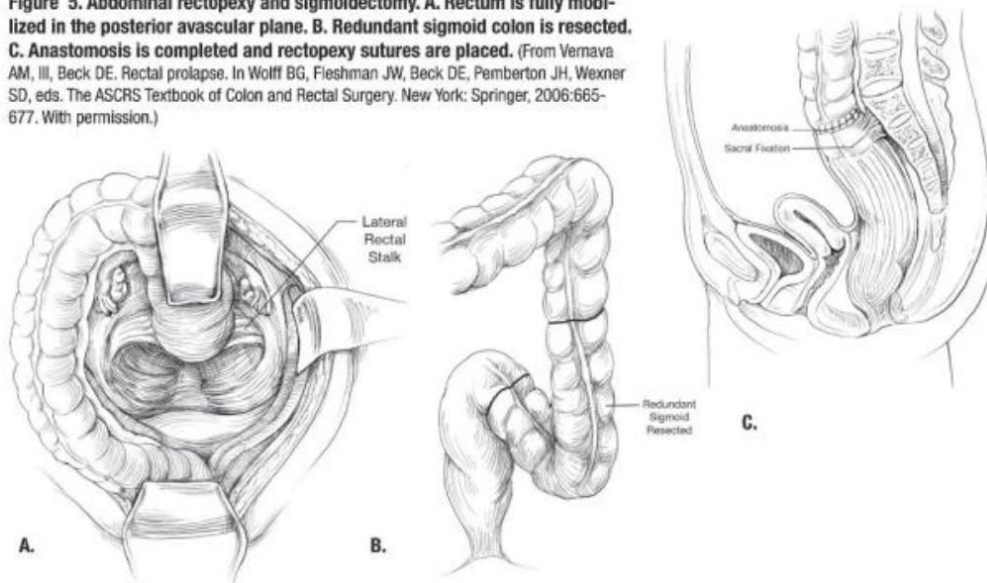
- **From the inside (through the abdomen)**
- **From the outside (through the vagina / rectum)**

Abdominal procedures

- **Posterior rectal dissection techniques**
- **Posterior suture rectopexy**
- **Posterior mesh rectopexy (Ripstein repair / modified Wells procedure)**
- **Resection rectopexy**
- **Ventral mesh rectopexy (D`Hoore)**

Resection rectopexy (Frykman)

Figure 5. Abdominal rectopexy and sigmoidectomy. A. Rectum is fully mobilized in the posterior avascular plane. B. Redundant sigmoid colon is resected. C. Anastomosis is completed and rectopexy sutures are placed. (From Vernava AM, III, Beck DE. Rectal prolapse. In Wolff BG, Flesherman JW, Beck DE, Pemberton JH, Wexner SD, eds. The ASCRS Textbook of Colon and Rectal Surgery. New York: Springer, 2006:665-677. With permission.)

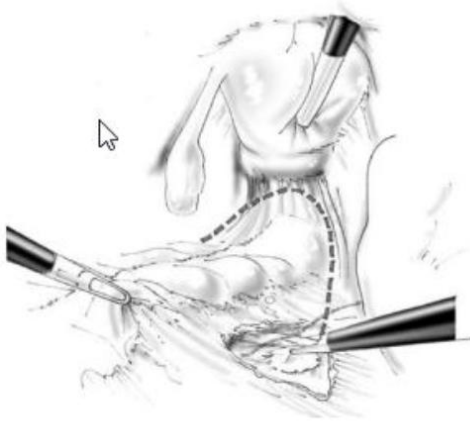


Rectal Prolapse: A 10-Year Experience

Kerry Hammond, MD, David E. Beck, MD, David A. Margolin, MD,
Charles B. Whitlow, MD, Alan E. Timmcke, MD, Terry C. Hicks, MD

Department of Colon and Rectal Surgery, Ochsner Clinic Foundation, New Orleans, LA

Ventral mesh rectopexy (D`Hoore)



Technique

Surg Endosc (2006) 20: 1919–1923
DOI: 10.1007/s00464-005-0485-y

© Springer Science+Business Media, Inc. 2006

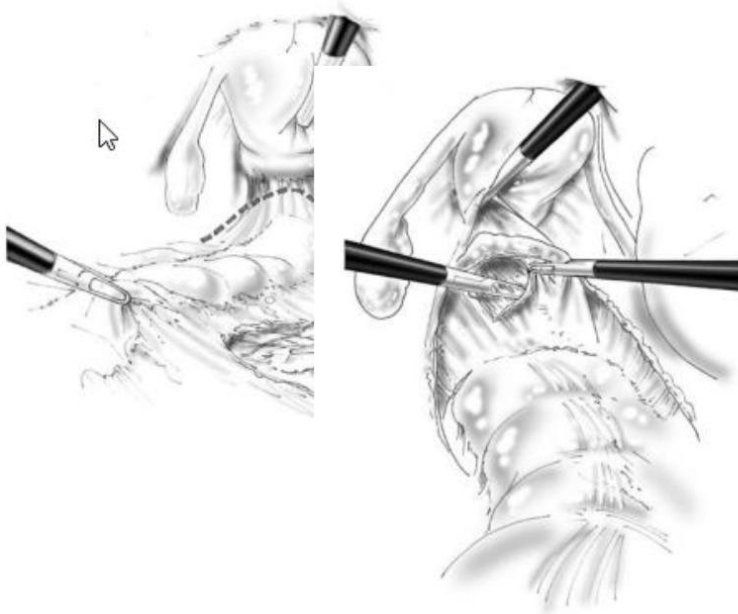


Laparoscopic ventral recto(colpo)pe^Txy for rectal prolapse: surgical technique and outcome for 109 patients

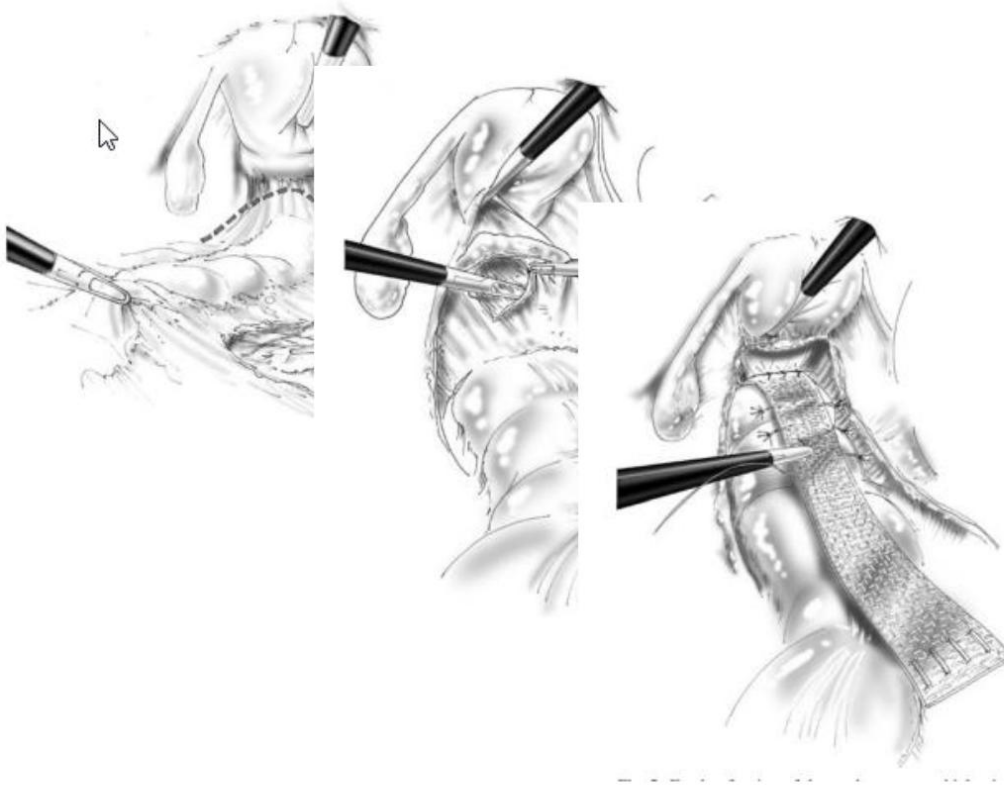
A. D'Hoore, F. Penninckx

Department of Abdominal Surgery, University Hospital Gasthuisberg, Herestraat 49, 3000 Leuven, Belgium

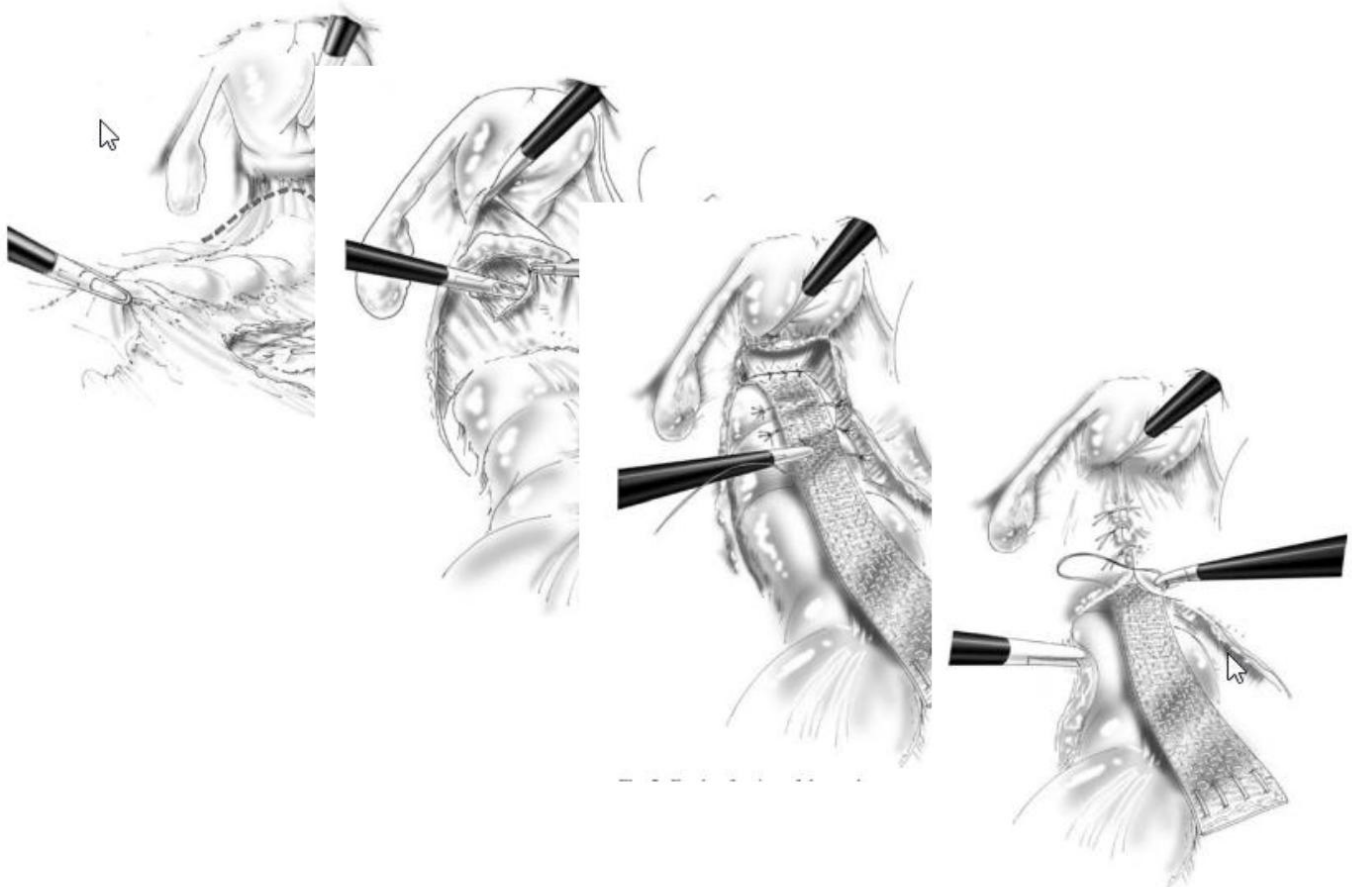
Ventral mesh rectopexy (D`Hoore)



