Conventional Surgical treatment of apical prolapse

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Surgical treatment of apical prolapse

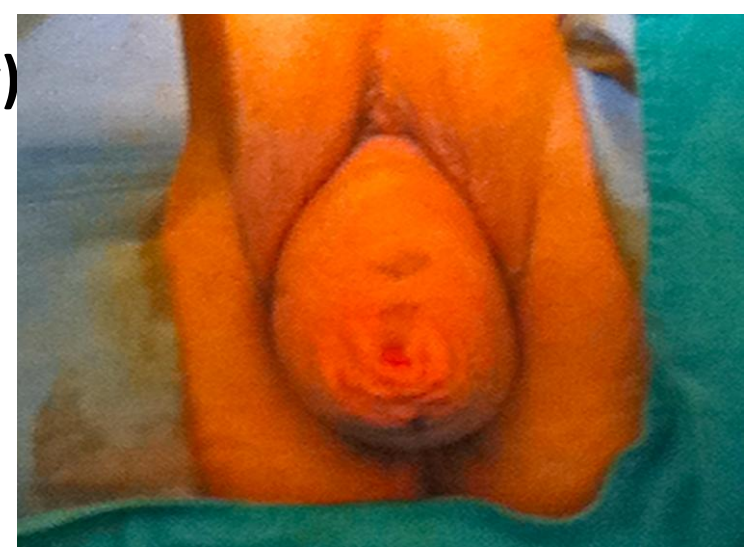
Conventional surgery

Vaginal

- **Colpocleisis**
- **Sacrospinous ligament fixation**
- **Uterosacral ligament suspension**
- Manchester-Fothergill
- VH+McCall culdoplasty

Abdominal

- **Sacrocolpopexy(sacrohysteropexy)**



Nev treatment modalities

- Transvaginal meshes(surgical kits)
- Laparascopic sacrocolpopexy
- Robotic sacrocolpopexy

Which Patient?– Which Approach?

Abdominal Approach is preferred in the following conditions:

- Recurrence after previous vaginal approach
- ‘Pulling up’ preserves vaginal depth and reduces dyspareunia
- Uterine size more than 14 week’s pregnancy
- Concomitant intra-abdominal pathology
- Multiple previous vaginal operations
- Isolated vaginal vault prolapse

Which Approach– Why Vaginal?

Vaginal approach should be preferred in case of:

- Significant uterine prolapse
- Uterine size less than 14 week's pregnancy
- Presence of large rectocele
- Desire to perform concomitant TVT / TOT
- Frail and elderly patients

Colpocleisis

- Obliteration of vagina
- This procedure is performed on patients who are not sexual active
- It is relatively simple to perform and associated with less common peri-and post-operative complications.

It can be done in two ways

- Partial colpocleisis(Le Fort)
- Total colpocleisis

Preperation for colpocleisis

Patients must undergo:

- Physical examination
- PAP smear
- Transvaginal ultrasound

Endometrial sampling

  - Bleeding history
  - Increased endometrial thickness

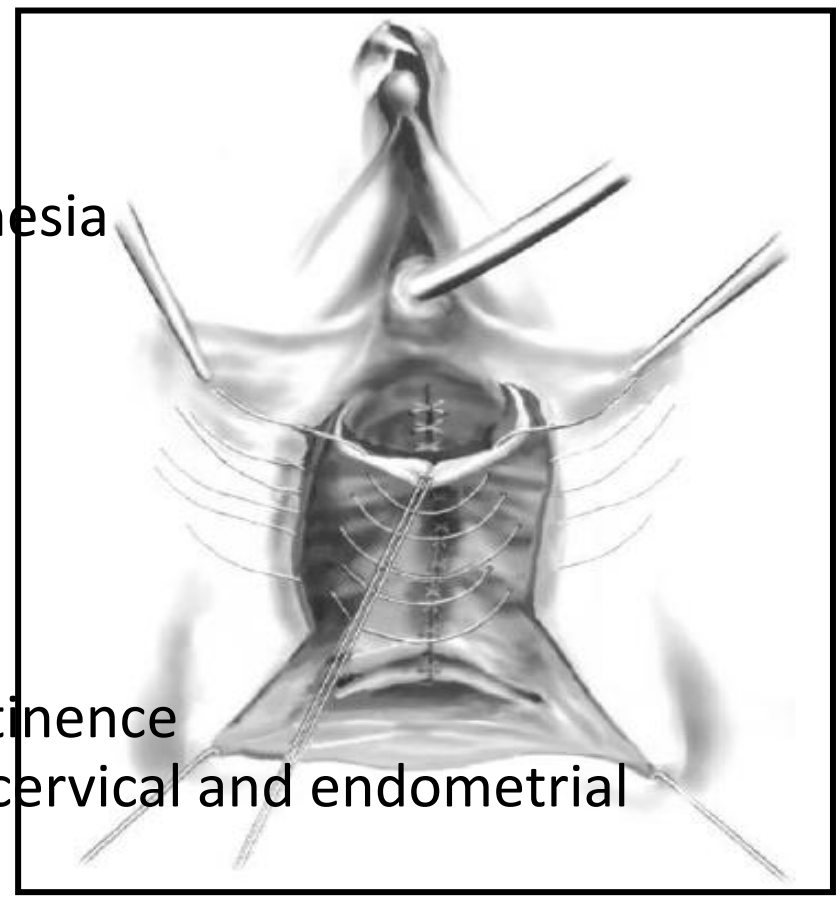
Colpocleisis

Advantages

- Short operating time
- Fewer and less severe complications
- Possible with regional and local anesthesia
- Short hospitalization time
- Faster recovery
- High success rate

