KEY POINTS

FOR PELVİC ORGAN PROLAPSE REPAİR

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30.04.2014 -4.05.2015
Antalya / Belek

UTERINE PROLAPSE

Papyrus Kahun;

The most ancient document on gynaecology known

B.C. 1800 / 34 Chapter

Mentions about vaginal prolapse and defines treatment strategies

Review Article

Uterine Prolapse: From Antiquity to Today

Keith T. Downing

Division of Femal… Albert …

Corres… Receiv… Acade…

Copyr… which… …tributed under the Creative Commons Attribution License, …any medium, provided the original work is properly cited.

Uteri… …omen for all of time as it is documented in the oldest medical literature. By lo… …recorded history we are able to appreciate the evolution of urogynecology and to gain persp… …today's female pelvic medicine and reconstructive surgeons in their attempts to treat uterine and v…

FROM ANTIQUITY TO TODAY

"He who cannot render an account to himself of at least three thousand years of time, will always grope in the darkness of inexperience"
Goethe, Translation of Panebaker

1. Introduction

Over one thousand years later, during the time of Hip-

Int Urogynecol J (2013) 24:1783–1790
DOI 10.1007/s00192-013-2169-9

POP SURGERY REVIEW

Epidemiology and outcome assessment of pelvic organ prolapse

Matthew D. Barber · Christopher Maher

Abstract

Introduction and hypothesis The aim was to determine the incidence and prevalence of pelvic organ prolapse surgery and describe how outcomes are reported

Methods Every 4 years and as
Collaboration on Incontin
language scientific literature after

Delphi processed expert opinion. A grade D "no recommendation possible" would be used where the evidence is inadequate or conflicting and when expert opinion is delivered
ch as by Delphi .
by symp-
based
performed

POP Prevalence;
Symptom based; 3-6 %
Examination based ; 50 %

Table 1 Prevalence and incidence pelvic organ prolapse (POP)

Study	Definition	Prevalence (%)	Incidence	Country
Rortveit et al. [59]	Symptom-based	5.7		USA
Nygaard et al. [2]	Symptom-based	2.9		USA
Hendrix et al. [60]	WHI study, examination	Any prolapse: 41.1 Cystocele: 34.3 Rectocele: 18.6 Uterine: 14.2		USA
Swift et al. [4]	Examination	Stage 0: 6.4 Stage 1: 43.3 Stage 2: 47.7 Stage 3: 2.6		USA
Handa et al. [61]	WHI study, examination	Cystocele: 24.6 Rectocele: 12.9 Uterine: 3.8	Cystocele: 9.3/100 Rectocele: 5.7/100 Uterine: 1.5/100	USA
Nygaard et al. [62]	Examination	Stage 0: 2.3 Stage 1: 33.0 Stage 2: 63.0 Stage 3: 1.9		USA
Bradley et al. [10]	Examination	23.5–49.9	26 %/1 year 40 %/3 year	USA
Marchionni et al. [63]	Examination	Vault prolapse: 12		Italy
Aigmueller et al. [7]	Examination	Vault prolapse: 6–8		Austria

Adapted from Sung and Hampton [13]

PROLAPSE REPAIR PREVALENCE / INCIDENCE

- Life-time prolapse repair risk of a woman by the age 80
  6.3- 19 %
- **Reoperation rate of cases who underwent prolapse repair** **33 %**

- Annual incidence of prolapse repair ;
  1000 women year; 1.5 - 1.8

- Incidence of prolapse repair after hysterectomy;
  1000 women year; 3.6

- Cumulative risk of prolapse surgery , 15 years after hysterectomy;
  5 %

SURGERY DECISION FOR VAGINAL PROLAPSE

❑Who are the candidates for surgical treatment?

- ✓**Patients who does not prefer coservative therapy**
- ✓ **Patients who are predicted as the poor candidates for pessery treatment;**
  - ❖Vaginal length <7cm
  - ❖Genital Hiatus>4cm
  - ❖History of previous hysterectomy and prolapse repair

➢ Asymptomatic cases;

Reduced bladder sensitivity **Closed follow up !**

Increased residual urine and history of recurrent urinary

- ❖**Measurement of urine volume at normal bladder sensitivity**
- ❖**Residual urine volume**
- ❖**RENAL USG**

GE 57 y, Stage 4 Anterior / Posterior and Apical Prolapse

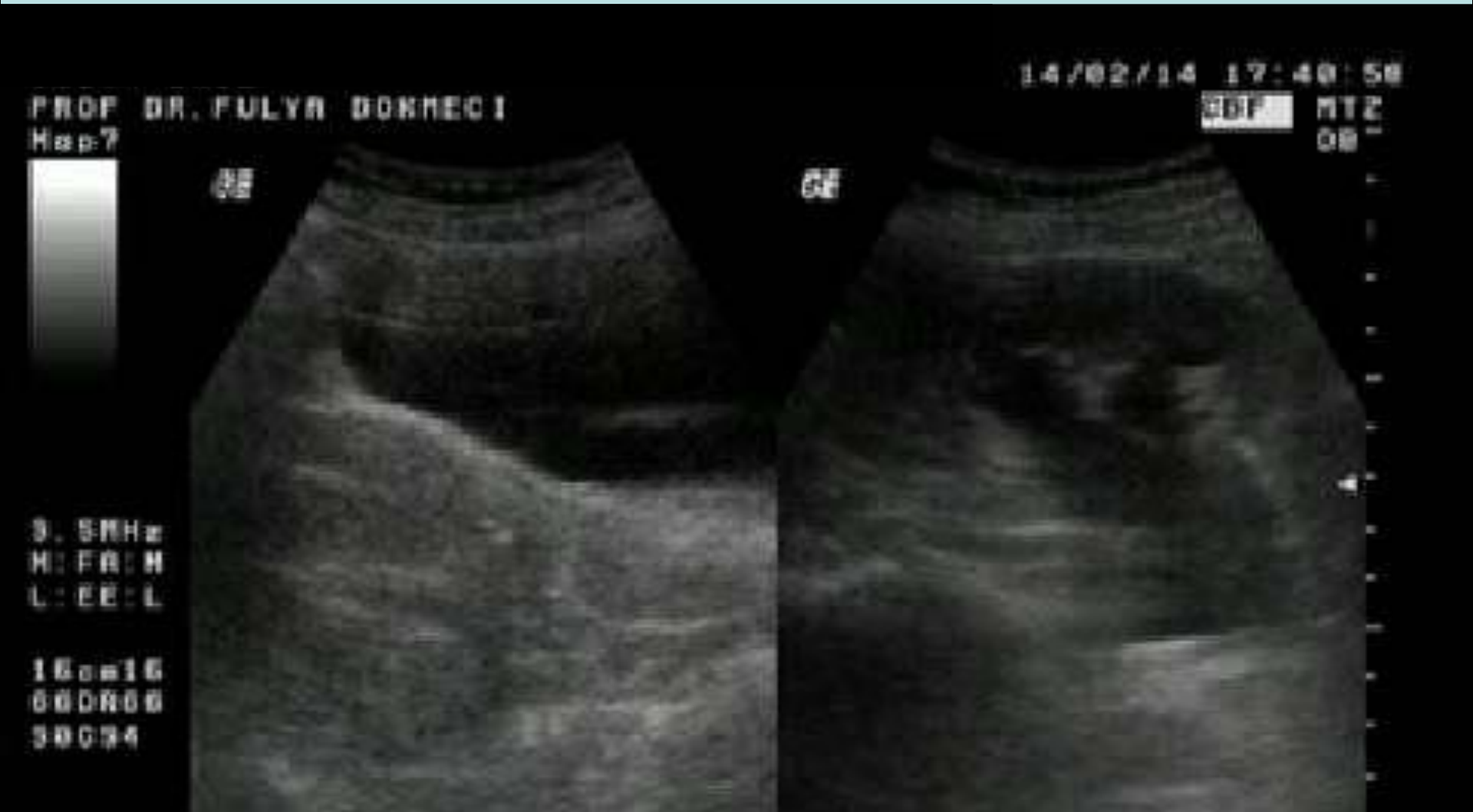
>5 year, suffering bulge symptoms,

No hospital admission due to fear of examination and surgery

Can not use recommended pessary regularly

Check up revealed;

Bilateral pelvicaliectazi and hydroureters



THE MOST COMMON COMPARTMENT WITH PROLAPSE

Table 1 Prevalence and incidence pelvic organ prolapse (POP)

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Int Urogynecol J (2013) 24:1645–1650
DOI 10.1007/s00192-013-2072-4

ORIGINAL ARTICLE

Correlation of pelvic organ prolapse staging with lower urinary tract symptoms, sexual dysfunction, and quality of life

Serife Esra Cetinkaya · Fulya Dokmeci · Omer Dai

Received: 13 December 2012 / Accepted: 14 February 2013 / Published online: 28 March 2013

Abstract

Introduction and hypothesis To evaluate the relationship between pelvic organ prolapse (POP) staging and clinical

(r=0.198, r=0.192, and r=0.146 respectively), and physical, travel, social, emotional subscale scores of IIQ-7 (r=0.223, r=0.154, r=120, and r=0.171, respectively) were found

Table 1 Compartments of prolapse in patients with Pelvic Organ Prolapse Quantification (POPQ) stage ≥1

Compartment	Total n=280	POPQ stage of each compartment
Anterior, n (%)	91 %	Stage 1: 97 (38)
		Stage 2: 126 (49.4)
		Stages 3 and 4: 32 (12.6)
Apical, n (%)	30 %	Stage 1: 53 (63.1)
		Stage 2: 24 (28.6)
		Stages 3 and 4: 7 (8.3)
Posterior, n (%)	62 %	Stage 1: 84 (48.6)
		Stage 2: 67 (38.7)
		Stages 3 and 4: 22 (12.7)

Statistical analysis was performed with SPSS version 13.0 for Windows (SPSS, Chicago, IL, USA). The comparison of baseline characteristics, clinical findings, LUTS, sexual function, and QoL among POP stages were similar in patients with stage 0 and stage ≥3. Body mass index of patients with stage 2 prolapse was found to be higher than stage 0 (p=0.006), no significant difference was found among other stages. Postmenopausal women more frequently had stages 0 and 3 and 4 than stages 1 and 2 (p=0.004). Diabetes was more frequent in women with stage 0 (p=0.021). Parity, previous pelvic surgery, and chronic obstructive lung disease were similar among all stages of POP.