Ventral mesh rectopexy (D`Hoore)



Ventral mesh rectopexy (D'Hoore)



Perineal proctosigmoidectomy

4 Longo A. Obstructed defecation because of rectal pathologies. Novel surgical treatment: stapled transanal rectal resection (STARR). Annual Cleveland Clinic Florida Colorectal Disease Symposium 2004

Original article

doi:10.1111/j.1463-1318.2008.01714.x

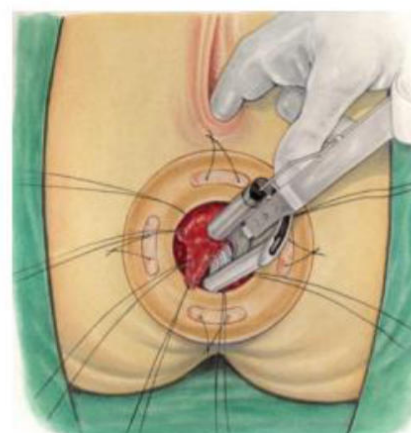
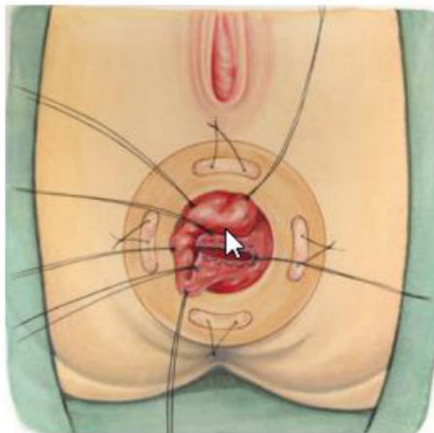
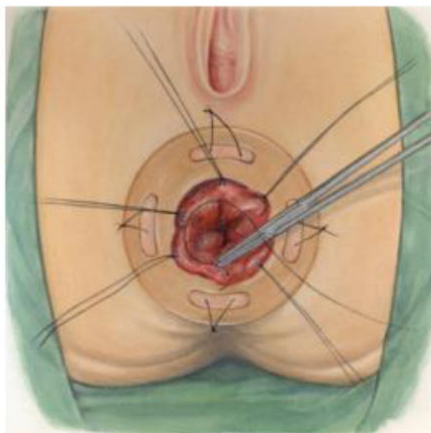


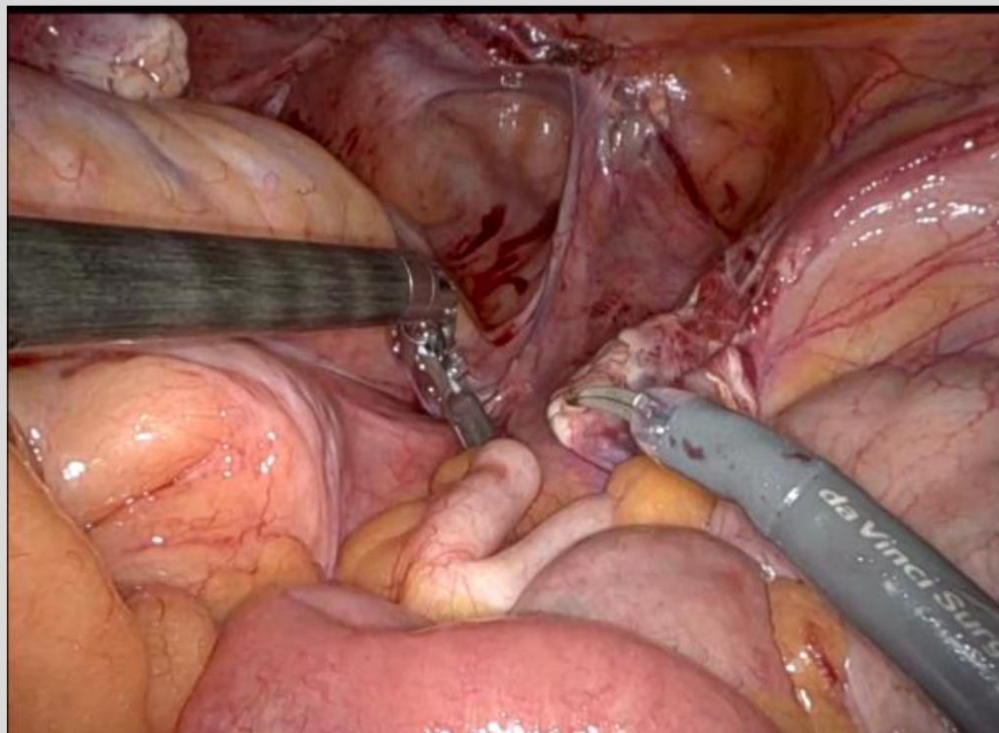
STARR with Contour[®] Transtar[™]: prospective multicentre European study

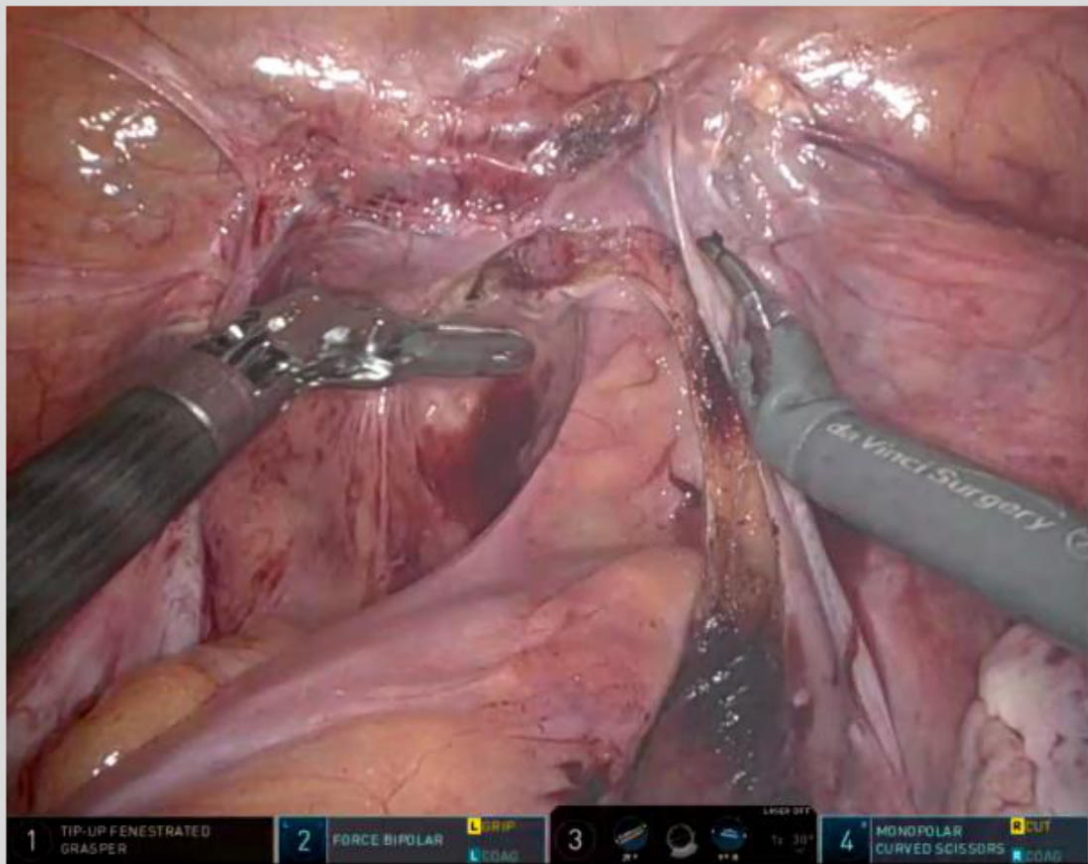
L. Lenisa*, O. Schwandner†, A. Stuto‡, D. Jayne§, F. Pigot¶, J.J. Tuech**, R. Scherer††, K. Nugent‡‡, F. Corbisier§§, E. Espin-Basany*¶ and F. H. Hetzer***

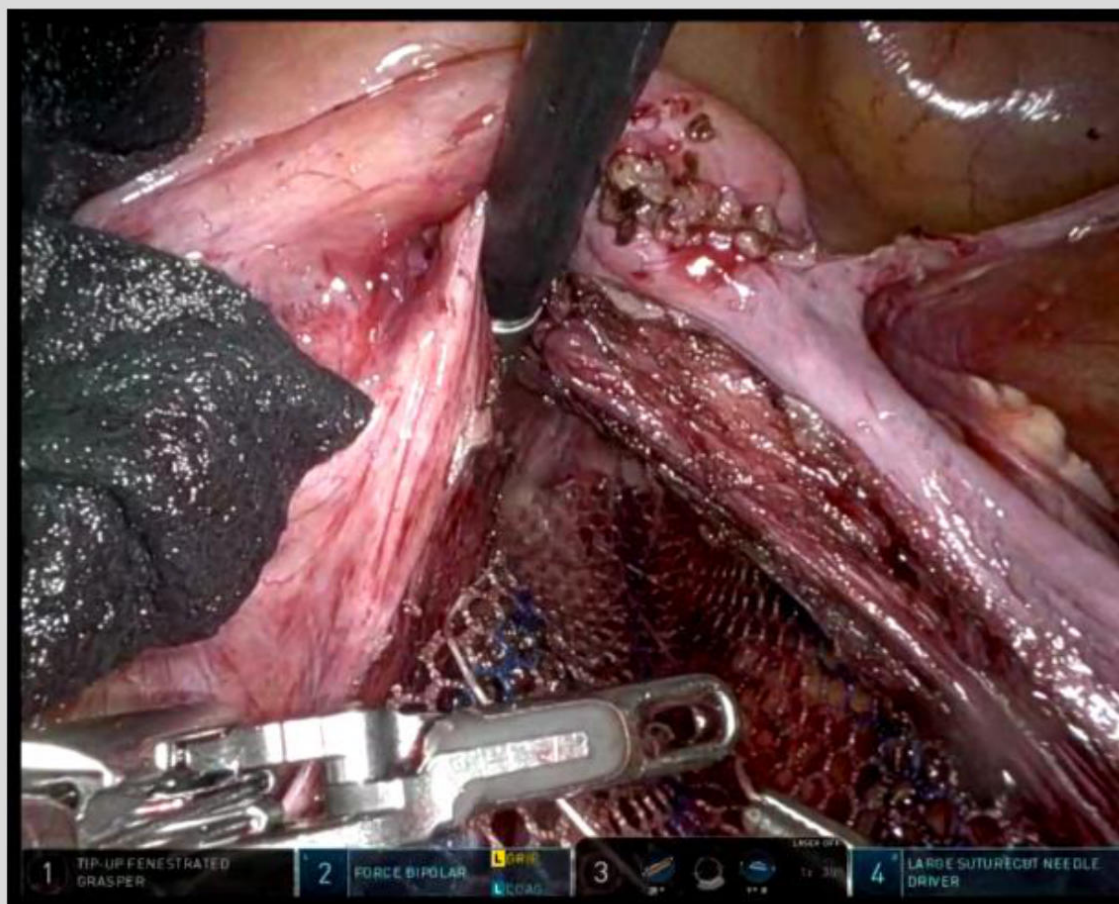
*Department of Surgery, Casa di Cura San Pio X, Milan, Italy, †Department of Surgery, Caritas-Krankenhaus St. Josef, Regensburg, Germany, ‡Department of Surgery, Ospedale S. Maria degli Angeli, Pordenone, Italy, §Academic Surgical Unit, St James University Hospital, Leeds, UK, ¶Department of Proctology, Bagatelle-Maison de Sante, Talence-Cedex, France, **Department of Digestive Surgery, University Hospital, Rouen, France, ††Department of Surgery, Krankenhaus Waldfriede, Berlin, Germany, ‡‡Department of Surgery, General Hospital, Southampton, UK, §§Department of Surgery, CHND.R.F., Charleroi, Belgium, ¶¶Department of Surgery, Hospital Valle de Hebron, Barcelona, Spain and ***Department of Surgery, Cantonal Hospital, St Gallen, Switzerland