Disadvantages

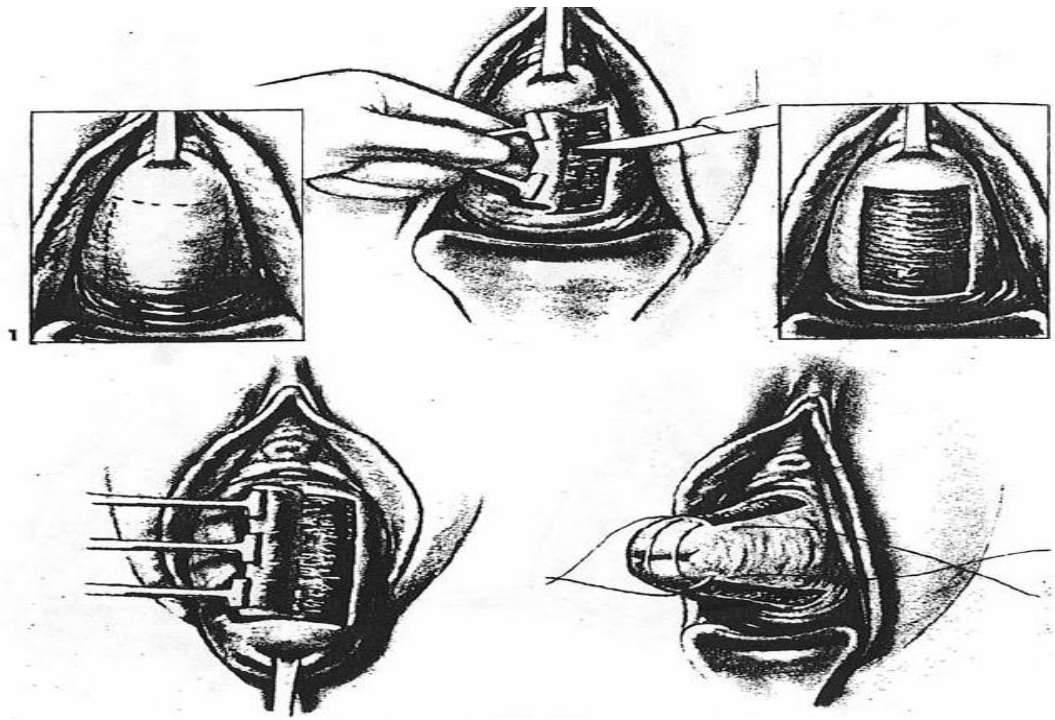
- End of coitus
- Self image issues
- De novo or more severe urinary incontinence
- Difficulty and/or delayed diagnosis of cervical and endometrial neoplasia

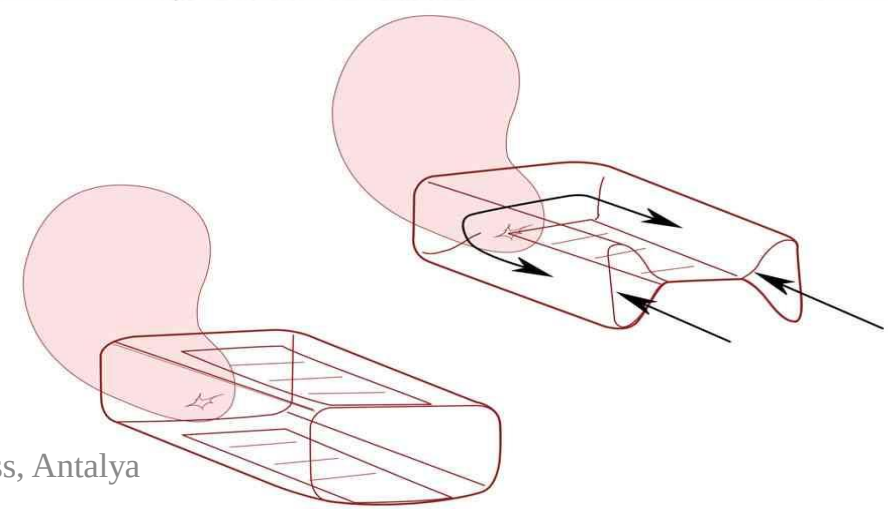


FitzGerald MP, Int Urogynecol J. 2006

Partial colpocleisis

- It is described by Le Fort in 1877
- Rectangular piece of anterior and posterior vajinal mucosa are removed.
- Vagina is obliterated with row sutures starting from servix
- A wide longitudinal vaginal septum area and bilateral channels on each side are created