Clinical findings showed significant differences among POP stages (p<0.05; Table 3). Among 388 patients, the Q-tip test was positive in 201 (51.8 %) and the stress test was positive in 167 patients (43 %). Q-tip test positivity was highest in patients with stage ≥3 (p=0.00) and stress test positivity was highest in stages 1 and 2 (p=0.00). The PVR measurements were available for 301 patients (stage 0: n=57, 18.9 %; stage 1: n=74, 24.6 %; stage 2: n=129, 42.9 %; stages 3 and 4: n=41, 13.6 %). The PVR volumes were higher in patients with stage ≥2 (p=0.047). The significant

Correlation of pelvic organ prolapse staging with lower urinary tract symptoms, sexual dysfunction, and quality of life

Serife Esra Cetinkaya · Fulya Dokmeci · Omer Dai

Table 5 Comparison of subscale scores for the UDI-6 and IIQ-7 according to POP stages

POP-Q	UDI-6 scores			IIQ-7 scores			
	Irritative	Stress	Obstructive	Physical	Travel	Social/relationship	Emotional
Stage 0	50 (0–100)	33 (0–100)	17 (0–100)	0 (0–100)	0 (0–100)	0 (0–100)	0 (0–100)
Stage 1	50 (0–100)	33 (0–100)	17 (0–100)	17 (0–100)	33 (0–100)	33 (0–100)	17(0–100)
Stage 2	67 (0–100)	50 (0–100)	17 (0–100)	50 (0–100)	33 (0–100)	36 (0–100)	17(0–100)
Stages 3 and 4	67 (0–100)	50 (0–100)	33 (0–100)	67 (0–100)	50 (0–100)	50 (0–100)	67(0–100)
p	0.005	0.009	0.05	0.001	0.031	0.116	0.006

Data are presented as median, minimum to maximum

$p<0.05$ was considered statistically significant

Surgical management of pelvic organ prolapse in women: the updated summary version Cochrane review

Christopher M. Maher · Benny Feiner · Kaven Baessler · Cathryn M. A. Glazener

Native tissue anterior repair failure rate compared to

Polipropylene mesh in lay;
RR: 2.14 95% CI 1.23-3.74

Armed transobturator mesh;
RR: 3.55 95% CI 2.29-5.51

- Subjective parameters
- Quality of life data
- Postoperative Dysparonia and SUI
- Reoperation rate

No Significant difference

Mesh erosion rate 10%

As a conclusion, first line surgical approach for anterior repair should be native tissue anterior repair according to the current evidences

Original Article

FEMALE PELVIC MEDICINE & RECONSTRUCTIVE SURGERY

Volume 16, Number 1
January/February 2010

Surgery for Pelvic Organ Prolapse

Linda Brubaker, MD, MS, Chris Maher, MD,† Bernard Jacquetin, MD,‡ Natarajan Rajamaheswari, MD, DGO, MCh,§ Peter von Theobald, MD, PhD,¶ and Peggy Norton, MD‖*

apex is the keystone of pelvic organ
ort. Support of the apex must be as-
ed regardless of the presence or absence
e uterus. Without good suspension of
uterus or posthysterectomy vaginal cuff,
anterior and posterior walls are exposed
tra-abdominal forces that drive these tis-
toward the introitus. Because of the sig-
ant contribution of the apex to anterior
al support, the best surgical correction
e anterior and posterior walls may fail
ss the apex is adequately supported.[1,2]
re is Level 2–3 evidence that suspension
e apex by an appropriate method should
considered at the time of each vaginal
apse repair. While recognition of apical
cts is one of the biggest problems in the
uation of pelvic support defects, surgical
ection of the apex has several good op-
s with relatively high success rates.

Apex; Keystone of pelvic organ support

- A thorough examination is essential
- The most important component of anterior vaginal support is apex

From the *Loyola University Medical Center, Maywood, IL

DB,70y


DB,70y

Types of Surgical Management for Apical Prolapse

- **Restorative** (*Kendi dokularına asma*)
- **Compansatory** (*Meş yardımıyla asma*)
- **Obliterative** (*Vajinal açıklığı kapama*)

Restorative Surgical Management

Uterine / Vaginal cuff Prolapse

- Sacrospinal fixation (Vaj)
- İleococygeal suspension (Vaj)
- Sacrouterine ligament suspension (Vaj / Abd / LS)

Restorative Approach

Use patients' own tissues

SACROUTERİNE COLPO- HYSTEROPEXY

Best anatomic position

SACROSPINAL COLPO-HYSTEROPEXY

Postoperative, increased risk of anterior prolapse

Sacrouterine Ligament Suspension

- Strong enough to carry 17kg at the level of spina ischia
- No deviation of vaginal axis
- Lower bleeding risk
- Shorter operation time
- L/S provides better visualisation and safe operation
- Ureter injury with vaginal approach is 11%

Buller J L ve ark. Obstet Gynecol. 2001

Uterosacral ligament vaginal vault suspension: anatomy, outcome and surgical considerations

Taji Yazdany and Narender Bhatia

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Tel: +1 310 222 3868; fax: +1 310 222 4149
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Current Opinion in Obstetrics and Gynecology
2008, 20:484–488

Purpose of review

With aging populations, primary pelvic organ and recurrent pelvic organ prolapse have become a large-scale public health concern. Surgical options for patients include both abdominal and vaginal approaches, each with its own safety and efficacy profiles. This review summarizes the most recent anatomic, surgical and outcome data for uterosacral ligament vault suspension. It offers data on methods to avoid complications and difficult surgical scenarios.

Recent findings

Uterosacral ligament suspension allows reattachment of the vaginal vault high within the pelvis. New modifications in technique including the extraperitoneal and laparoscopic approaches allow surgeons more freedom when planning surgery. Five-year data on the durability of the procedure make it a viable surgical option.

Summary

As a technique widely used by many pelvic reconstructive surgeons, uterosacral ligament vault suspension provides a safe, anatomically correct and durable approach to uterine and vault prolapse. It requires advanced surgical training and an intimate understanding of pelvic anatomy to avoid and identify ureteral injury.

L/S UTEROSACRAL HYSTEROPEXY

One study investigated 43 patients who underwent laparoscopic uterosacral hysteropexy (follow-up 12 months), with 16% requiring repeat surgery for uterine prolapse. Complications included uterine artery laceration (1 patient) and ureteral kinking (2 patients). Two women went on to deliver term infants by cesarean section.[104] Another study followed 23 patients (mean follow-up 15.9 months) that had uterosacral hysteropexy, and showed significant improvement in postoperative vault measurements with no reported failures.[105] In a study comparing 25 patients after laparoscopic uterosacral hysteropexy (mean follow-up 26 weeks) with 25 patients after total vaginal hysterectomy and a variety of vaginally approached vault suspension techniques (mean follow-up 46 weeks), blood loss and hospital stay were lower and shorter in the laparoscopic group. Postoperative vault measurements were significantly worse in the vaginal group than in the laparoscopic group. Furthermore, 3 patients required reoperation for apical prolapse in the vaginal group compared with none in the laparoscopic group. For short-term outcomes related to this procedure, this study suggests that there is a benefit to maintaining the uterus in situ.[106]

VH+ Sacrouterine Lig / Sacrospinosus suspension
L/S Sacrouterine Colpohysteropexy