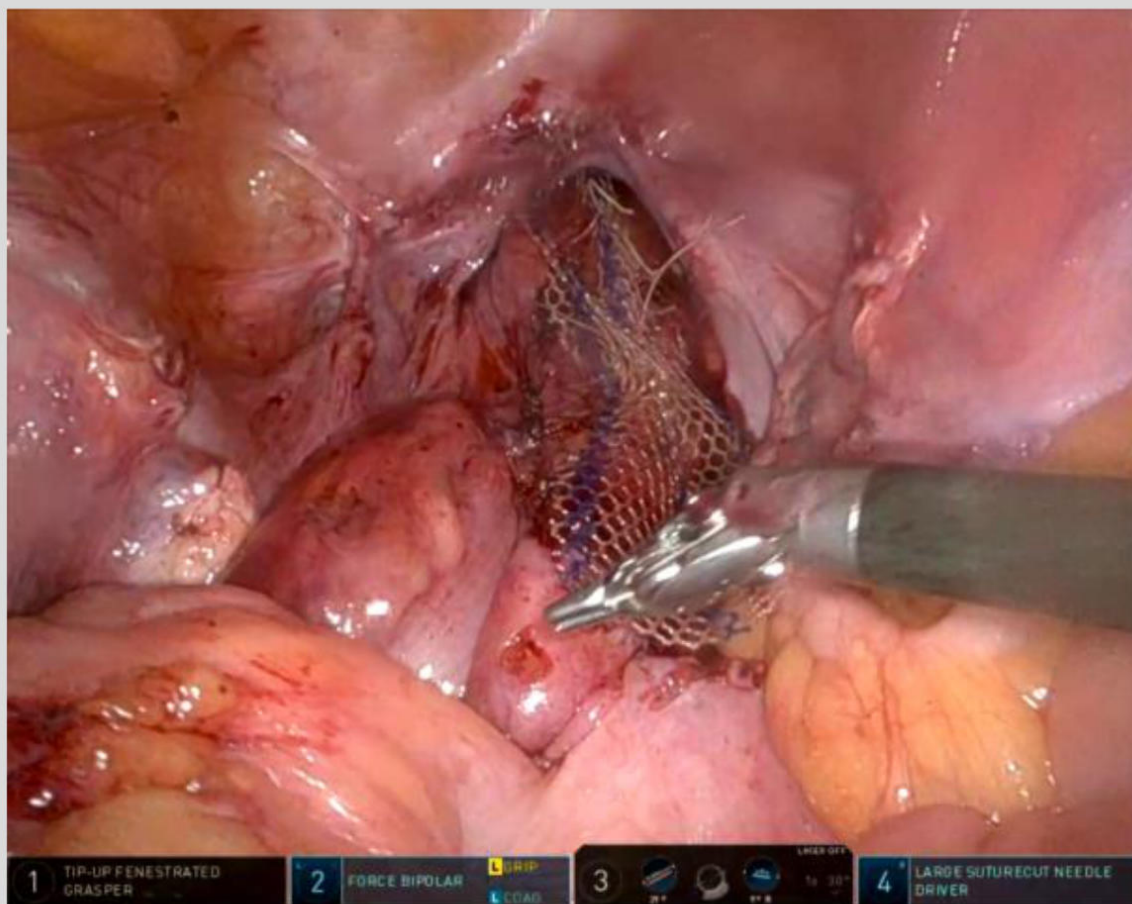
Received 27 June 2008; accepted 2 August 2008

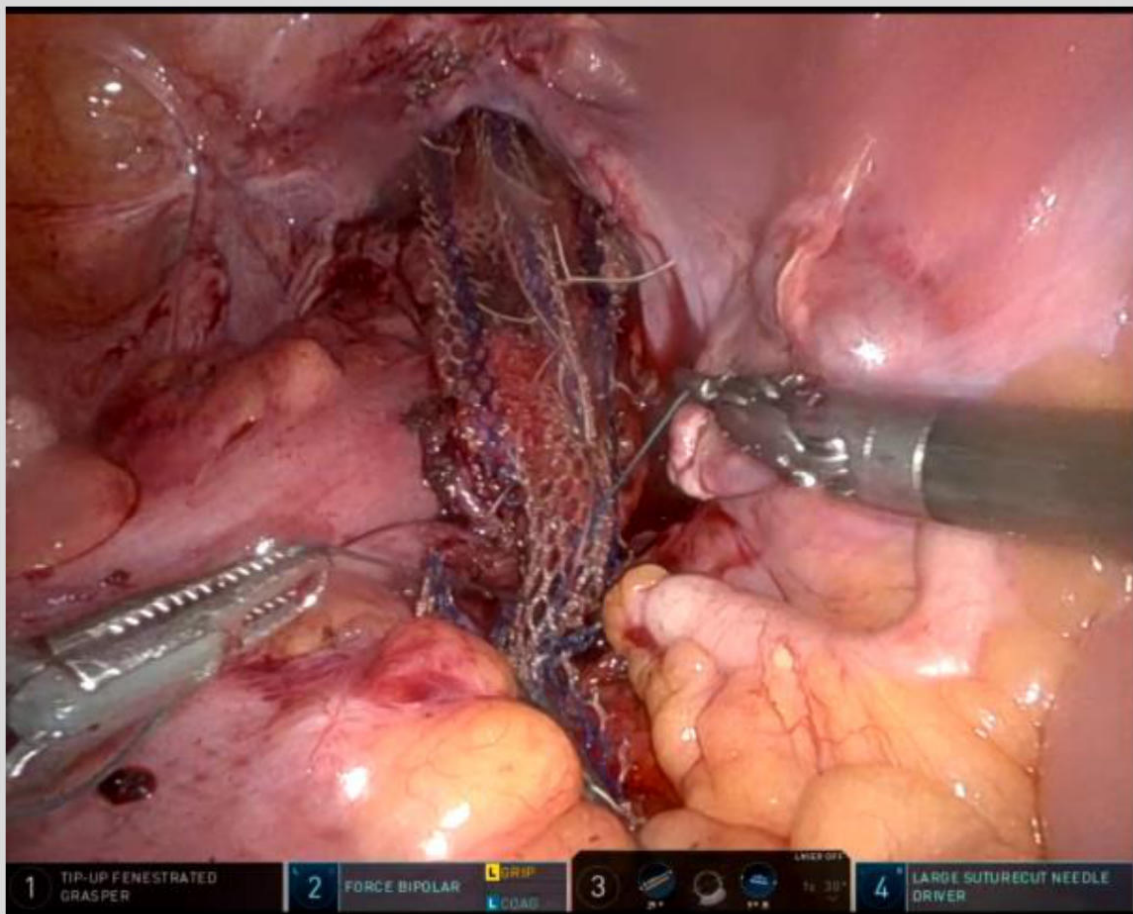


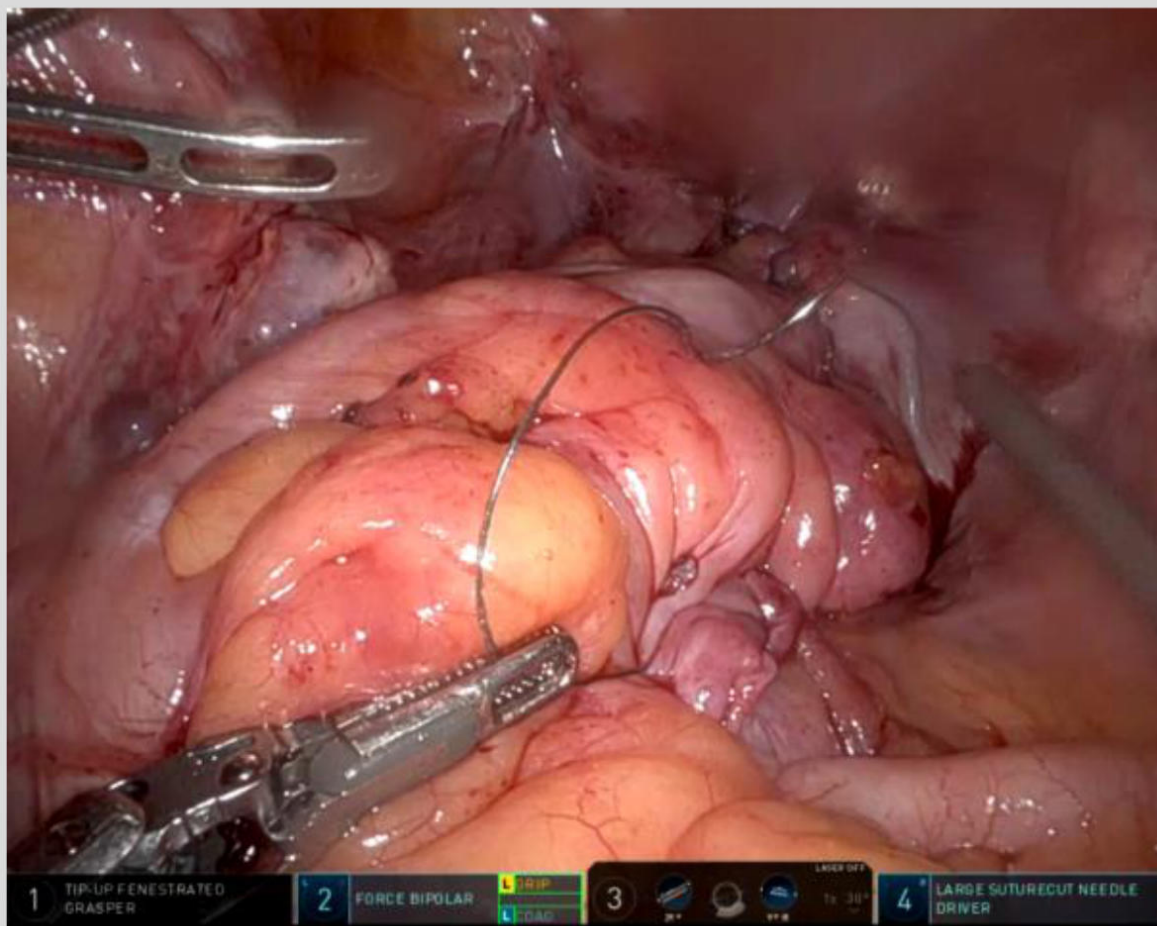












Posterior suture rectopexy

- **Recurrence rates: 3-9% in 2 years and 29% 10-year recurrence rate (data of the rectal prolapse recurrence study group)**
- **Can worsen constipation, especially in combination with posterior rectal mobilization**
- **Sigmoid resection added in patients with preoperative constipation**

Resection rectopexy

- **Low recurrence rates 2-5%**
- **Reasonable complication rates (0-20%) and low rates of anastomotic leak**
- **Can reduce constipation**
- **Not recommended in patients with severe baseline incontinence**

Posterior mesh rectopexy (Ripstein repair / modified Wells procedure)

- **Associated with higher morbidity (bowel obstruction, erosion, ureteral injury / fibrosis, rectovaginal fistula)**

Vental mesh rectopexy (D`Hoore)