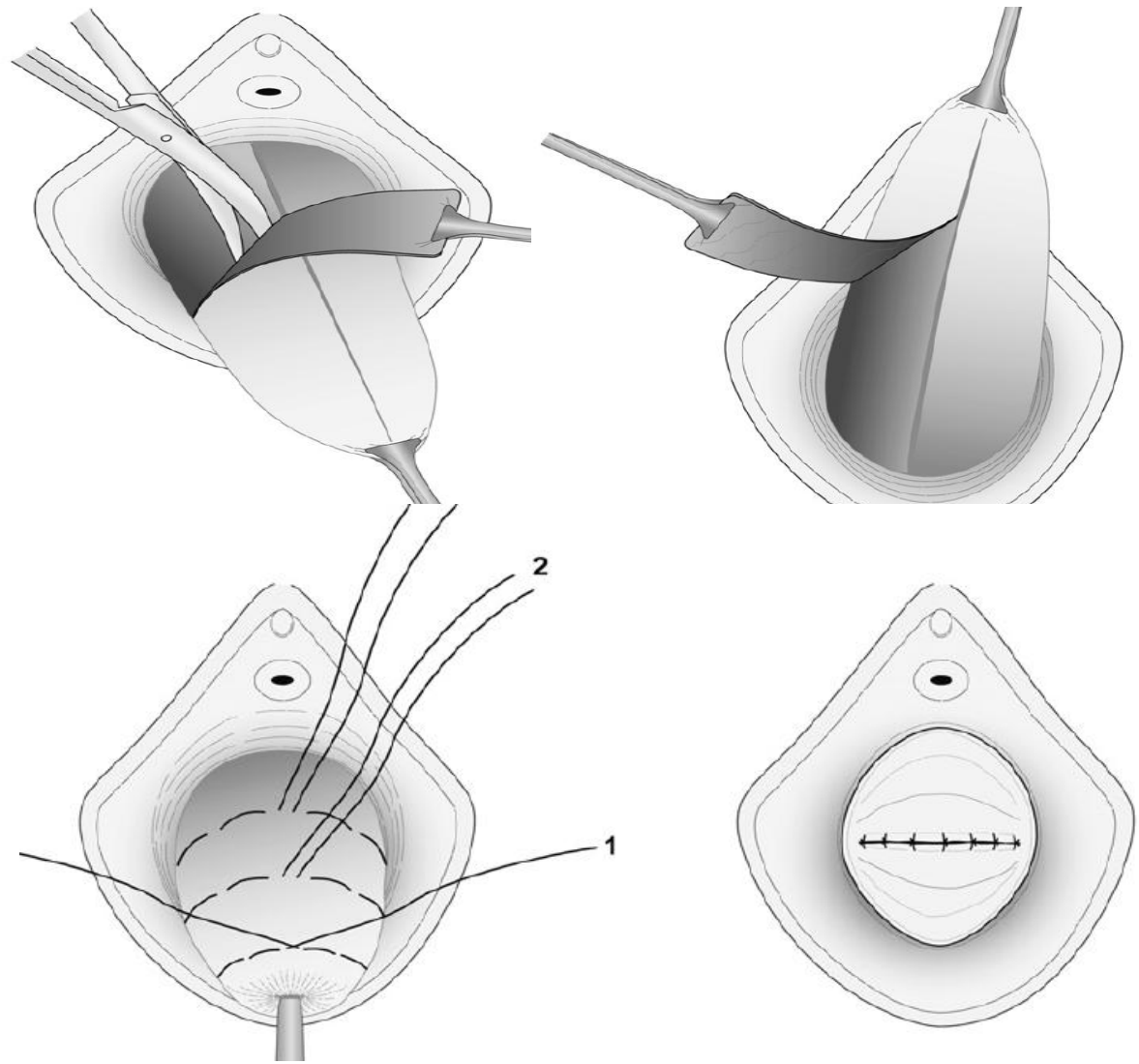




Total colpocleisis (colpectomy)

All vaginal mucosa is removed and vagina is pushed up with circular sutures

Generally, this procedure is used in vaginal vault prolapse



Colpocleisis: Complications

Perioperative complications:

- Mortality rate 0.025%
- Major complications due to underlying cardiovascular and pulmonary conditions 2%
- Major surgical complications such as bleeding requiring transfusion 4%
- Minor complications 15%

Late complications

- Urinary incontinence
- Recurrence
- Urogenital fistula

Colpocleisis: Postoperative incontinence

Post operative stress incontinence rate increases due to altered anatomy

- **Uretral axis is straightened**
- **and moves down to toward rectal plane**

Some authors recommend adding TVT/TOT to colpocleisis

Hoffman MS, Am J Obstet Gynecol. 2003
Hanson GE, Obstet Gynecol. 1969
FitzGerald MP, Am J Obstet Gynecol. 2003

Sacrospinous Ligment fixation: Success.