- **Preservation of Uterus increases surgical success**

  POP Q C is better; $p<0.001$

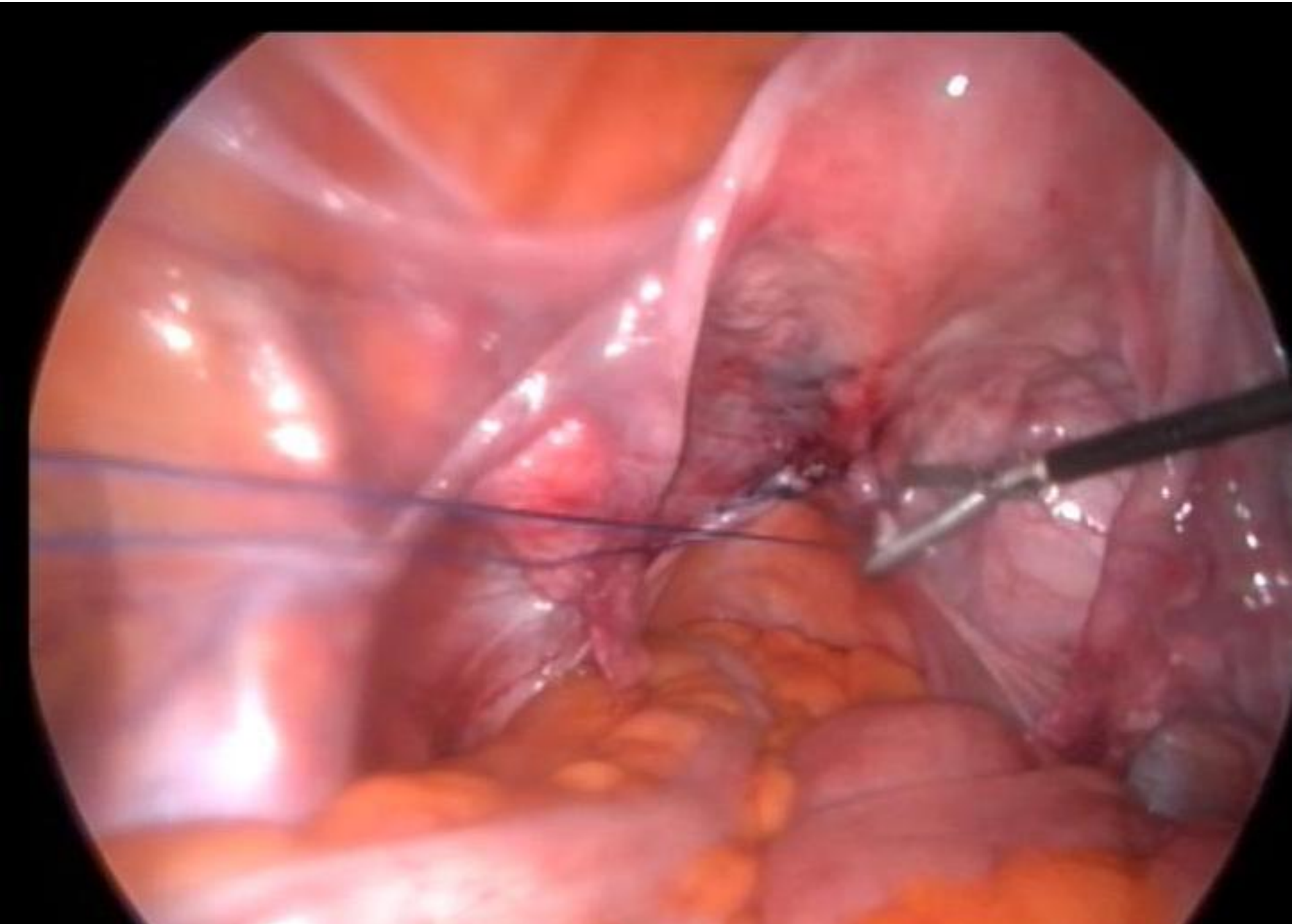
  Failure rate needs reoperation ; 1:3

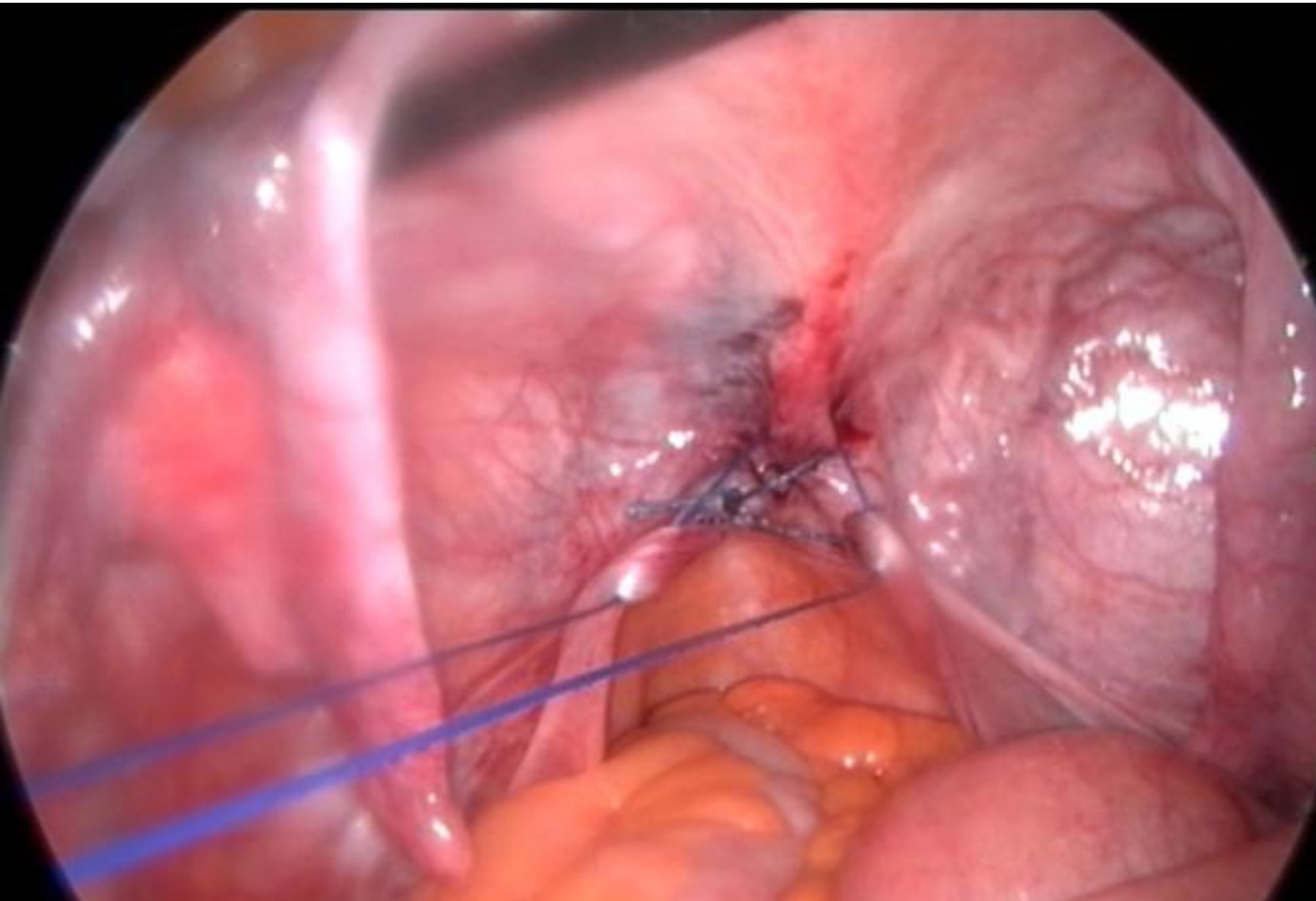
  Lower bleeding ; $p<0.0001$

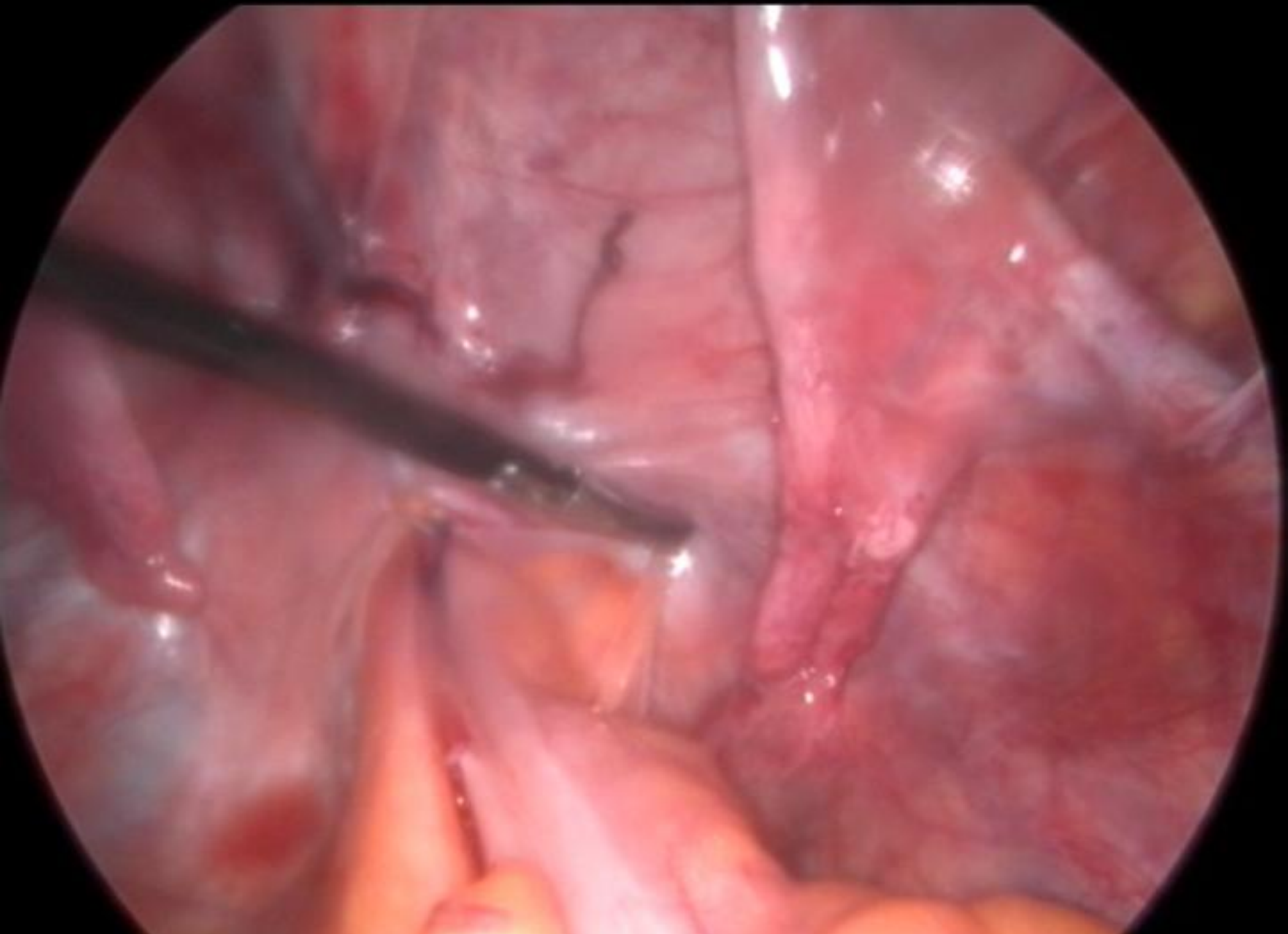
  Shorter hospital stay; $p=0.002$
- **Sacrouterine Lig Suspension is recommended***
- **Preoperative evaluation of patient's tissues is essential**

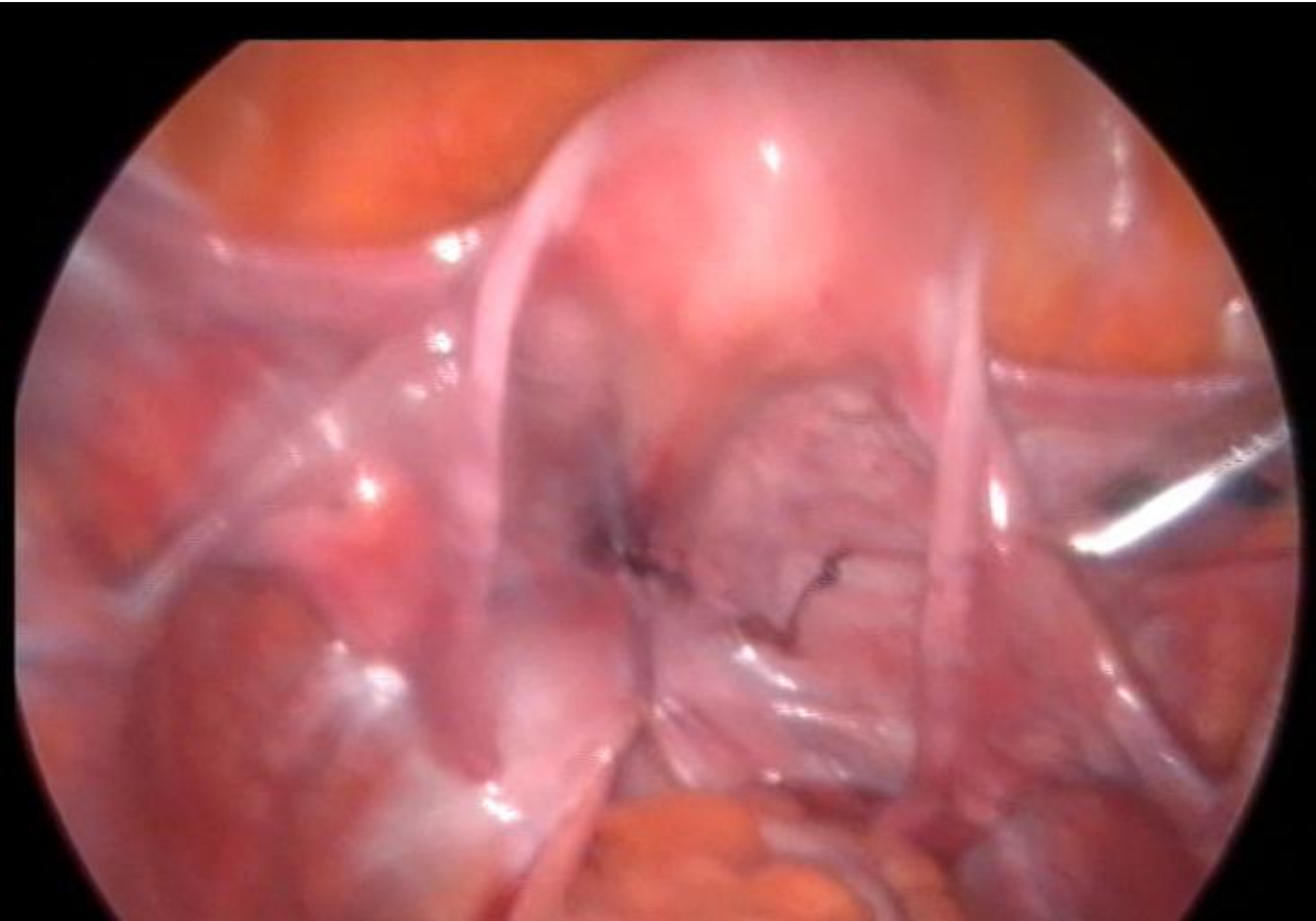
*Flynn MK et al, J Pelv Med Surg, 2007

Diwan A et al, Int Urogynecol J Pelvic Floor Dysfunct, 2005









Abdominal, Laparoscopic, and Robotic Surgery for Pelvic Organ Prolapse

Colleen D. McDermott, MD, FRCSC[a],
Douglass S. Hale, MD, FACOG, FACS[a,b,*]