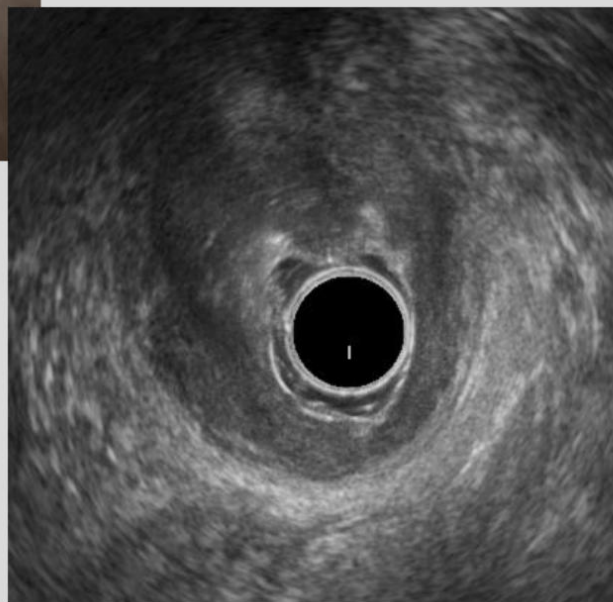
- **3.4% recurrence rate, postoperative complication rate 23%**
- **84% improvement in postoperative constipation, no de novo constipation**
- **Recommended in patients with pre-existing constipation and abnormalities in the anterior compartment**

2nd Patient

- Mrs JM 91 yrs old
- Complete rectal prolapse
- urinary and faecal incontinence for years
- uneventful spontaneous births (3x)
- independent
- 08/2022 Hemorrhoidectomy
- 09/2022 Perineal stapled prolapse resection (PSPR)

2nd Patient

- Descensus genitalis POP-Q Stage IV anterior compartment / apex
- 01/2008 vaginal hysterectomy
- 11/2020 Colporrhaphia anterior and BSC-Mesh (bilateral sacrospinal fixation)



Perineal procedures

Perineal proctosigmoidectomy

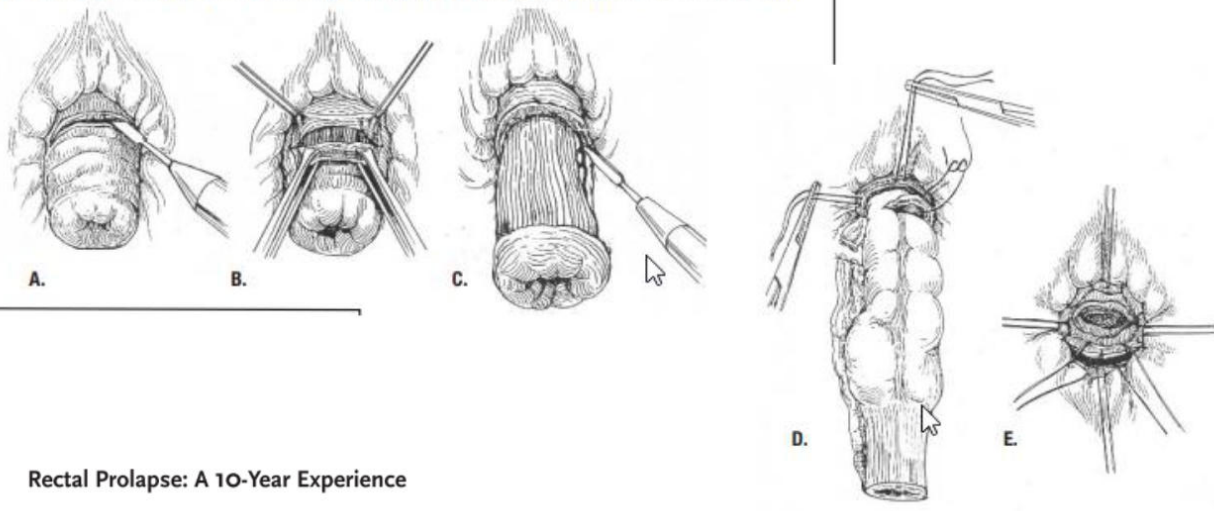
- Altemeier
- STARR
- Perineal stapled prolapse resection (PSPR)

Mucosal sleeve resection (Rehn-Delorme)

Posterior colporrhaphia

Perineal proctosigmoidectomy

Figure 6. Perineal rectosigmoidectomy (Altemeier). A, B. Incision of rectal wall. C. Division of vessel adjacent to bowel wall. D. Mesenteric vessels ligated. Stay sutures previously placed in distal edge of outer cylinder are placed in cut edge of inner cylinder. E. Anastomosis of distal aspect of remaining colon to the short rectal stump. (From Beck DE, Whitlow CB. Rectal prolapse and intussusception. In Beck DE, ed. Handbook of Colorectal Surgery, 2nd ed. New York: Marcel Dekker, 2003:301-324. With permission.)



Rectal Prolapse: A 10-Year Experience

Kerry Hammond, MD, David E. Beck, MD, David A. Margolin, MD,
Charles B. Whitlow, MD, Alan E. Timmcke, MD, Terry C. Hicks, MD

Department of Colon and Rectal Surgery, Ochsner Clinic Foundation, New Orleans, LA

Perineal proctosigmoidectomy



Figure 2 Separation. Separation of anterior and posterior wall of the prolapse after second opening with a linear stapler at nine o'clock.

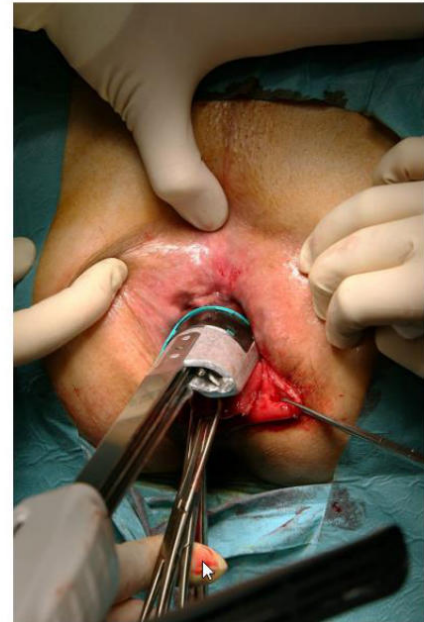


Figure 3 Resection. Resection of the prolapse continuously counterclockwise by the curved Contour® Transtar™ and parallel to the dentate line, first anteriorly.

Heller et al. *BMC Surgery* 2010, **10**:9
<http://www.biomedcentral.com/1471-2483/10/9>

RESEARCH ARTICLE

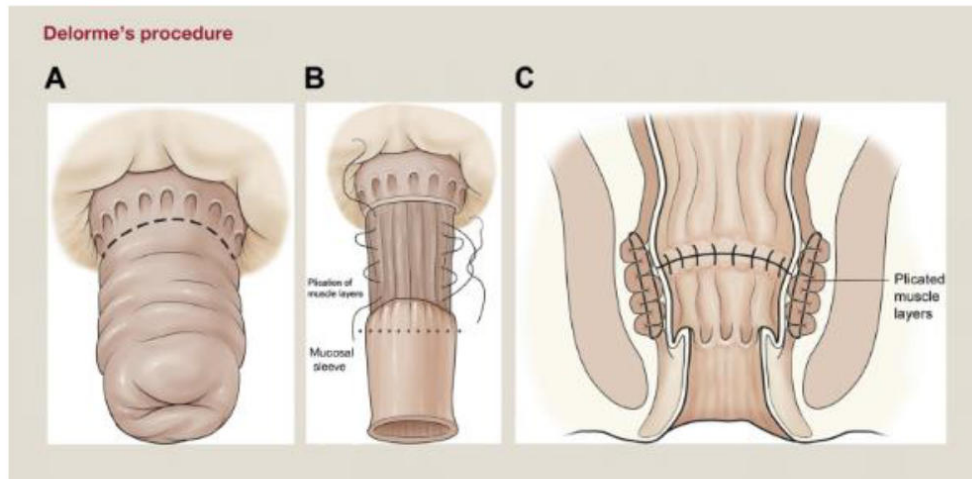
Open Access

Functional outcome after perineal stapled prolapse resection for external rectal prolapse

Franc H Herber^{1*}, Amir H Routhan¹, Katja Wolf², Ulrich Beutner¹, Jan Borovicka², Jochen Lange¹, Lukas Mann¹



Mucosal sleeve resection (Rehn Delorme)