Barber and Maher. Int Urogynecol J 2014

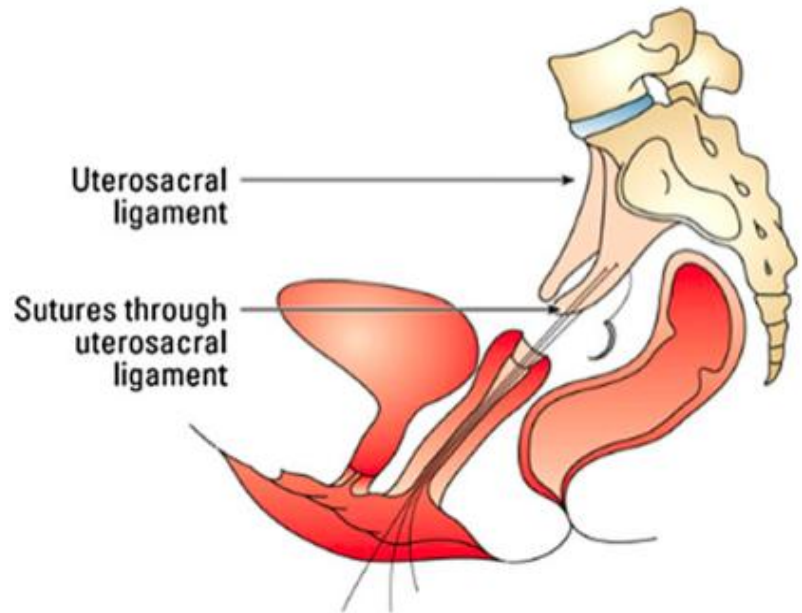
Table 1 Outcome of colpocleisis

Author [reference]	N	Length of follow-up	Success rate	Complications
Total colpocleisis with or without concomitant total vaginal hysterectomy/cuffclectomy				
Edebohls [18, 19]	4	0.5–12 months	100%	
Demarest [40]	10	Not stated	Not stated	Febrile morbidity first 72 h
Masson [27]	23	Not stated	100%; 19 of 23 patients followed	One death pulmonary embolus postop. day 30
Williams [28]	60	Not stated	91/60 "satisfactory results"	One death SBO
Adams [22]	30	1–14 years	100%	One myocardial infarction, One thrombophlebitis
Hayden [20]	4	2–24 months	100%	One pelvic abscess
Anderson [41]	18	6–12 months	89%	One pyelonephritis 2 weeks postop., One death POD nine probable myocardial infarction
Percy [42]	315	Not stated but noted to be "inadequate"	100% in those followed	Eight deaths (Three coronary, three pulmonary embolism, one pneumonia, one high fever/stupor)
Thompson [5]	11	FU on 10/11 patients, no recurrences over 5 years or less	100%	Two postop. DVT requiring anticoagulation
Bradbury [9]	43	1–5 years	100%	16 patients with cystitis, 5 with new onset stress incontinence
Johnson [43]	18	0.5–14 years	100%	One death myocardial infarction, Three hematomas
DeLancey [32]	33	1–18 months postop exam, questionnaire at 35–83 months	97%, 1 failure at 12 months	Two worsening of CHF, one postop. pneumonia, two lower UTI
Von Pechmann [34]	92	0–64 months physical exam n = 92, 13–161 months phone follow-up n = 64	98% anatomic success, by phone survey, 90% satisfied/very satisfied	One death 28 days postop. (lung cancer), two rectal prolapse, 20 (22%) transfusion, 4 (4%) ureteral occlusion, one proctotomy, two (2%) laparotomy during TVH
Hoffman [35]	54	Follow-up on 40 patients 6–56 months postop.	100%	One CVA, one pulmonary edema, one atrial fibrillation
Harmanli [34]	40	5–65 months	100%	One (2%) vesical injury, four (10%) late rectal bleeding
Le Fort or partial colpocleisis, with or without total vaginal hysterectomy, cuffclectomy				
Wyatt [7]	8	12–30 years	83%, six of the eight patients followed	None stated
Barr [44]	14	>4 months	100%	Two fevers, one UTI
Adair [10]	38	3 months to 3 years	95%	Two deaths (One myocardial infarction, venous thromboembolism, pneumonia, one pulmonary embolism), seven fevers, three UTI
Collins [45]	31		87%	One uremia, one rectovaginal fistula
Maher [15]	43	2–11 years	97%, 38/43 followed	Two fever, five UTI, one pneumonia, one coronary occlusion, one perineorrhaphy infection, three (8%) uterine bleeding remote from surgery
Wolf [46]	14	Not stated	Twelve good-excellent, one fairly satisfactory	None stated
Falk [16]	100	2–22 years	96%	11 UTI, two infected perineorrhaphies, one vaginal infection
Hanson [30]	288	5 years or more	92%, 216/288 followed by mail	Two deaths, one cerebrovascular accident, one PE, 11 (4%) transfusion, 65 (22%) fever first 48 h, three vaginal bleeding >11 months postop.

Uterosacral ligament suspension

It was first described by Miller in 1927 and was later popularised by Shull in late 1990s.

In this procedure, the vaginal apex attached to the proximal uterosacral ligaments using an intraperitoneal approach.



This can be performed either concomitantly with a vaginal hysterectomy or for post-hysterectomy vault prolapse.

Intra operative cystoscopy is recommended to confirm ureteral patency.

Uterosacral ligament suspension

Margulies (2010), meta-analysis, 10 studies, 820 patients, mean follow up 25 months

- Ureteral reimplantation 0.6 %
- Blood transfusion 1.3 %
- Cystotomy 0.1 %
- Bowel injury 0.2 %
- Success rate for apical prolapse 98 %

Some studies gave the ureteral complication as high as 11 %

Uterosacral ligament fixation: success

Barber and Maher. Int Urogynecol J 2014

Table 2 Outcomes of transvaginal uterosacral vault suspension procedures

Reference	Number of patients	Mean follow-up in months (range)	Definition of anatomical success[b]	Anatomical success—all segments (%)	Anatomical recurrence by segment (%)	Reoperation for prolapse (%)
Jenkins [35]	50	(6–48)	Not defined	48/50 (96)	Anterior (4)	MD
Comiter et al. [36]	100	17 (6.5–35)	Grade 0–1	96/100 (96)	Apex (4)	4/100 (4)
Barber et al. [37]	46	15.5 (3.5–40)	Stage 0/1 or stage 2 without symptoms	41/46 (90)	Apex (5); anterior (5); posterior (5)	3/46 (6.5)
Shull et al. [38]	289	Not stated	Grade 0–1	275/289 (95)	Apex (1); anterior (3.5); posterior (1.4)	MD
Karram et al. [39]	168	21.6 (6–36)	Grade 0–1	148/168 (88)	Apex (i); anterior or posterior (ii)	11/168 (5.5)
Amundsen et al. [40]	33	28 (6–43)	Stage 0 or 1	27/33 (82)	Apex (6); posterior (12)	MD
Silva et al. [41]	72	61.2 (42–90)	Symptomatic stage 2 or greater	61/72 (85)	Apex (3); anterior (7); posterior (14)	2/72 (3)
Antovska and Dimitrov [42]	32	25 (9–42)	Stage 0 or 1	MD	Apex (0); anterior	MD
Wheeler et al. [43]	35	24 (0–46)	Stage 0 apical prolapse	28/35 (80)	Apex (20)	0/0 (0)
De Boer et al. [44][a]	48	12	Stage 0–1	23/48 (48)	Apex (4.2); anterior (47.9) Posterior (14.6)	MD
Doumouchtsis et al. [45]	42	60	Grade 0 of vaginal vault	36/84 (84.6)	Apex (15.4)	5/42 (11.9)
Total				783/925 (85 %) 95%CI (83–87 %)		25/428 (5.8) 95%CI (3.6–7.0)