Obstet Gynecol Clin N Am 36 (2009) 585–614

ABDOMINAL POSTERIOR VAGINAL WALL SUPPORT

No series with notable numbers of patients have reported on outcomes after enterocele repair alone. Most experts would agree that any culdoplasty surgery (Moschcowitz or Halban) should be performed in conjunction with an appropriate apical support procedure. Furthermore, there are sparse data available on abdominally approached rectocele repairs. Using an abdominal approach, 33 patients with rectocele and symptoms of obstructed defecation underwent an abdominal mesh rectopexy. Postoperative complications occurred in 16% of patients, ranging from abscess formation (n = 1) to urinary tract infection (n = 4). Evacuation proctography demonstrated rectoceles greater than 3 cm in 100% of patients preoperatively and in only 7% of patients postoperatively. Preoperative findings of enterocele (39% of patients) and intussusception (24% of patients) were eliminated in all patients postoperatively. In patients with normal colonic transit time preoperatively, 55% continued to have symp-

ABDOMİNAL SACROCOLPOPEXY;

THE COCHRANE COLLABORATION®

When compared to;

"Vaginal sacrospinosus fixation" &

"Vaginal hysterectomy+anterior / posterior repair"

- Lower recurrence of apical prolapse
  - RR 0.23, % 95 CI 0.07 – 0.77
- Lower residual prolapse stage
  - RR 0.29, % 95 CI 0.09 – 0.97
- Longer time to recurrence
- Lower dysparonia
  - RR 0.39, % 95 CI 0.18 – 0.86

Maher C, Feiner B, Baessler K ve ark. Cochrane Database Syst Rev. 2010

UTERINE SUSPENSION 2. OPTION SACRAL COLPOHYSTEROPEXY(L/S)

- First option for young women with congenital collagen weakness

Yaş; 30-43
Mesh polypropylene
Hospital stay; 4,7day
follow up; 24-41monts
No recurrence
No mesh erosion
No complication
Pregnancy; n=3 /term C/S ; n=2

Seraccholi R ve ark.J Am Assoc Gynecol Laparosc 2004

UROGYNECOLOGY

Vascular and ureteral anatomy relative to the midsacral promontory

Meadow M. Good, DO; Travis A. Abele, MD; Sunil Balgobin, MD; T. Ignacio Montoya, MD; Donald McIntire, PhD; Marlene M. Corton, MD

OBJECTIVE: The objective of the study was to further characterize the vascular and ureteral anatomy relative to the midsacral promontory, a landmark often used during sacrocolpopexy, and suggest strategies to avoid complications.

STUDY DESIGN: Distances between the right ureter, aortic bifurcation, and iliac vessels to the midsacral promontory were examined in 25 unembalmed female cadavers and 100 computed tomography (CT) studies. Data were analyzed using Pearson χ^2, unpaired Student *t* test, and analysis of covariance.

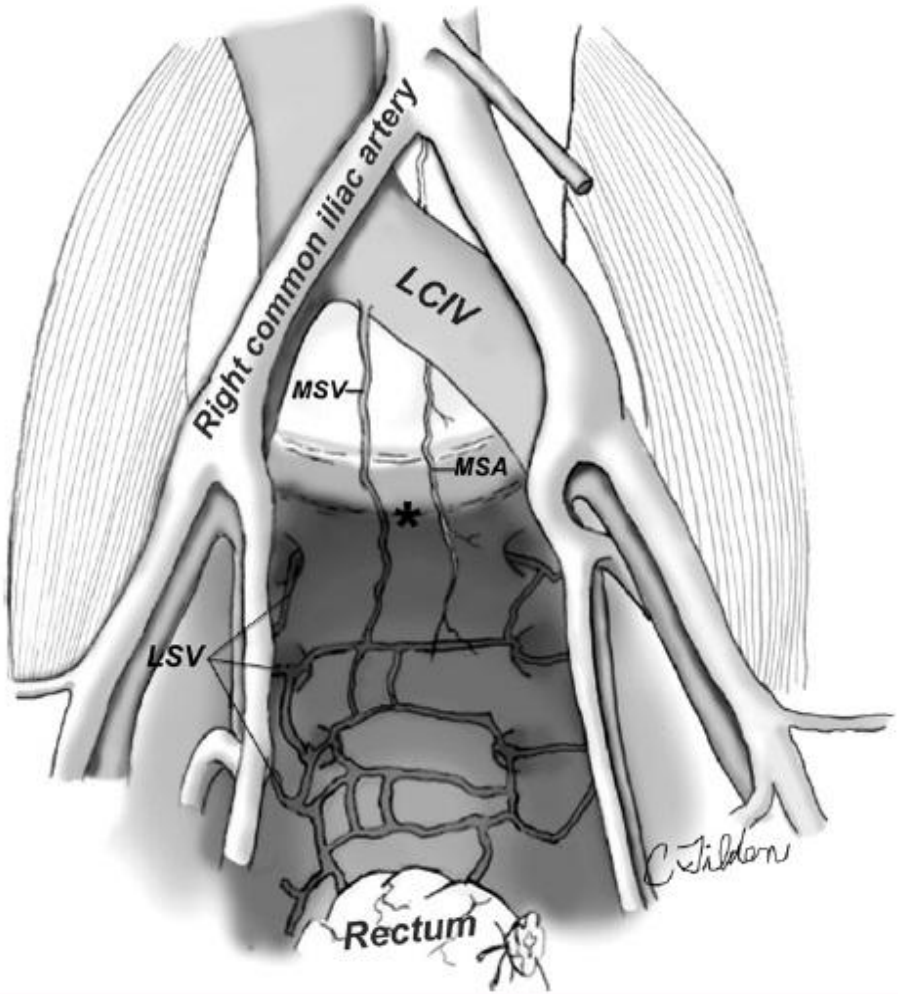
RESULTS: The average distance between the midsacral promontory and right ureter was 2.7 cm (range, 1.6–3.8 cm) in cadavers and 2.9 cm (range, 1.7–5.0 cm) on CT ($P = .209$). The closest cephalad vessel to the promontory was the left common iliac vein, the average distance being 2.7 cm (range, 0.95–4.75 cm) in cadavers and 3.0 cm (range, 1.0–6.1 cm) on CT ($P = .289$). The closest vessel to the right of the promontory was the internal iliac artery, with the average distance of 2.5 cm (range, 1.4–3.9 cm) in cadavers and 2.2 cm (range, 1.2–3.9 cm) on CT ($P = .015$). The average distance from the promontory to the aortic bifurcation was 5.3 cm (range, 2.8–9.7 cm) in cadavers and 6.6 cm (range, 3.1–10.1 cm) on CT ($P < .001$). The average distance from the aortic bifurcation to the inferior margin of the left common iliac vein was 2.3 cm (range, 1.2–3.9 cm) in cadavers and 3.5 cm (range, 1.7–5.6 cm) on CT ($P < .001$).

CONCLUSION: The right ureter, right common iliac artery, and left common iliac vein are found within 3 cm from the midsacral promontory. A thorough understanding of the extensive variability in vascular and ureteral anatomy relative to the midsacral promontory should help avoid serious intraoperative complications during sacrocolpopexy.

Key words: sacral promontory, sacrocolpopexy, ureter, vascular anatomy

Cite this article as: Good MM, Abele TA, Balgobin S, et al. Vascular and ureteral anatomy relative to the midsacral promontory. Am J Obstet Gynecol 2013;208:486.e1-7.

KEY POINTS OF SACRAL FIXATION



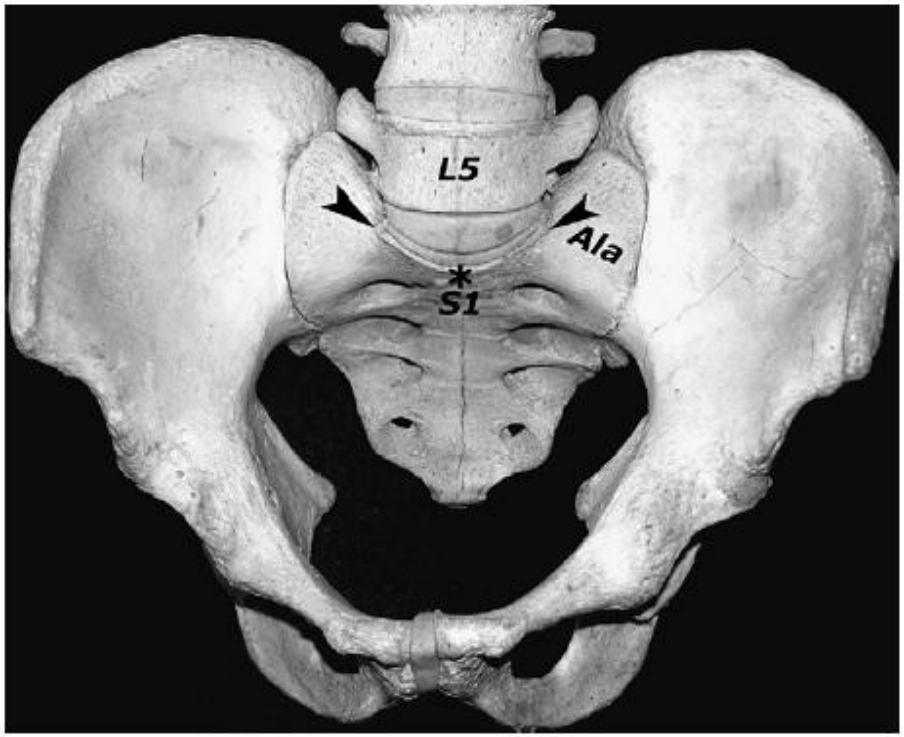
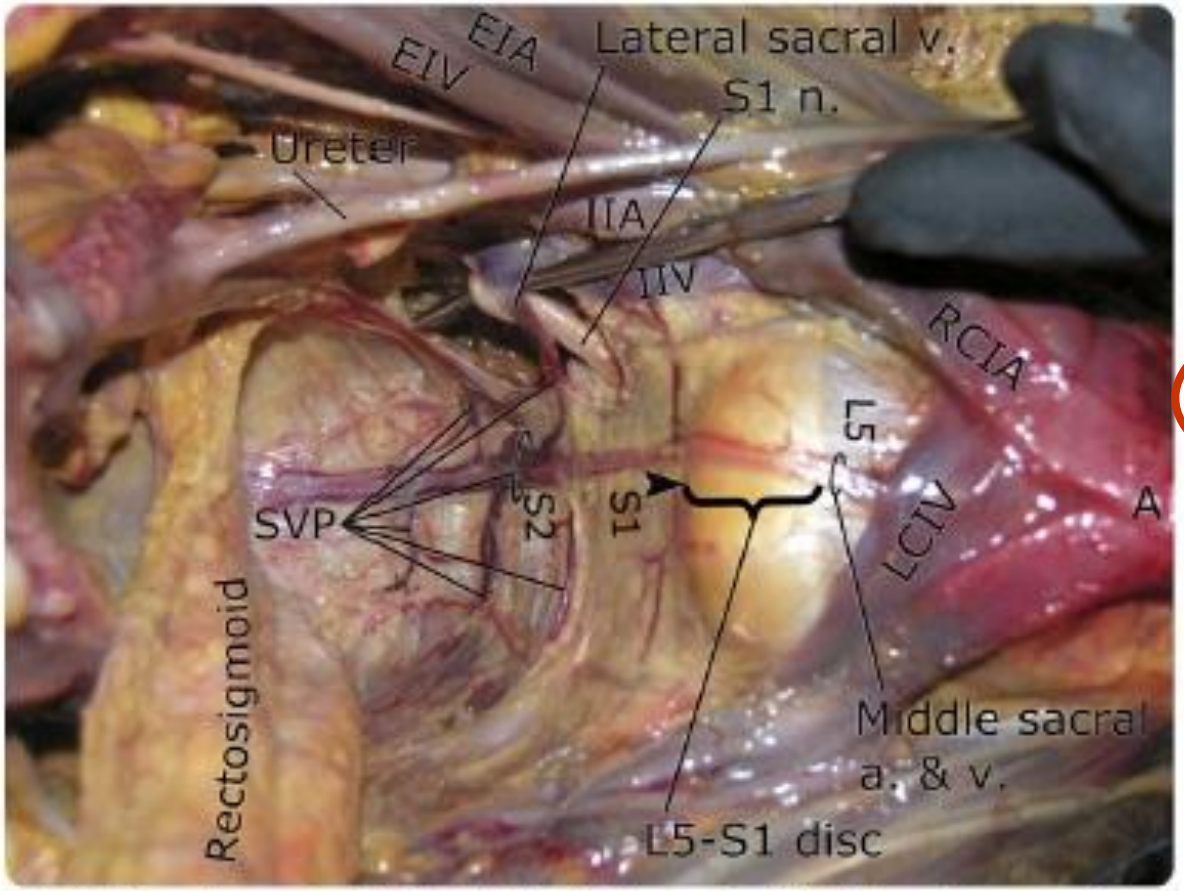


Figure 2 Bony pelvis showing the mid sacral promontory (*). This was determined as the midpoint between the junctions of the body of the first sacral vertebra (S1) with the ala of the sacrum (arrow heads).