Surgery (Oxford)
Volume 38, Issue 6, June 2020, Pages 343-349

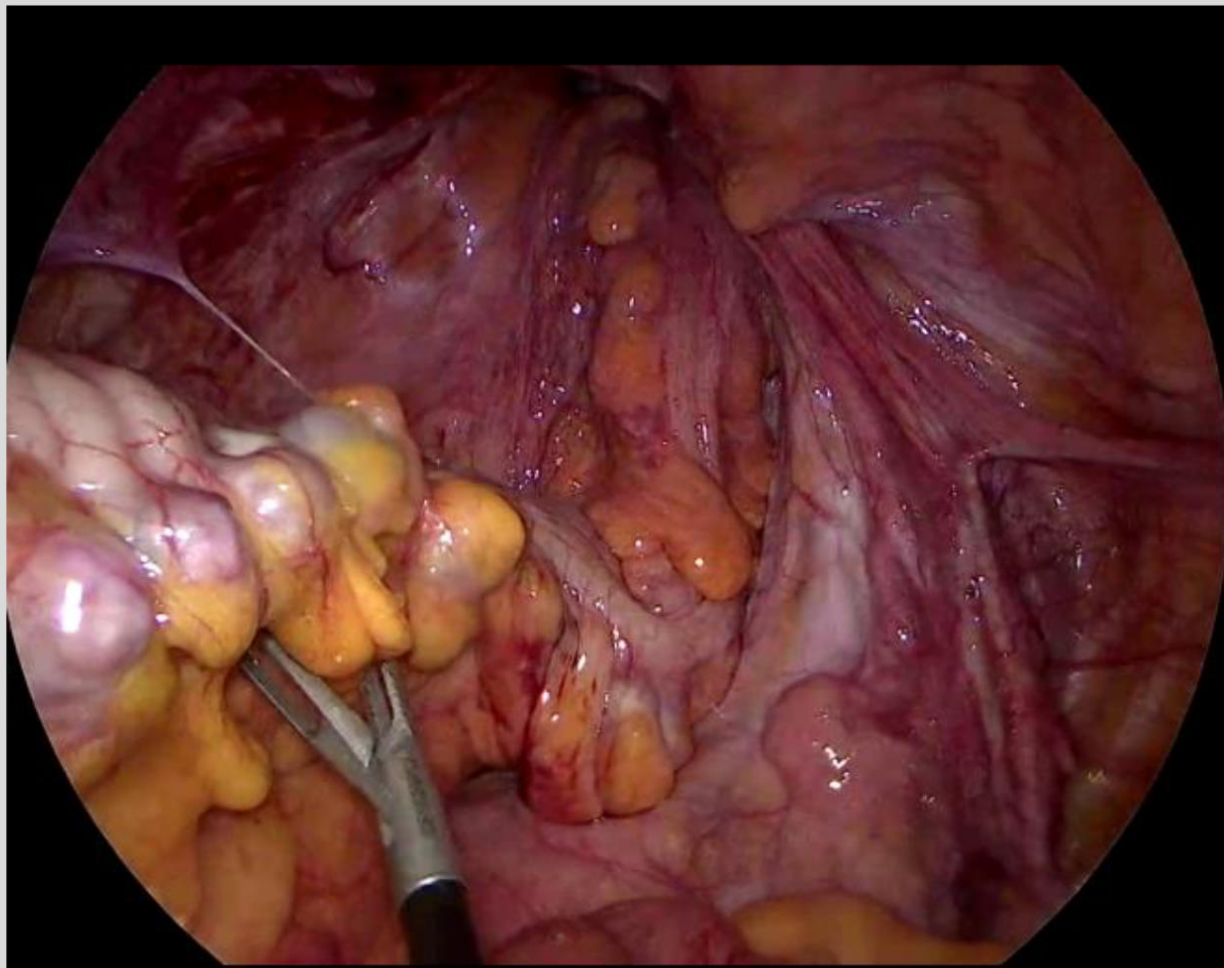
Intestinal surgery - II

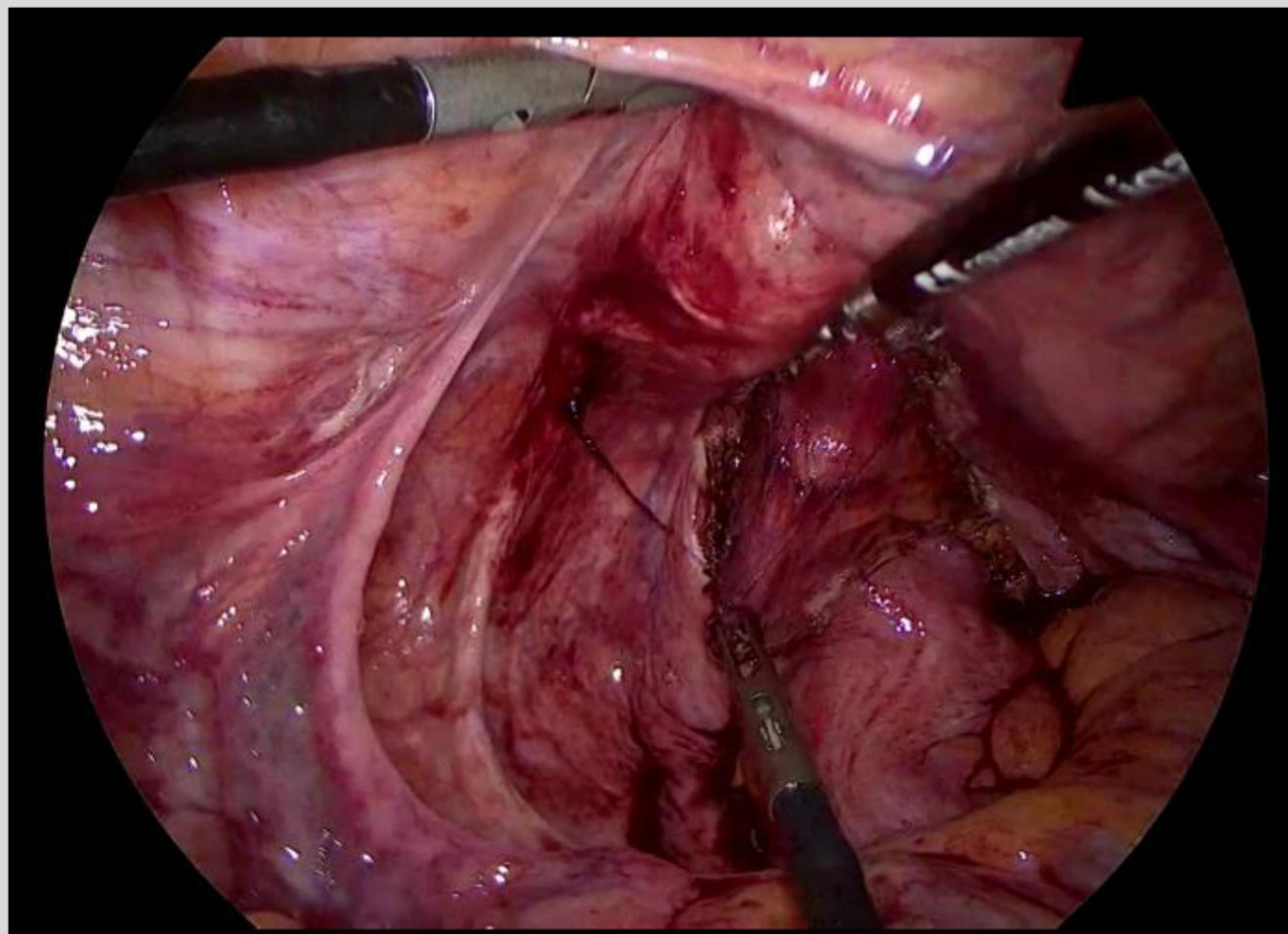
Rectal prolapse and surgery for faecal incontinence

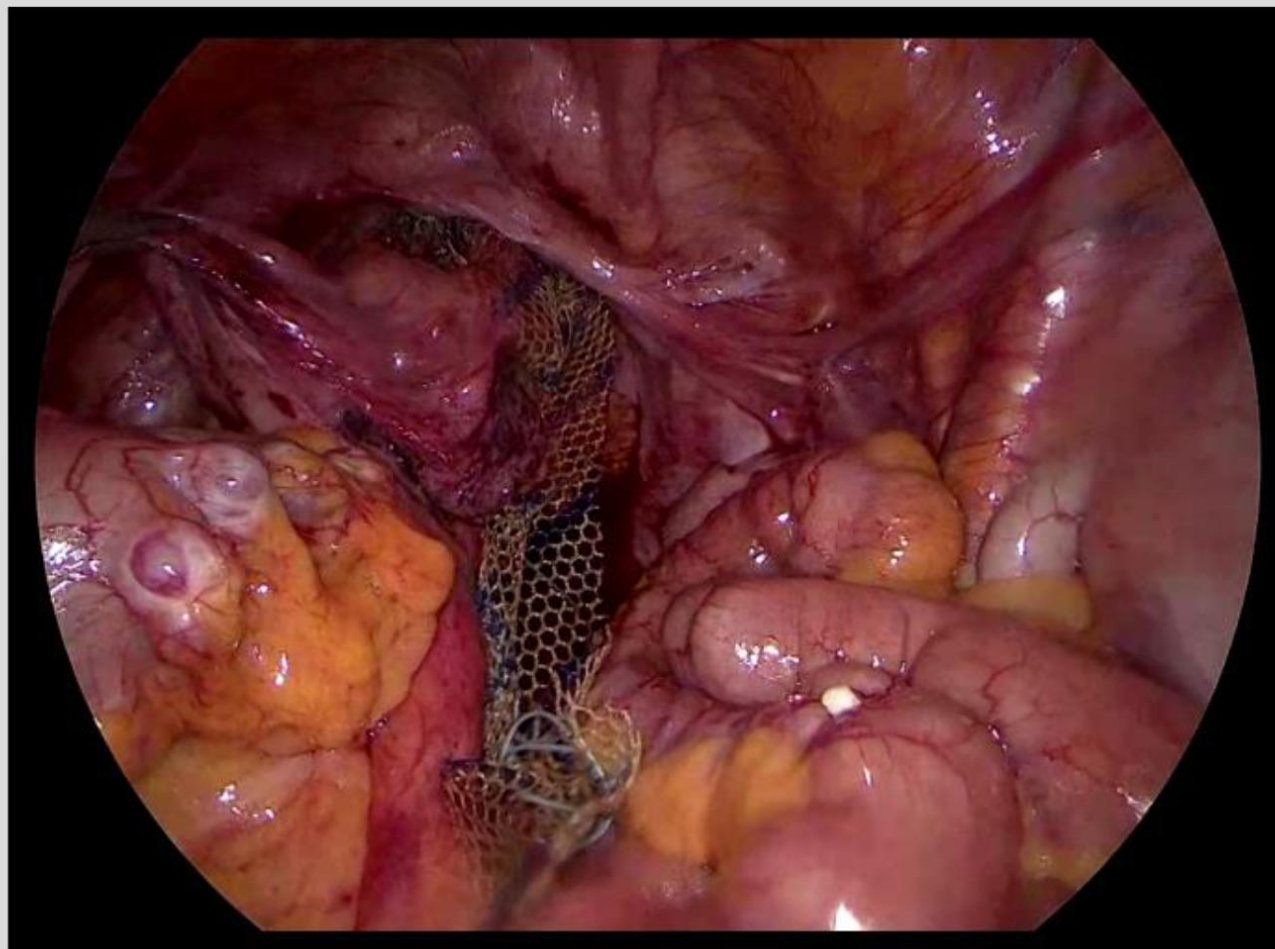
Victoria K. Proctor, Athur Harikrishnan

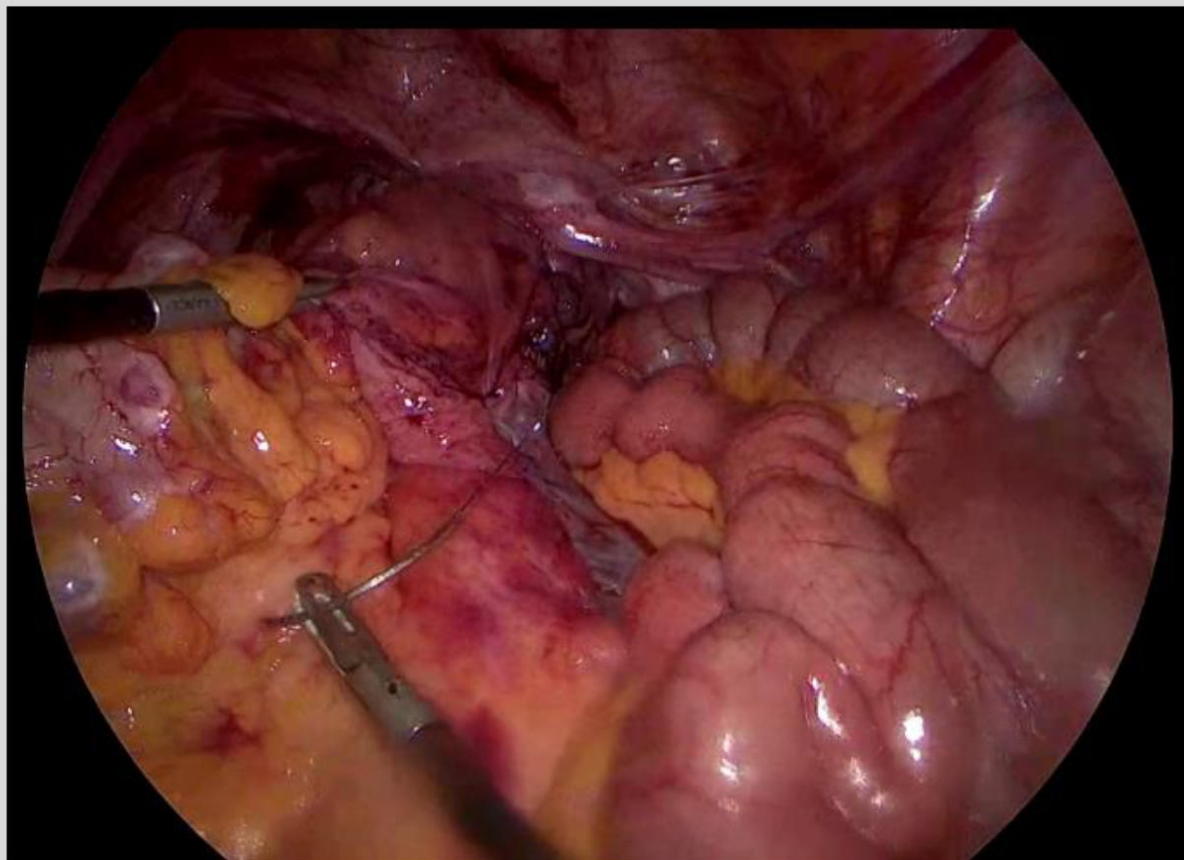
Mucosal sleeve resection (Rehn Delorme)

- **Recurrence rates 10-15%**
- **Very safe procedure (4-14 % early complications)**
- **Can improve constipation and faecal incontinence (increased squeeze pressures), urgency possible**