Sacrospinous Ligament Fixation

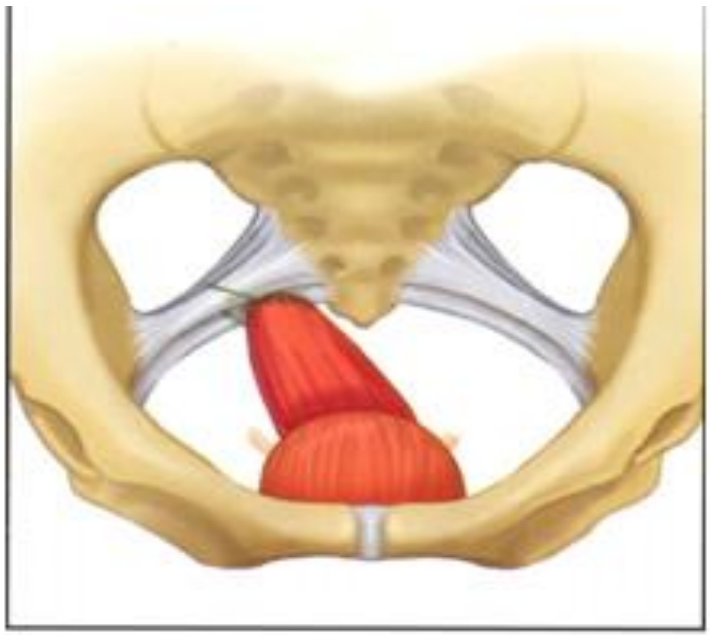
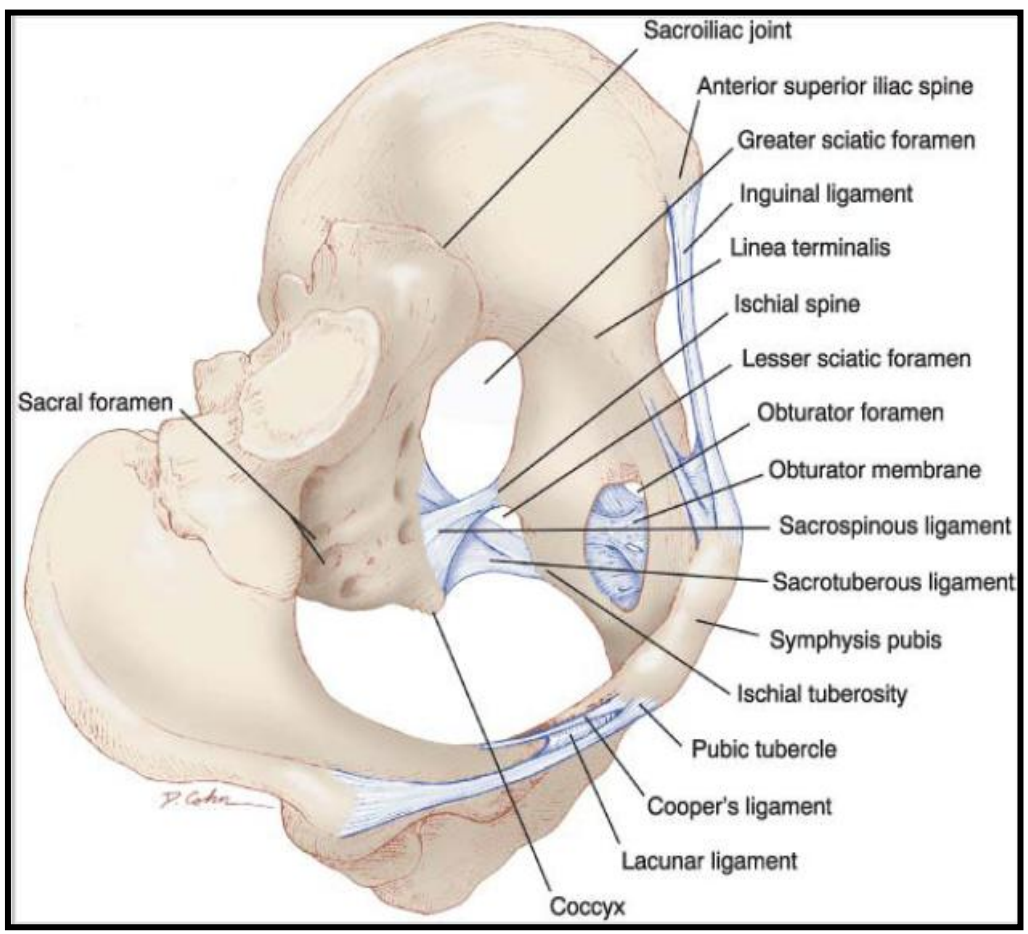