FIGURE 4

Presacral space and right posterolateral pelvic walls in unembalmed female cadaver



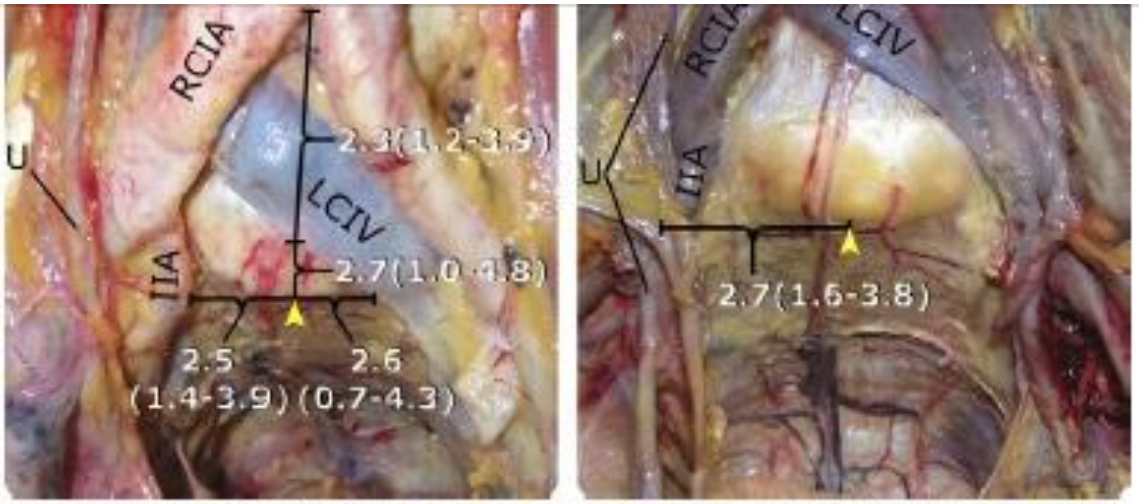
Midpoint of sacral promontory is indicated by the *black arrowhead*. Note that sacral nerves and lateral sacral veins are covered by connective tissue on left pelvic wall, which was not fully dissected. Also note that in the shown supine position, the most prominent vertebral structure in the presacral space is the L5-S1 disc.

careful measurements obtained from cadavers.

In summary, this study confirms the extensive variability and proximity of the ureter and major vessels to the midpoint of the sacral promontory. With increased utilization of new technology, procedural modifications are likely to expand in an effort to overcome the technical difficulties inherent to the endoscopic approach. To avoid injury to the left common iliac vein, the peritoneal dissection should begin at the level of the sacral promontory and extend inferior to this point. If difficulties are encountered visualizing the promontory, the right ureter must be clearly visualized in the pelvic brim area, using the steep angle created by the lumbosacral drop as a landmark. Meticulous dissection of the peritoneum from the underlying loose connective tissue should follow to expose the anterior longitudinal ligament, with unequivocal visualization of the entry and exit points of the needles through the ligament. To avoid intraoperative or delayed injury to the right ureter, surgeons should identify the ureter prior to

the rectosigmoid, the presacral space is generally exposed to the right of the midline. Thus, inadvertent deviation of the peritoneal or connective tissue dissection toward the right may lead to ureter and/or iliac vessel injury. While exposing the presacral space, it is important to consider that the right ureter and iliac vessels may be as close as 1.5 and 1.2 cm, respectively, from the midline of the sacrum at the level of the sacral promontory. Customarily, a 1-2 cm wide segment of mesh is fixed to the anterior longitudinal ligament at the level of the sacral promontory. Consequently, the lateral extent of the dissection and mesh placement may be a short distance away from the ureter and iliac vessels. To avoid intraoperative or delayed injury to these structures, surgeons should identify the ureter at the beginning and throughout the entire course of the dissection. If indicated, the rectosigmoid may be mobilized from the sacrum to allow fixation of the mesh at a more medial position.

Because modifications of the sacrocolpopexy technique may be leading to graft fixation points that expand above the sacral promontory, special attention should be given to the proximity of the LCIV to the MSP. Similar to other inves-



These exposed presacral space in the 2 unembalmed cadavers illustrate the average distances (in centimeters) and range from midsacral promontory (*yellow arrowhead*) to the **A**, vascular structures and to **B**, the right ureter. Note the proximity of LCIV to the midsacral promontory in the cadaver on the **A**, *left panel*.

IA, internal iliac artery; *LCIV*, the left common iliac vein; *RCIA*, right common iliac artery; *U*, ureter.

Good. Vascular and ureteral anatomy in sacrocolpexy. Am J Obstet Gynecol 2013.

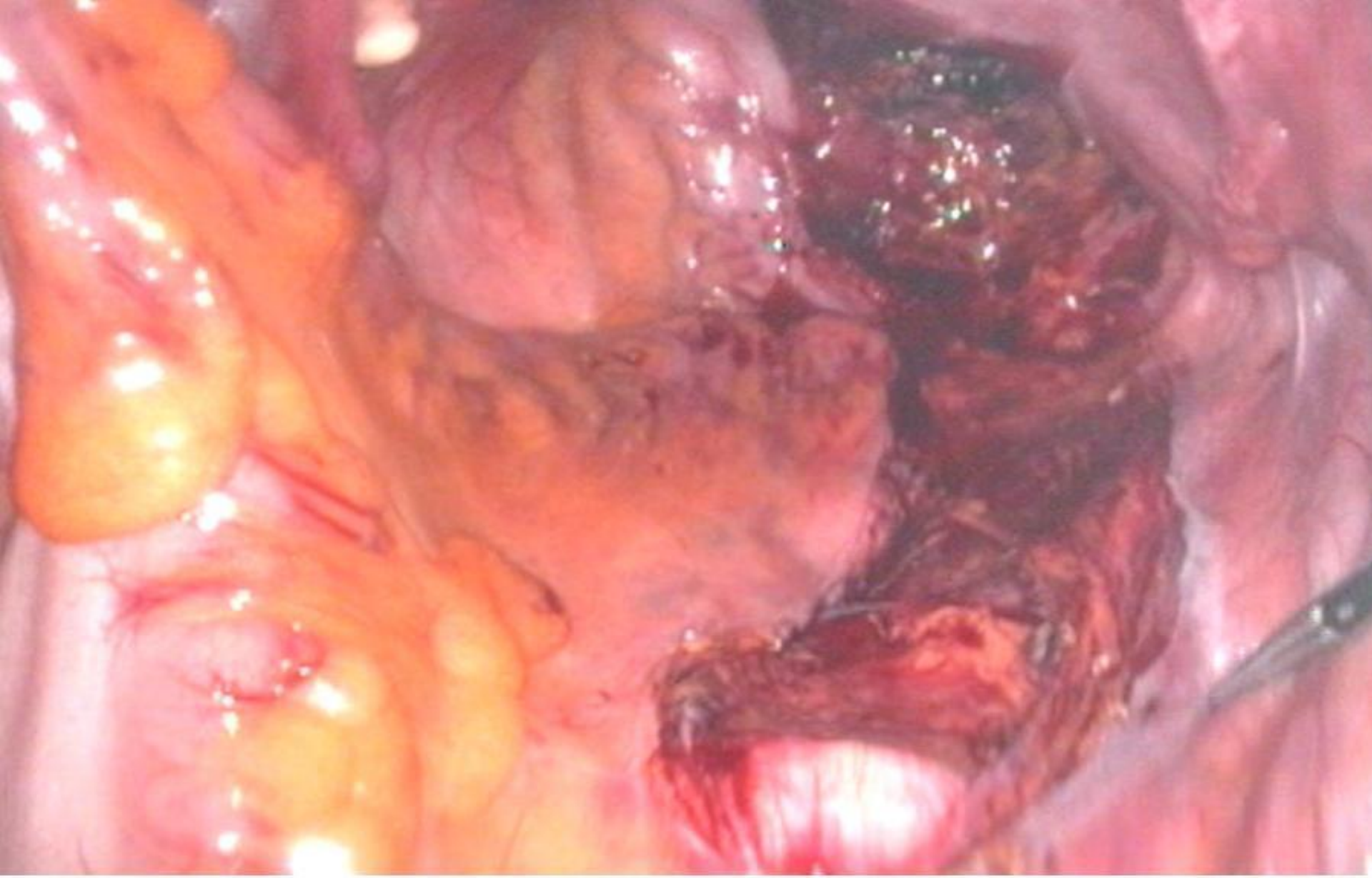
to 5.6 cm. This marked variability in location of the LCIV relative to the aortic bifurcation highlights the importance of careful dissection above the sacral promontory. Given the potential catastrophic outcomes of injury to the LCIV, surgeons should avoid dissection and graft fixation above the sacrum whenever possible.