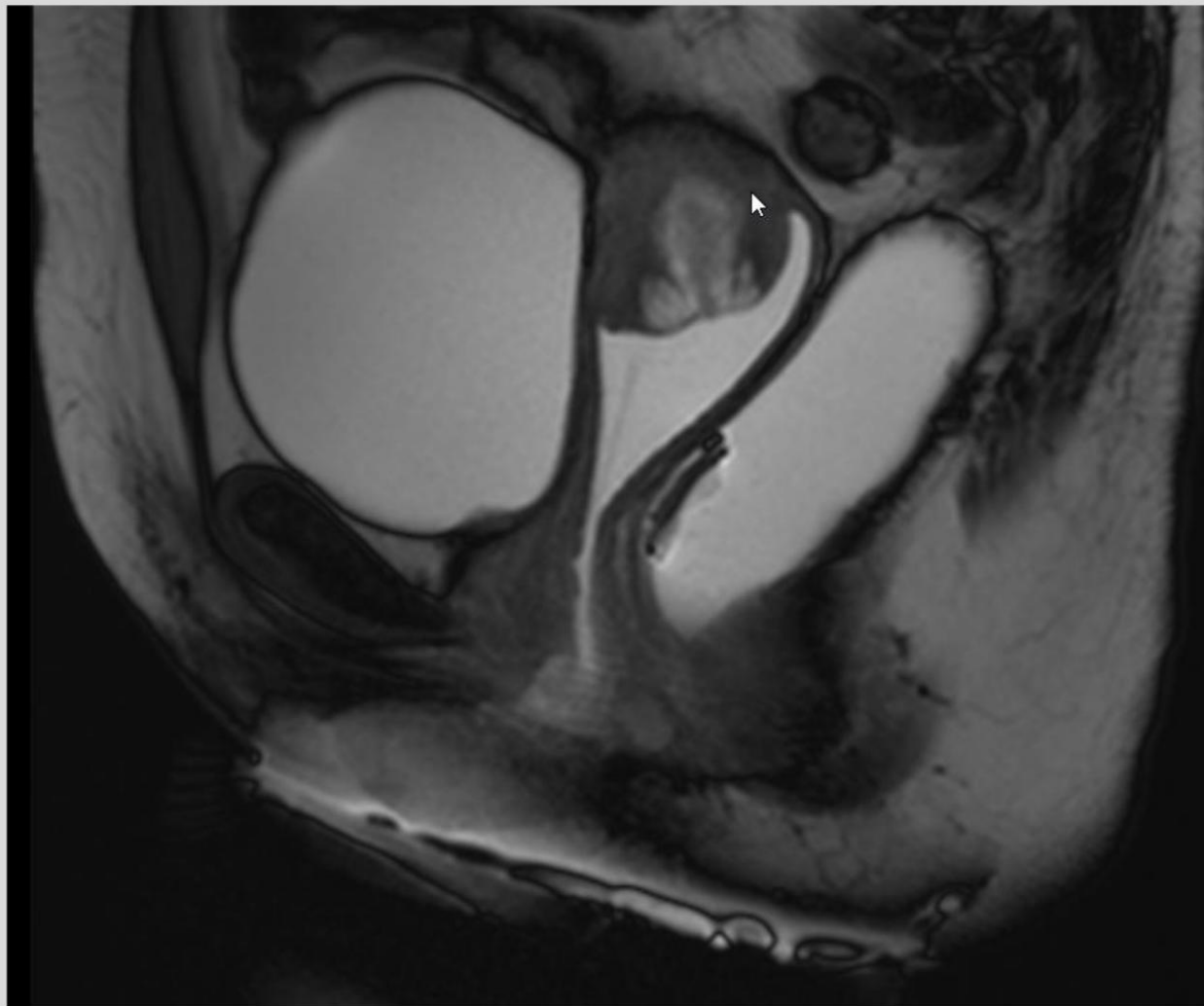


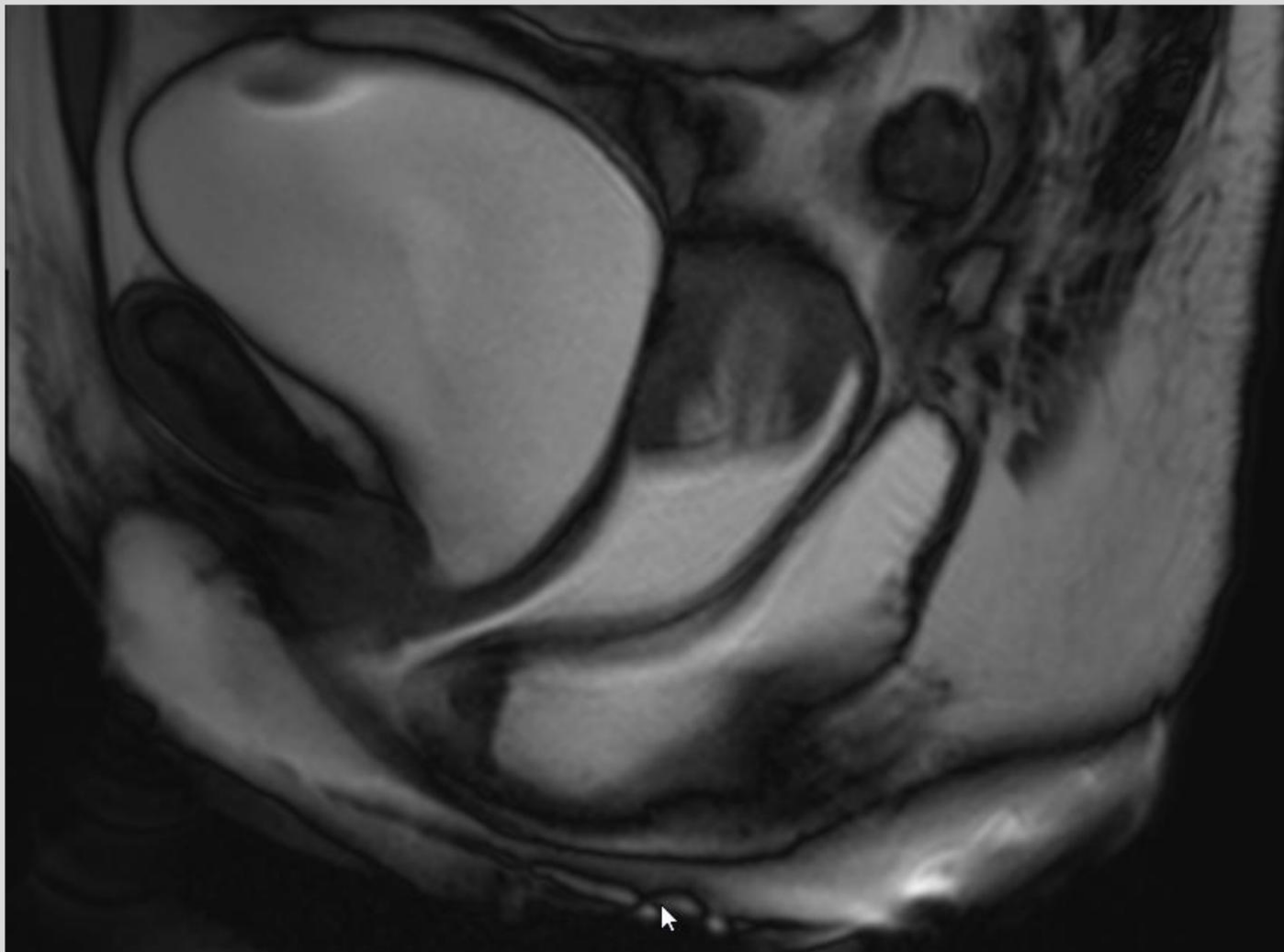
3rd Patient

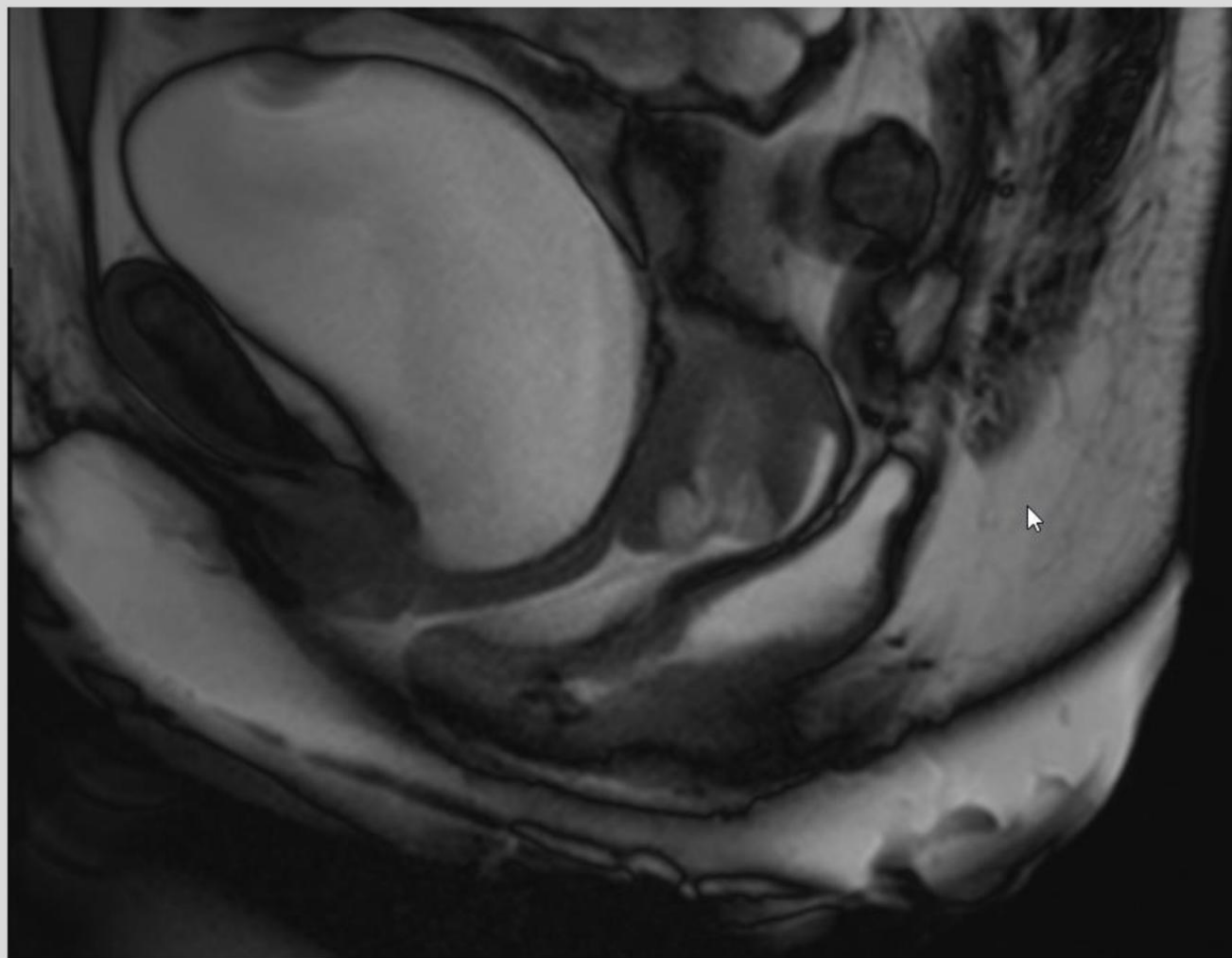
- Mrs BK 41 yrs old
- Problems with stool voiding, no incontinence
- Car accident 3 yrs ago with fractures in the vertebral column, since then constipation
- BMI 30.5 kg/m²
- Family planning not completed

3rd Patient

- MR Defaecography
- Anorectal manometry – normal
- Tests concerning hyperlaxity / Ehlers Danlos - pending







- Pregnancy after laparoscopic ventral mesh rectopexy:
- implications and outcomes