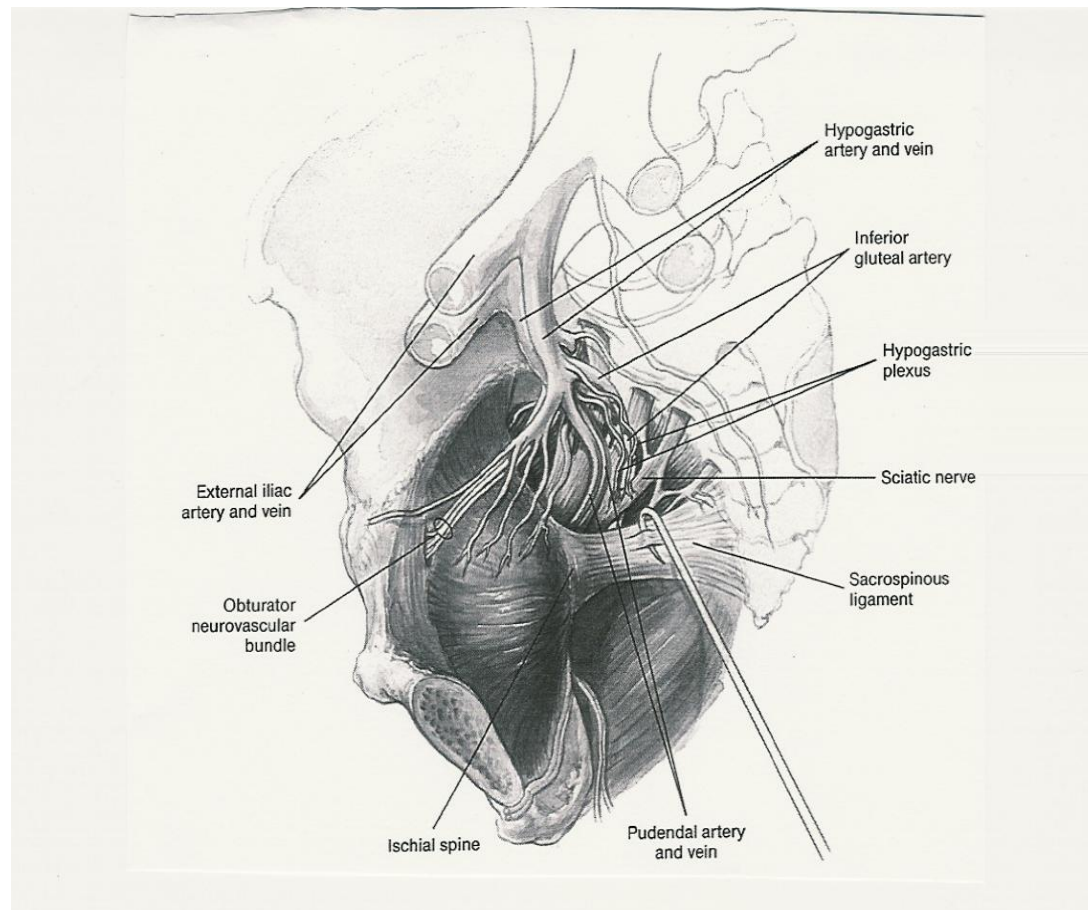
***Figure 8**: The upper vaginal vault is secured to the sacrospinous ligament, restoring vaginal wall support and correcting prolapse*

- It is described by Richter in 1968
- It was popular due to Randall and Nichols after 1971
- Vaginal cuff is stitched to sacrospinous ligament .
- Pelvic anatomy must be known well for this procedure

Richter 1968
Randall 1971

Anatomy,
Coccyx-Sacrospinous ligament complex

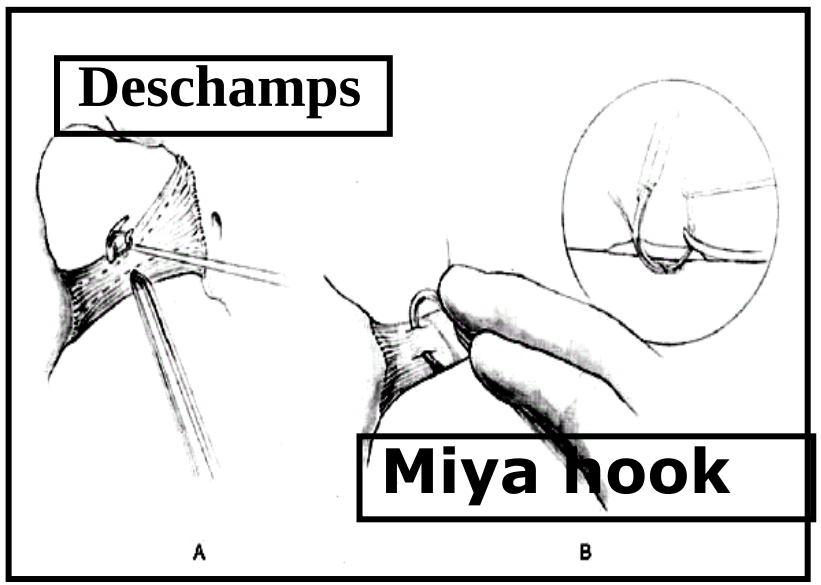


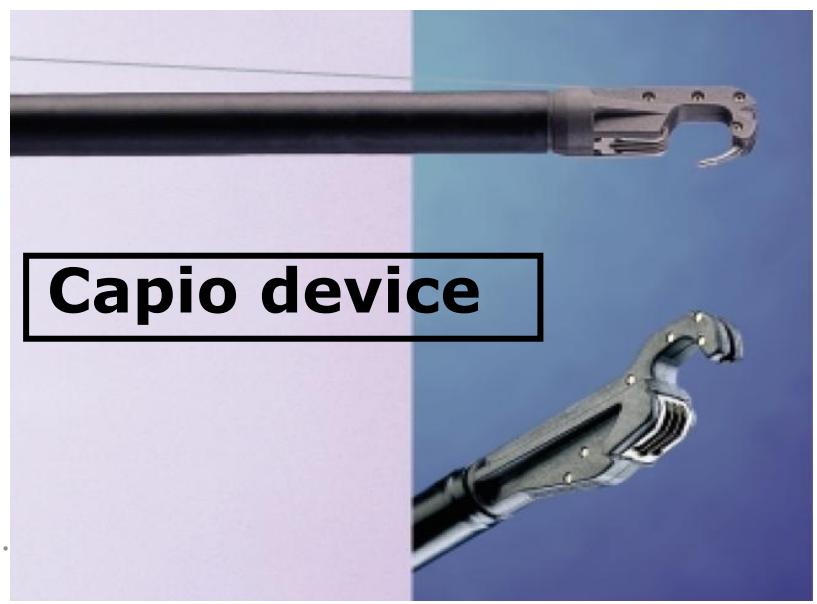


Sacrospinous Fixation: Procedure

- Dissection is made in pararectal fossa
- First, ischial spine and sacrospinous ligament is delineated
- Vaginal apex is anchored to the ligament with the least 2 sutures uniletarally on the right side
- vaginal vault and ligament are approximated with two non-absorbable sutures
- No space must be left between vaginal vault and ligament while tying the sutures
- Miya hook, Dechamps, Capio device or long needle holder with curved tip can be used for suturing