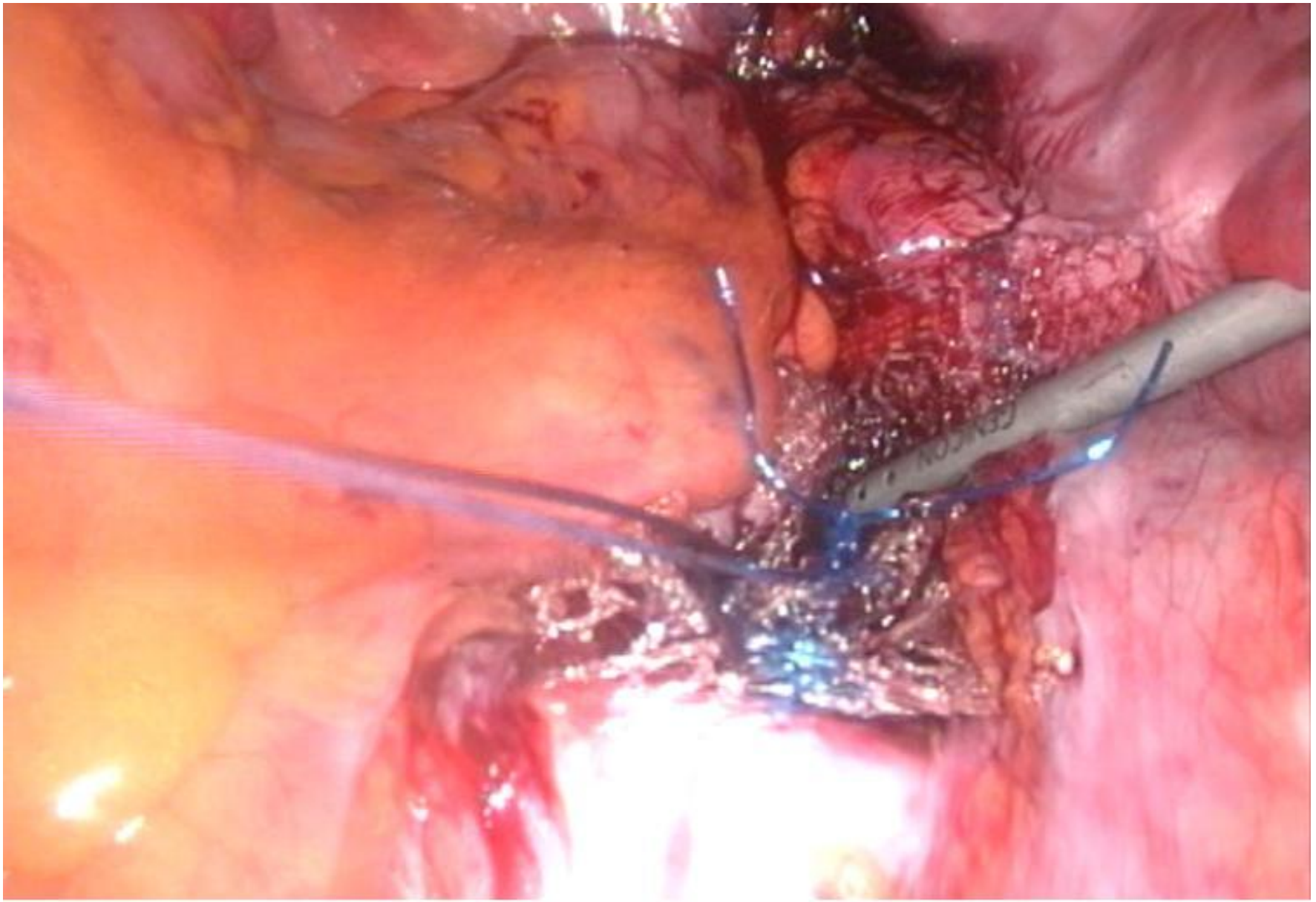
We believe the optimal region for mesh fixation is the anterior surface of S1. We recommend this for several rea-

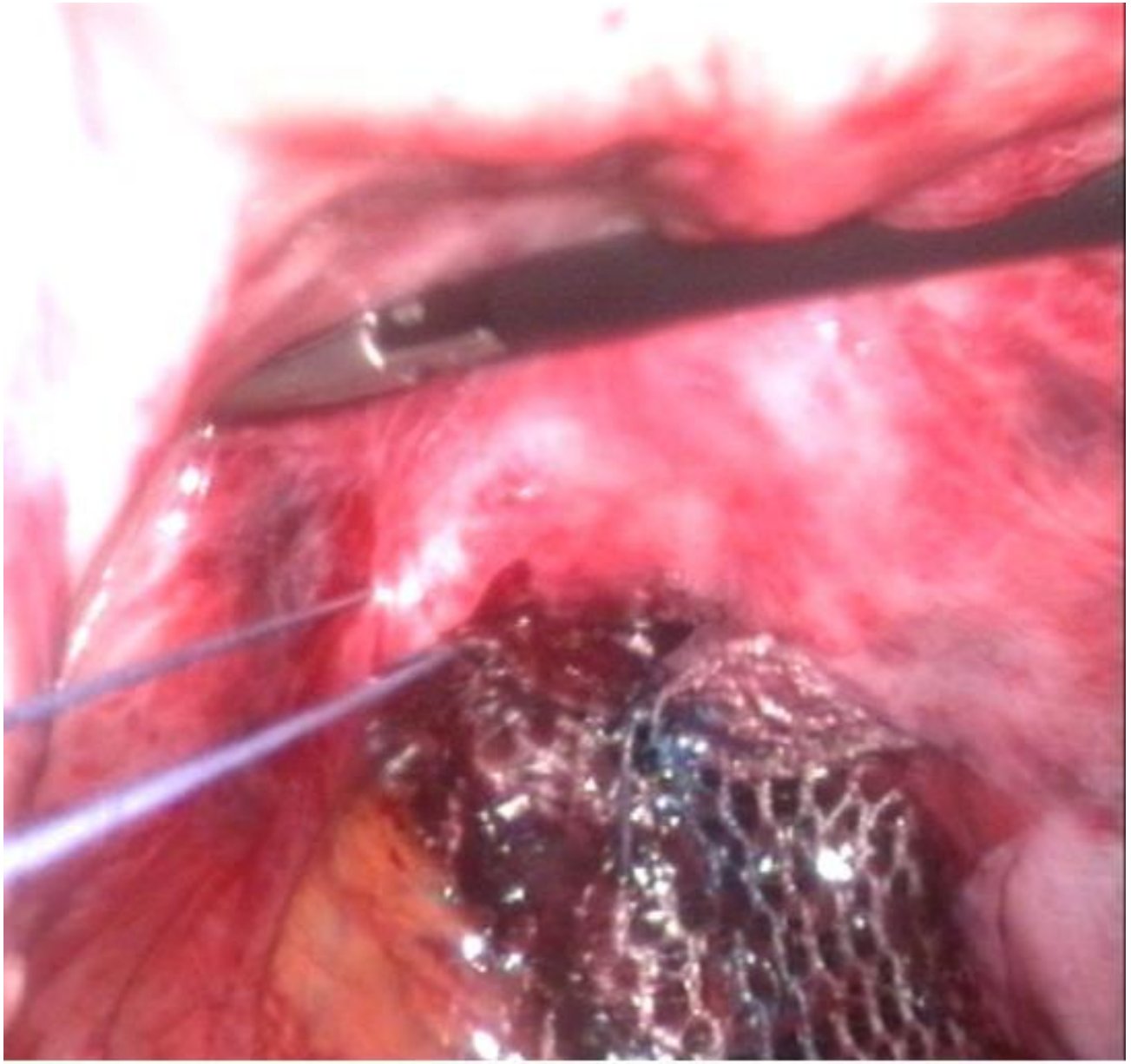
pecially during the learning phase of the sacrocolpopexy procedure. A study that evaluated the L5-S1 anatomy demonstrated a steep angle of descent (averaging 60 degrees) between L5 and S1.[16] This finding can be used as an intraoperative aid for proper identification of the sacral promontory.

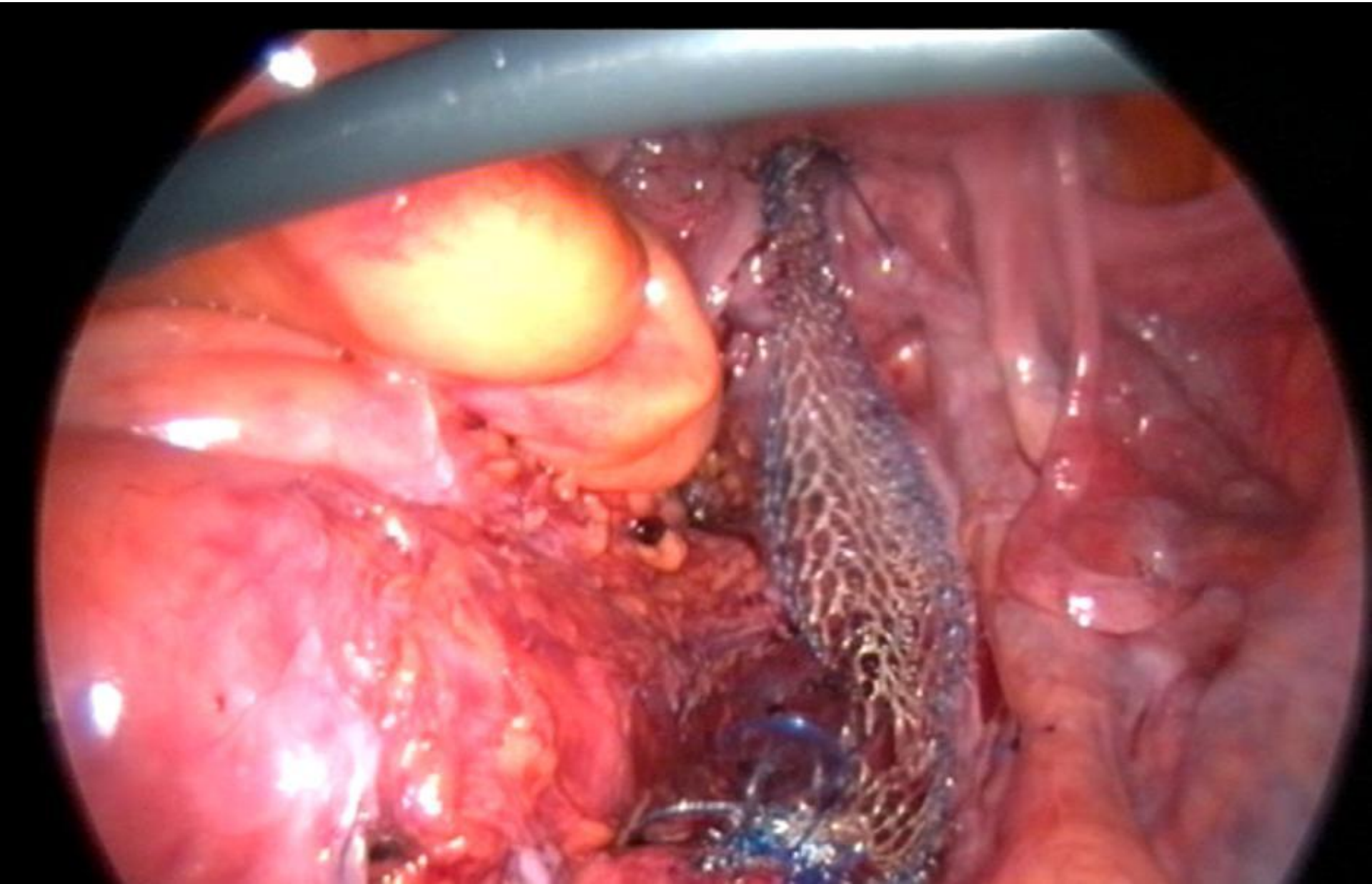
Finally, attachment of the mesh to the first sacral vertebra may result in a more anatomic suspension of the vaginal apex when compared with graft fixation above