A. M. Hogan, P. Tejedor, I. Lindsey, O. Jones, R. Hompes, K. J. Gorissen and C. Cunningham

Department of Colorectal Surgery, Oxford University Hospital, Oxford, UK

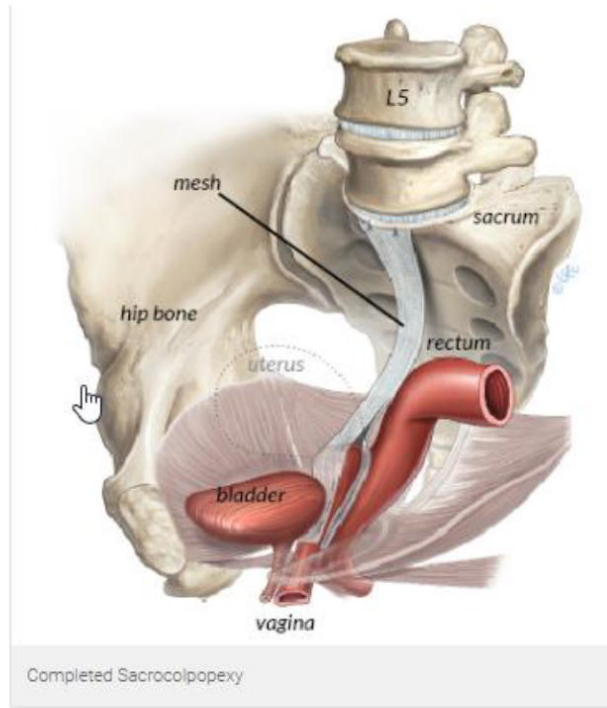
Received 8 March 2017; accepted 11 July 2017; Accepted Article online 15 July 2017

954 patients
polypropylen mesh
8 pregnant
6 caesarian sections, 2 spontaneous deliveries
no complications, no relapse

4th Patient

- Mrs JA 70 yrs old
- Descensus genitalis POP-Q III
 - Cystocele III
 - Descensus uteri II
 - Rectocele I
- OAB dry
- Hemorrhoids / skin tags
- Light voiding problems
- 2 spontaneous births

Combined sacral colpopexy



Combined sacral colpopexy

International Journal of Colorectal Disease (2018) 33:1453–1459
<https://doi.org/10.1007/s00384-018-3140-5>

ORIGINAL ARTICLE



Combined rectopexy and sacrocolpopexy is safe for correction of pelvic organ prolapse

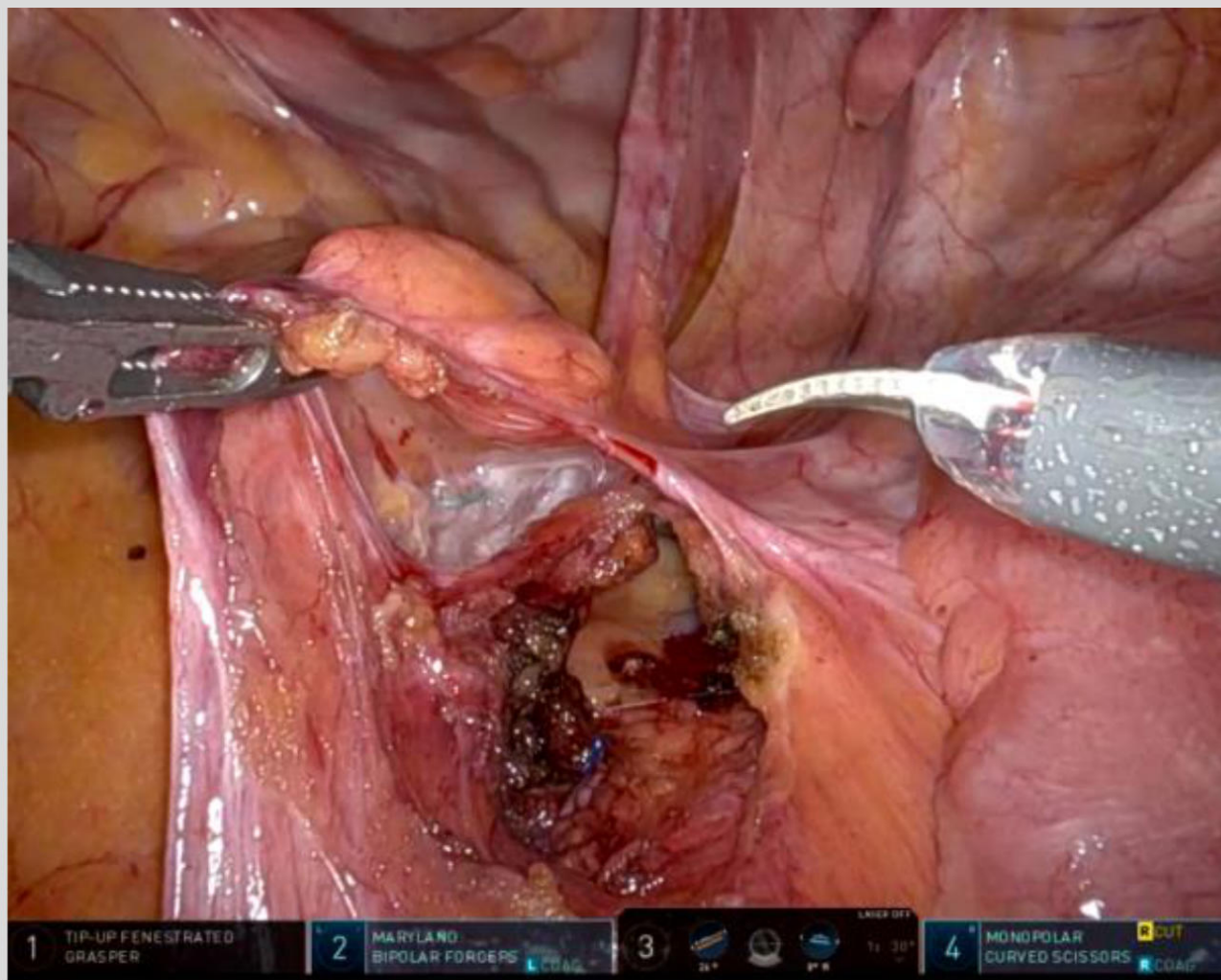
Cristina B. Geltzeiler¹  • Elisa H. Birnbaum² • Matthew L. Silveira³ • Matthew G. Mutch⁴ • Joel Vetter⁴ • Paul E. Wise⁴ • Steven R. Hunt⁴ • Sean C. Glasgow⁴

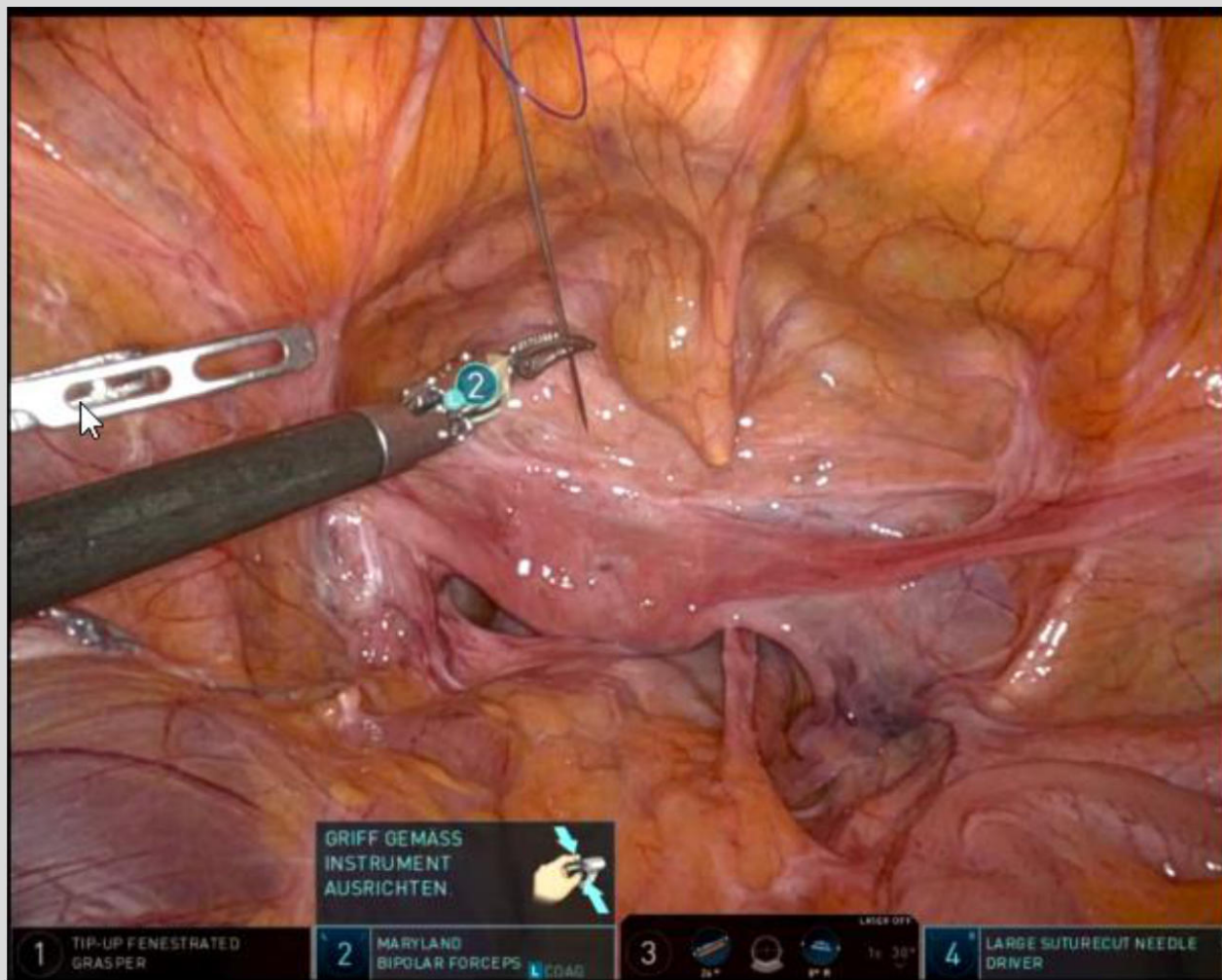
Prolonged operation time
Complication rate not higher