Sacrospinous ligament fixation: Equipments





Sacrospinous fixation

- **İntraoperative complications** 3-6 %
  - Severe bleeding 2-28 %
    0.2 % in 1229 cases and transfusion rate 2 %
    (22 studies, Sze & Karram, 1997)
  - Damage to pudendal vessels and nerves
  - Rectal injury

Morgan et al Obstet Gynecol 2007
Lovatsis et al. Curr Opin Obstet Gynecol. 2003
Arbel et al. Best Pract Res Clin Obstet Gynaecol. 2005
Demirci et al. Int Urogynecol J. 2006

Sacrospinous Ligament Fixation

Late complications

- Persistent gluteal pain due to sacral nerve entrapment, 3 %
- sexual disfunction due to shortened vagina
- De novo cystocele
  - 6- 28.5 %.
- Stress/urge urinary incontinence caused by
  - Neurologic damage due to dissection
  - İmpaired urethrovesical junction
  - Straightened uretral axis
  - Decreased intra urethral pressure due to mentioned changes.

Morgan et al Obstet Gynecol 2007
Holley et al J Am Coll Surg 1995
Lovatsis et al. Curr Opin Obstet Gynecol. 2003
Arbel et al. Best Pract Res Clin Obstet Gynaecol. 2005

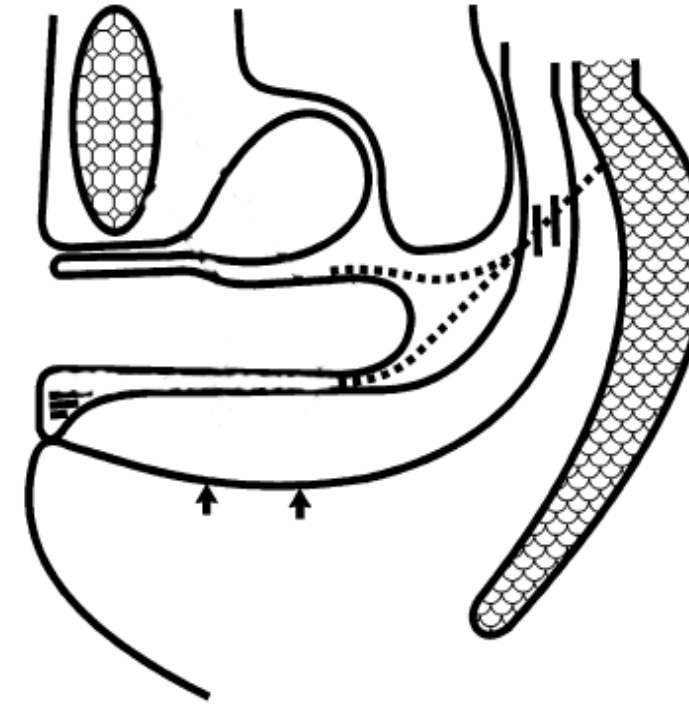
Sacrospinous Ligament Fixation: success. Barber and Maher 2013

Table 1 Outcomes of sacrospinous ligament suspension (SSLS) procedures

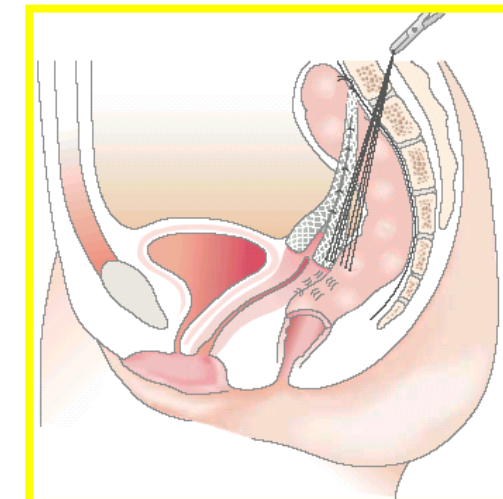
Reference	Study design	Number	Mean follow-up in months (range)	Definition of anatomical success[a]	Anatomical success—all segments (%)	Anatomical recurrence by segment (%)	Reoperation for prolapse (%)
Morley and DeLancey [13]	Retrospective	92	51.6 (1–132)	Not defined	90	Apex (4); anterior (6)	4 (5)
Imparato et al. [14]	Retrospective	155	Not stated	Not defined	90.3	Not reported	None reported
Shull et al. [15]	Retrospective	81	(24–60)	Grade 0–1	82	Apex (4); anterior (12); posterior (1)	4 (5)
Pasley [16]	Retrospective	144	35 (6–83)	Asymptomatic and above hymen	85.4	Apex (5.6); anterior (7.6); posterior (1.4)	2 (1.3)
Benson et al. [17]	RCT SSLS vs ASC	42	30 (12–66)	Vaginal walls above hymen or apical descent less than 50 % length[b]	67	Apex (12); anterior (28.5); posterior (2.3)	14 (37)
Paraiso et al. [18]	Retrospective	243	76. (1–190)	Grade 0 or asymptomatic grade 1	79.7 at 5 years	Apex (4.9); anterior (15.9); posterior (4.9)	11 (4.5)
Penalver et al. [19]	Retrospective	160	40 (18–78)	"Any symptomatic descent"	85	Apex 6; anterior (6); posterior (2.5)	11 (6.8)
Colombo and Milani [20]	Retrospective	62	83 (48–108)	Grade 0–1	74	Apex (8); anterior (14); posterior (3)	0 (0)
Meschia et al. [21]	Retrospective	91	43 (12–86)	Grade 0–1	85	Apex (4); anterior (13); posterior (9)	None reported
Sze and Karram [22]	Retrospective	75	24 (3–72)	Above hymen	71	Anterior (21); other (8)	7 (12.9)
Lantzsch et al. [23]	Retrospective	123	58 (6–108)	Not defined	87	Apex (3.5); anterior (8); posterior (1.6)	2 (1.6)
Lovatsis and Drutz [24]	Retrospective	293	(12–30)	At or beyond the introitus	97	Apex (3); anterior NR; posterior NR	(3)
Cruikshank et al. [25]	Prospective cohort	695	43 (6–60)	Reoperation for recurrence	89.4	Apex (5.1)	105 (15)
Nieminen et al. [26]	Retrospective	138	24	POPQ Stage 2 or greater	78.7	Apex (4.9); anterior (11.5); posterior NR	NR
Maher et al. [27]	RCT SSLS vs ASC	48	22 (6–58)	Grade 0–1	69	Apex (19); anterior (14); posterior (7)	3 (6.3)
Hefni and El-Toukhy [28]	Prospective	305	57 (24–84)	Vaginal vault at least 6 cm distal to hymen	96	Apex (4); anterior (13); posterior (0)	NR
Toglia and Fagan [29]	Retrospective	64	26.5 (1–72)	Apex above introitus and no reoperation	78	Apex (9); anterior (17); posterior (0)	2 (3)
Aigmueller et al. [30]	Prospective	55	84 (24–180)	Above the hymen	64	Apex (7); anterior (29); posterior (5)	5 (9)
Chou et al. [31]	Retrospective	76	36 (12–60)	Grade 0	91	Apex (5.3); anterior (3.7); posterior (NR)	4 (5.3)