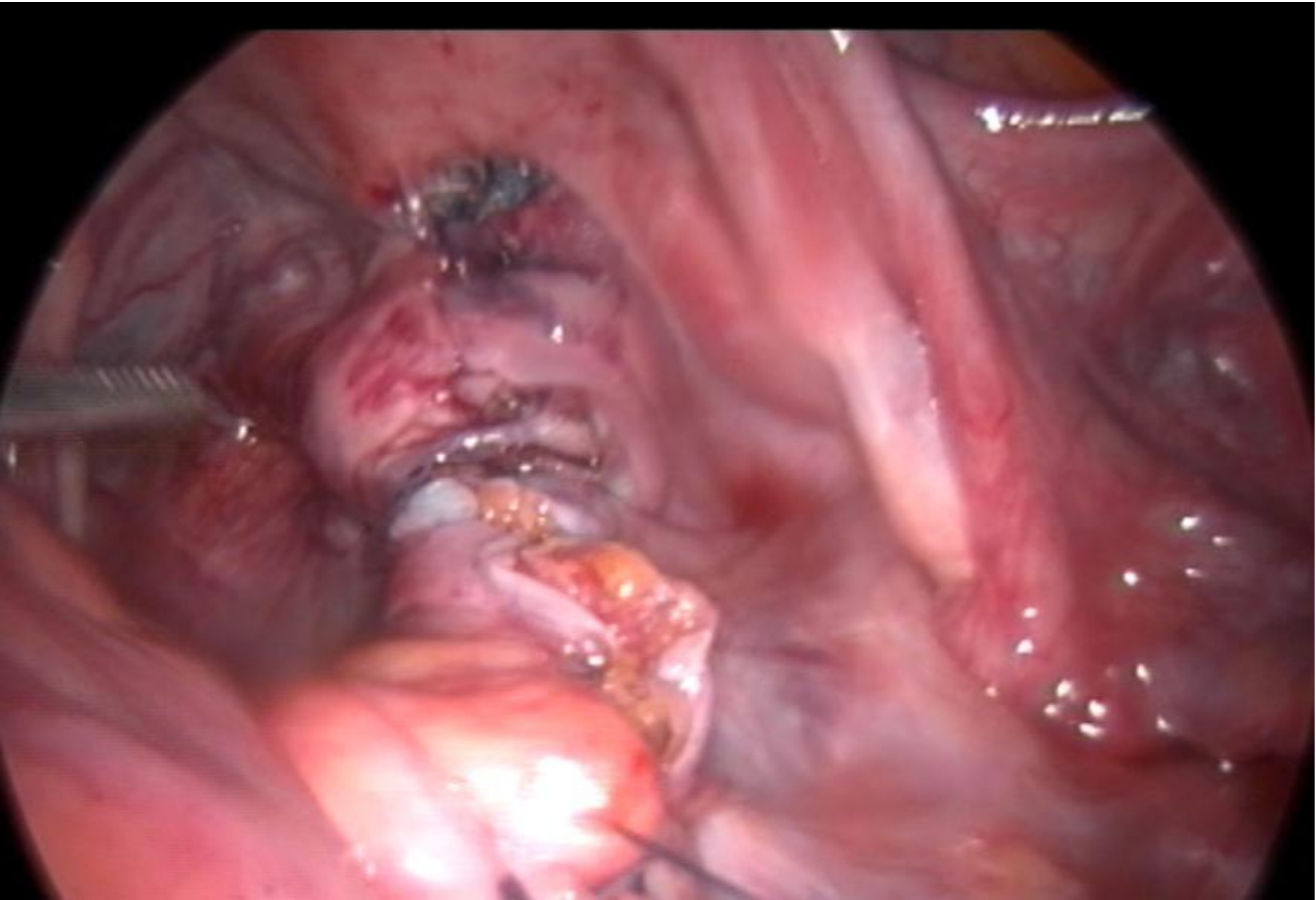

Voluson
E6
COMP
C1-5-D/GYN
MI 1.2
AUTF PERİNATOLOJİ
D53392-14-03-06-12
14.2cm / 1.1 / 35Hz
TIs 0.1
06.03.2014
1:02:59 PM
Uterus
Har-mid
100
Gn 3
C6 / M7
P4 / E3
SRI II 5
Voluson
E6

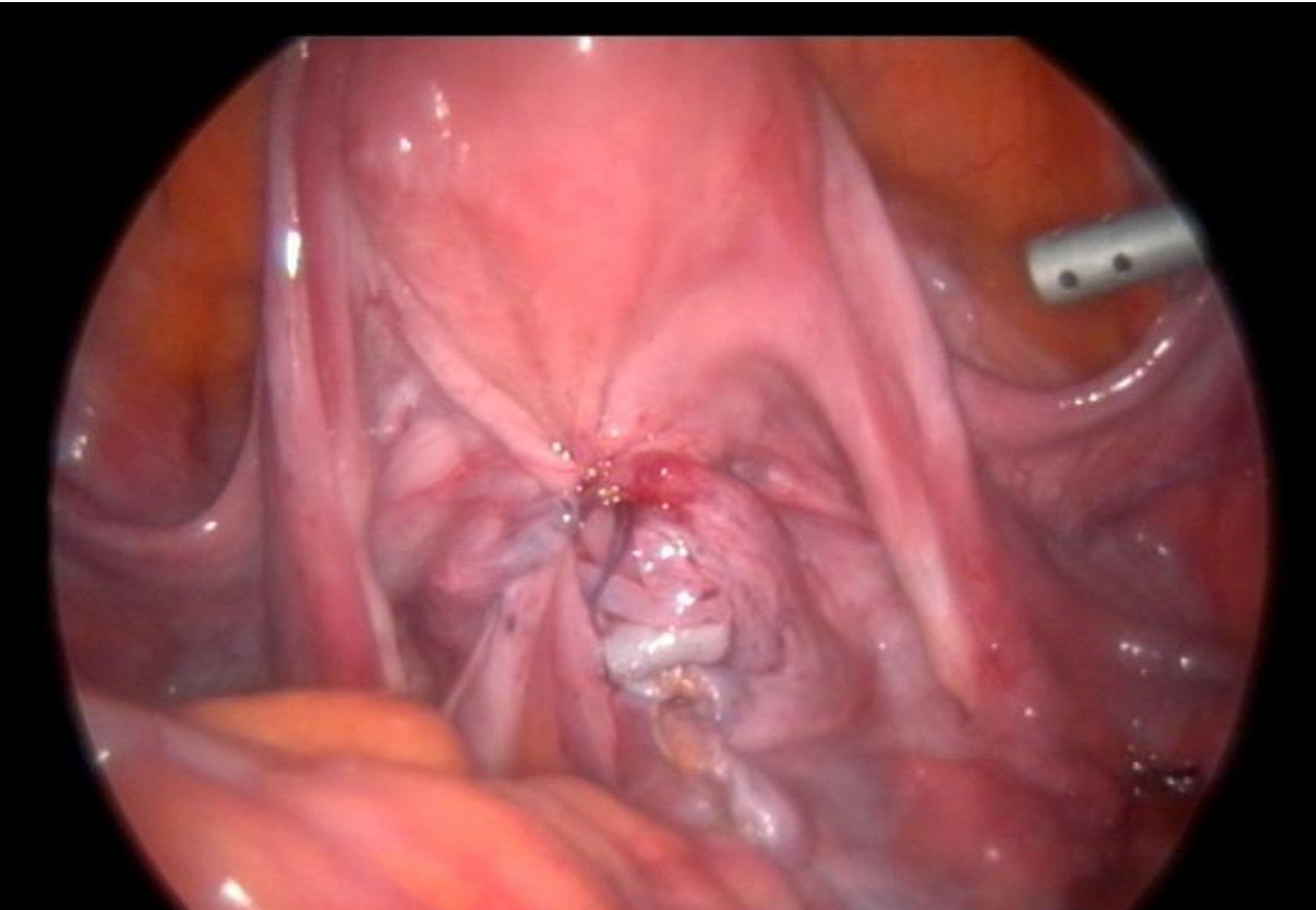












Laparoscopic sacral cervicopexy/hysteropexy Data on a laparoscopic approach to this procedure is even more limited, as many of the studies include sacral colpopexies, cervicopexies, and hysteropexies in the description of their surgical cohorts. The heterogeneity of these surgical procedures limits the validity of most published data. For patients with uterovaginal prolapse who desire minimally invasive repair, laparoscopic surgeons will often perform a supracervical hysterectomy followed by a sacral cervicopexy. This approach to hysterectomy is often considered technically easier and faster than a total laparoscopic hysterectomy, laparoscopic-assisted vaginal hysterectomy, or vaginal hysterectomy. Indeed, much of the literature cited therefore difficult to interpret. There is only one study that followed a small cohort of 15 women who underwent laparoscopic sacral hysteropexy using a 2-strap technique with the anterior mesh being conformed to a V-shape.[83] All patients also had a concomitant Burch urethropexy. Patients were followed for a minimum of 2 years, and during this time no patients had objective or subjective evidence of recurrent uterine prolapse and no one required repeat surgery. Postoperative bladder and bowel symptoms were not reported, but 86% of patients with preoperative dyspareunia had complete resolution. There were no intraoperative complications and no postoperative mesh erosions. Three patients became pregnant after the surgery, with 2 carrying to term and delivering by cesarean section.

Anterior/posterior colporrhaphy The need for concomitant anterior or posterior colporrhaphy at the time of sacral colpopexy is also a controversial issue among pelvic floor surgeons. Early on, surgeons performing sacral colpopexy described the need for concomitant anterior colporrhaphy.[5,6,63,64] As more surgeons extended graft attachment and incorporated a retropubic urethropexy in conjunction with the sacral colpopexy, the addition of a paravaginal defect repair also became more common to help provide additional anterior wall support. Unfortunately there are no current studies that directly compare sacral colpopexy with and without a separate anterior vaginal wall repair. As such, proceeding with this additional procedure at the time of sacral colpopexy is left to the discretion of the surgeon.

A traditional or site-specific posterior colporrhaphy may also be done at the time of sacral colpopexy. Many surgeons advocate for this additional procedure,[8,39,41,64] whereas others believe that suspending the vaginal apex with a separate posterior vaginal graft is sufficient to correct posterior wall defects.[65] A recent study looked at posterior wall measurements 1 year after abdominal sacral colpopexy without posterior repair, and found an objective cure rate of 75% in this compartment.[66] The investigators stated that the recurrence of posterior prolapse in their study was comparable to other studies that performed sacral colpopexy with and without posterior colporrhaphies, indicating no true benefit of this additional procedure.[39,41,61] The only comparative study in the literature to describe posterior measurements after sacral colpopexy with and without site-specific posterior repair demonstrated that the group with concomitant posterior repair had significantly better posterior measurements that persisted for 34 months after surgery.[67]

AUGS & ACOG guideline , 2011:

POP REPAIR WITH MESH SHOULD BE RESERVED

FOR PATIENTS WITH HIGH RECURRENCE RATE AND HIGH RISK FOR OPEN &LAPAROSCOPIC SURGERY

CLINICAL OBSTETRICS AND GYNECOLOGY
Volume 53, Number 1, 86–98

Obliterative Procedures for Pelvic Organ Prolapse

a sterile marker (Fig. 1). This facilitates maintaining orientation throughout the procedure, particularly when training junior surgeons. We are careful to not dissect the anterior vagina beyond the bladder neck and intentionally stay at least 1 to 2 cm from the urethrovesical junction (Figs. 2 and 3). Dissecting and placing sutures near the bladder neck places downward traction on the posterior urethra and may increase the risk postoperative stress urinary incontinence. In vaginal vault prolapse, we still perform a partial colpocleisis and remove 2 rec-

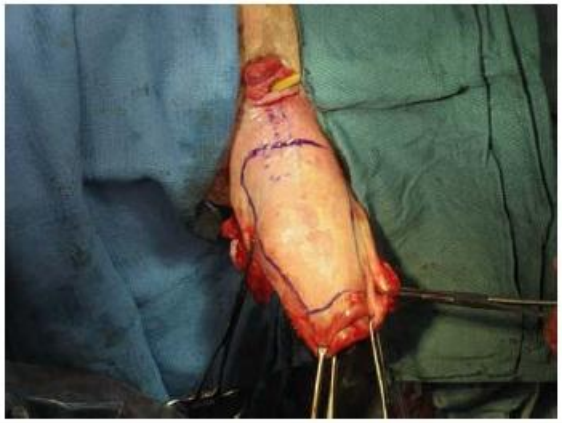


FIGURE 3. A rectangle of the vaginal mucosa is marked and will to be removed from the anterior vaginal wall.