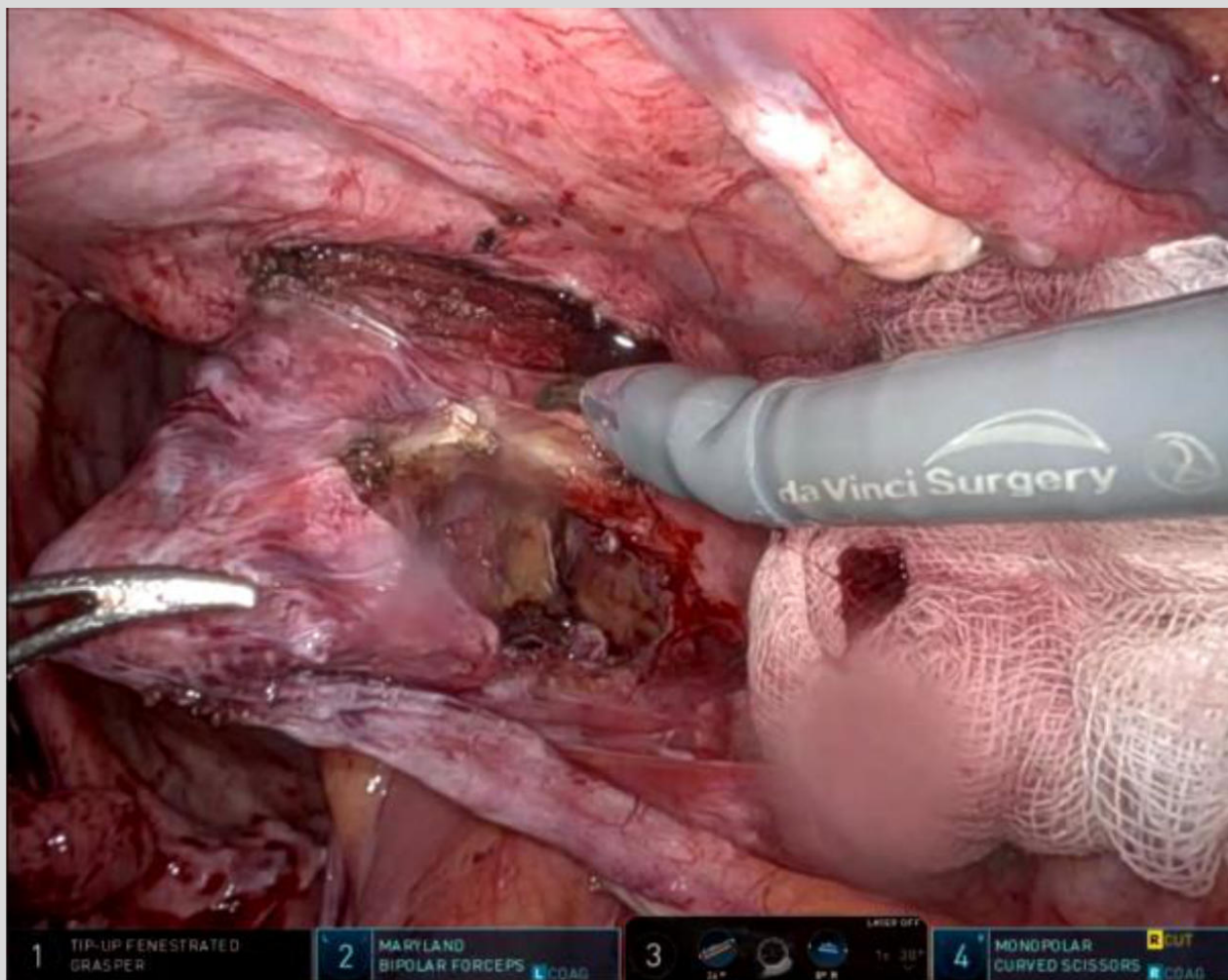
5th Patient

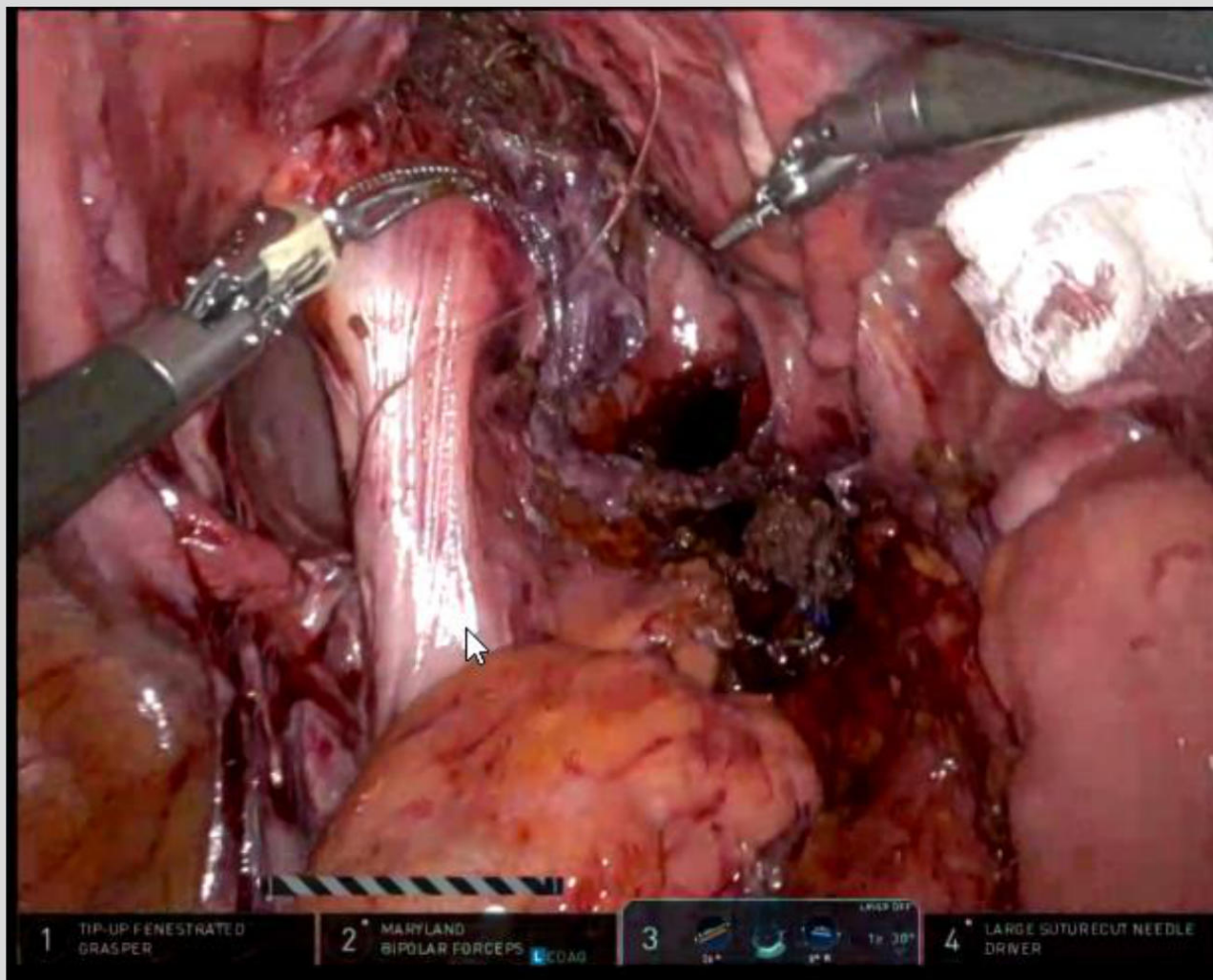
- Mrs DJ 79 yrs old
- 3rd relaps rectal prolapse
- 06/2017 Hemorrhoidopexy Longo
- 01/2018 PSPR (Transstar)
- 04/2019 sigmoid resection und dorsal rectopexy with mesh
- 01/2021 ventral mesh rectopexy D' Hoore
- chronic constipation
- suspected dyssynergy

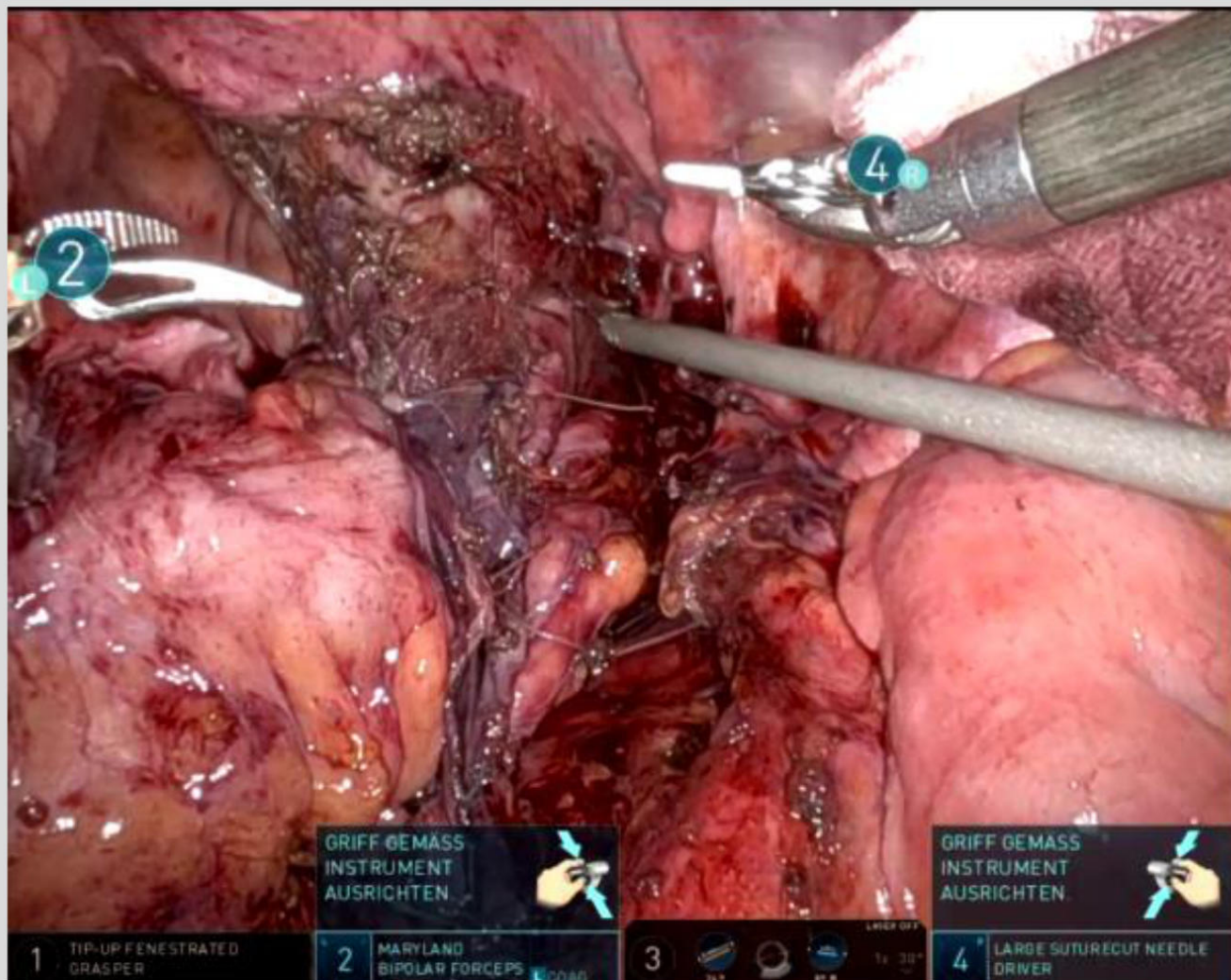












Decision making aspects

- **Comorbidities of the patient**
- **Experience and preference of the surgeon**
- **Age of the patient**
- **Bowel function of the patient**

Decision making aspects

- **Recurrence rates**
- **Functional outcome**



**Surgery for complete (full-thickness) rectal prolapse in adults
(Review)**

Tou S, Brown SR, Nelson RL

CLINICAL PRACTICE GUIDELINES

Clinical Practice Guidelines for the Treatment of Rectal Prolapse

Liliana Bordeianou, M.D., M.P.H. • Ian Paquette, M.D. • Eric Johnson, M.D.
Stefan D. Holubar, M.D. • Wolfgang Gaertner, M.D. • Daniel L. Feingold, M.D.
Scott R. Steele, M.D.

Prepared by the Clinical Practice Guidelines Committee of the American Society of Colon and Rectal Surgeons

Dis Colon Rectum 2017; 60: 1121–1131
DOI: 10.1097/DCR.0000000000000889
© The ASCRS 2017

DISEASES OF THE COLON & RECTUM VOLUME 60: 11 (2017)

Caveats

- **Preexisting constipation / slow transit**
- **Pelvic dyssynergia**
- **Preexisting faecal incontinence or multiple reasons for faecal incontinence**
- **Prolapse in multiple compartments**

Define treatment goals

patient satisfaction after pelvic reconstructive surgery correlates highly with achievement of self-described, preoperative surgical goals, but poorly with objective outcome measures

Take home message

- **Multidisciplinary approach**
- **Posterior compartment: aim for operation**
- **Multiple operation techniques**
- **Discuss and define treatment goals and possible achievements**
- **Decision depends on comorbidities of the patient, experience and preference of the surgeon, bowel function of the patient, age of the patient,**
- **We prefer transabdominal rectal fixation**