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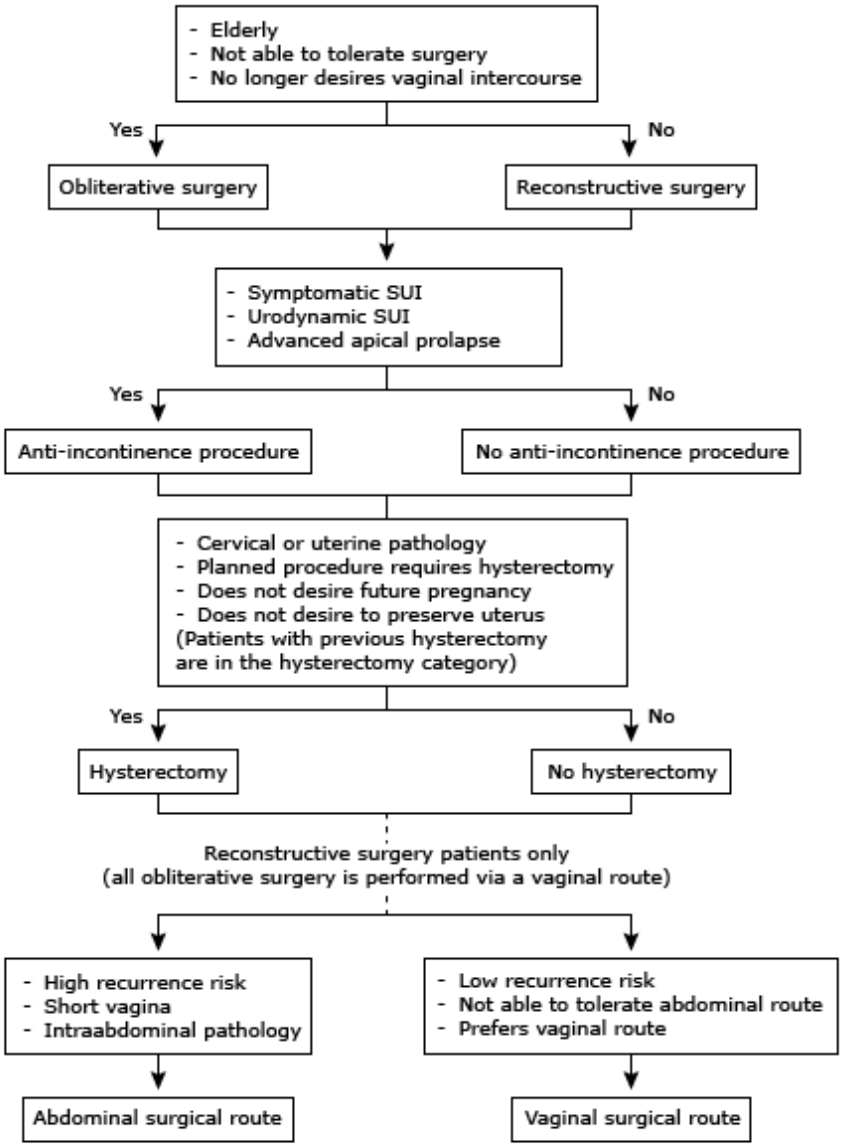
outlined at the level of the bladder neck.

Choosing a primary procedure for pelvic organ prolapse: Major decision points



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Ne preoperatif redüksiyon stres test ile
PO SÜİ mükemmel olarak öngörülebilir

Ne de Sakrokolpopeksiye aynı anda eklenen Burch
PO SÜİ' ı mükemmel önleyebilir
Stres kontinant kadınlardan
Redüksiyon stres test (+) olanlarda
Sakrokolpopeksi ve Burch yapıldıktan sonra
PO idrar kaçağı riski yüksek bulunmuştur
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farklı tedavi seçenekleri sunulmalıdır

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IMPORTANT FACTORS THAT SHOULD BE CONSIDERED BEFORE SURGICAL MANAGEMENT OF POP

PROLAPSED COMPARTMENTS & STAGES

↓

APICAL PROLAPSE ?

- **AGE ?**
- **SEXUALLY ACTIVE ?**
- **GENETİC PREDISPOSITION ?**
- **OBESITY & CHRONIC CONSTIPATION ?**
- **SYSTEMIC DISEASES LİKE DM ?**
- **GENERAL HEALTH STATUS ?**
- **ACTIVITY ?**

Rooney K, ve ark Am J Obstet Gynecol. 2006;195(6)
Siddiqui NY ve ark. Int J of Women's Health 2014:6

Female Pelvic Med Reconstr Surg. 2012 ; 18(5): 299–302. doi:10.1097/SPV.0b013e31826a53de.

Characterizing the Phenotype of Advanced Pelvic Organ Prolapse

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Abstract

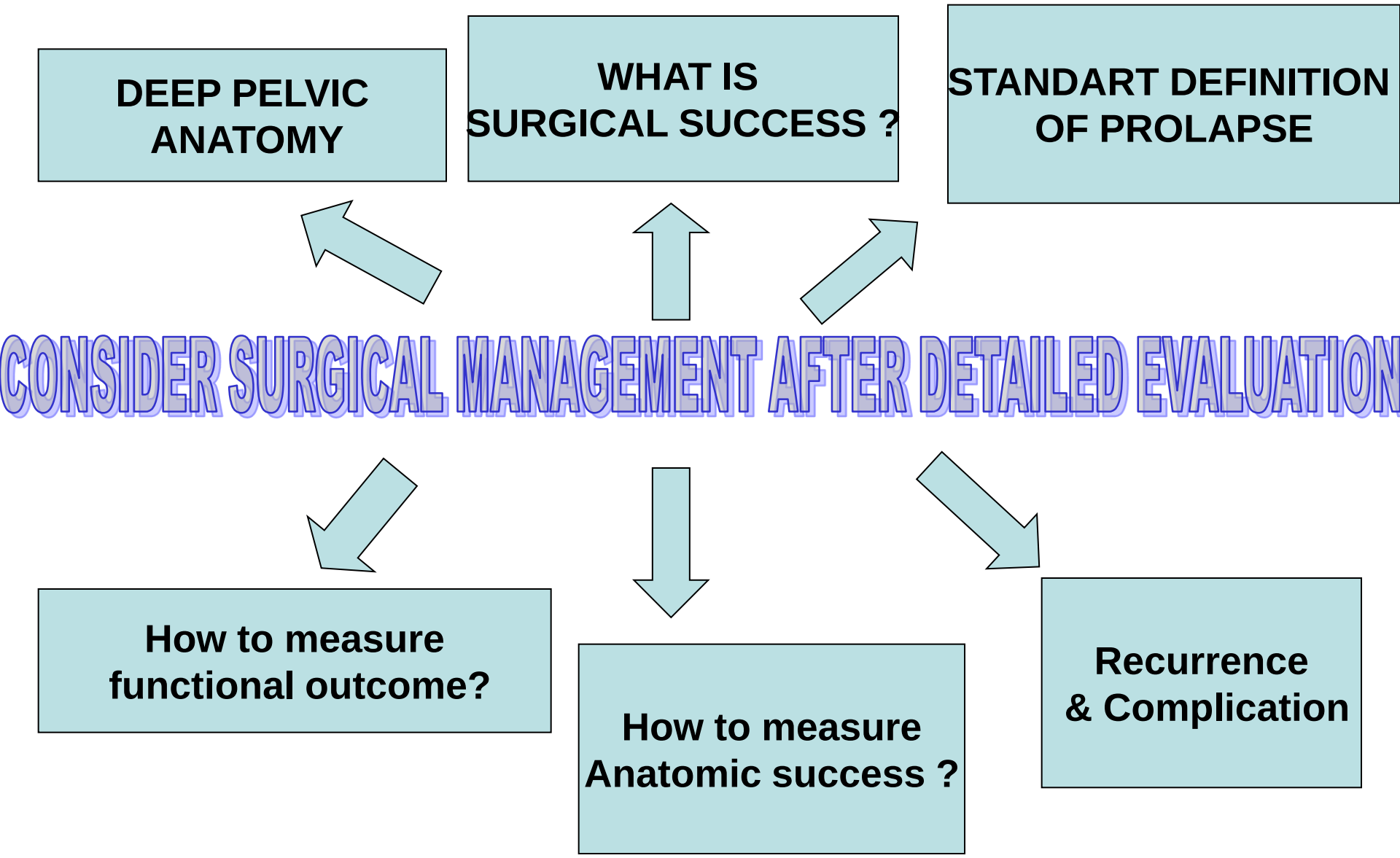
Objective—Genetic studies require a clearly defined phenotype to reach valid conclusions. Our aim was to characterize the phenotype of advanced prolapse by comparing women with stage III to IV prolapse with controls without prolapse.

Methods—Based on the pelvic organ prolapse quantification examination, women with stage 0 to stage I prolapse (controls) and those with stage III to stage IV prolapse (cases) were prospectively recruited as part of a genetic epidemiologic study. Data regarding sociodemographics; medical, obstetric, and surgical history; family history; and body mass index were obtained by a questionnaire administered by a trained coordinator and abstracted from electronic medical records.

Results—There were 275 case patients with advanced prolapse and 206 controls with stage 0 to stage I prolapse. Based on our recruitment strategy, the women were younger than the controls (64.7±10.1 vs 68.6±10.4 years; $P<0.001$); cases were also more likely to have had one or more vaginal deliveries (96.0% vs 82.0%; $P<0.001$). There were no differences in race, body mass index, and constipation. Regarding family history, cases were more likely to report that either their mother and/or sister(s) had prolapse (44.8% vs 16.9%, $P<0.001$). In a logistic regression model, vaginal parity (odds ratio, 4.05; 95% confidence interval, 1.67–9.85) and family history of prolapse (odds ratio, 3.74; 95% confidence interval, 2.16–6.46) remained significantly associated with advanced prolapse.

Conclusions—Vaginal parity and a family history of prolapse are more common in women with advanced prolapse compared to those without prolapse. These characteristics are important in phenotyping advanced prolapse, suggesting that these data should be collected in future genetic

BEST APPROACH TO SURGICAL TREATMENT OF POP



Zimmerman CW ve ark. Best Practice & Research Clin Obstet & Gynecol 2011 (25)

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