Abdominal sacrocolpopexy

Abdominal Sacrocolpopexy

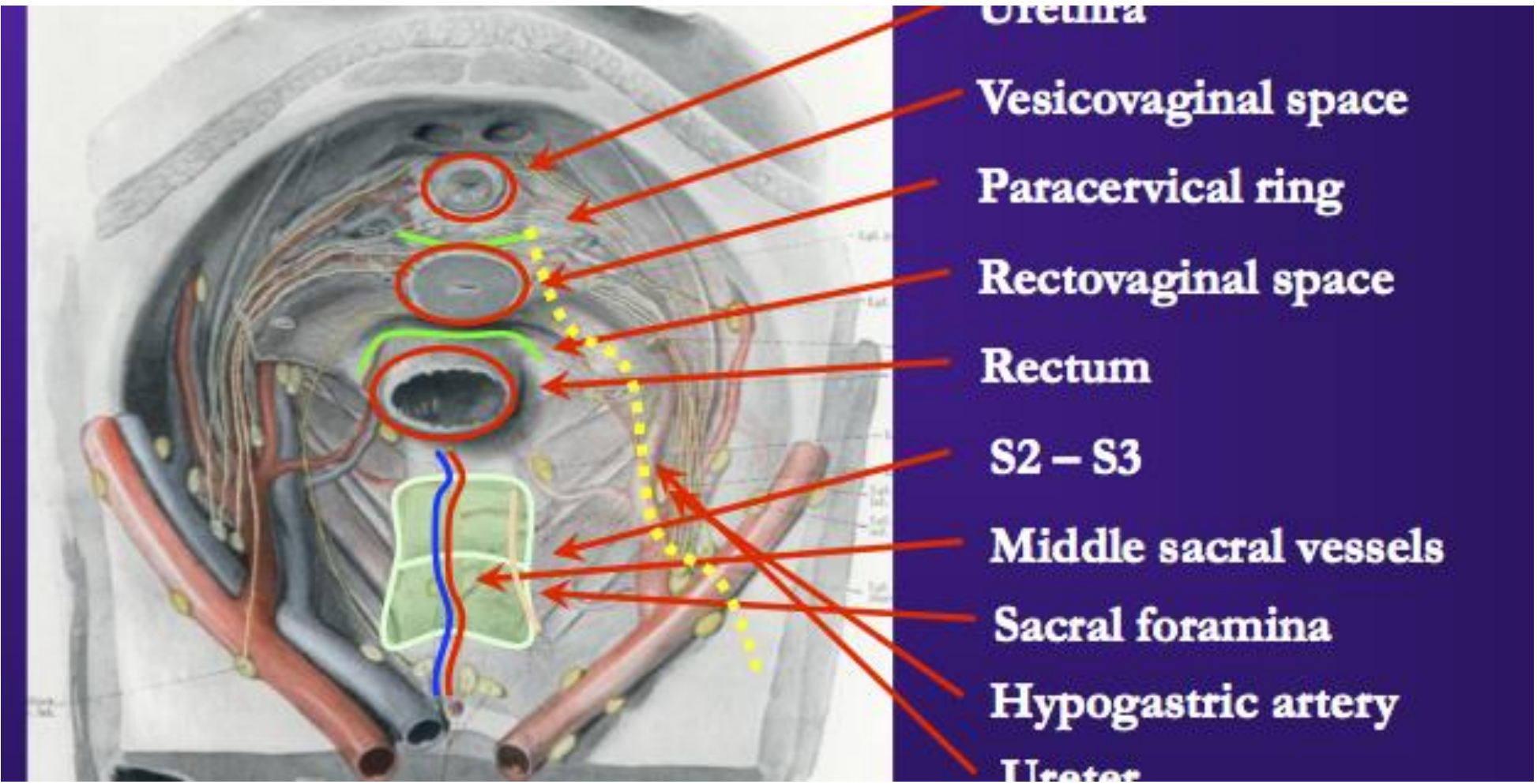


- It was described by Arthur in 1957 as hysteropexy.
- Sacrocolpopexy was described by Lane in 1962.
- Vaginal apex is suspended to sacrum using non absorbable mesh

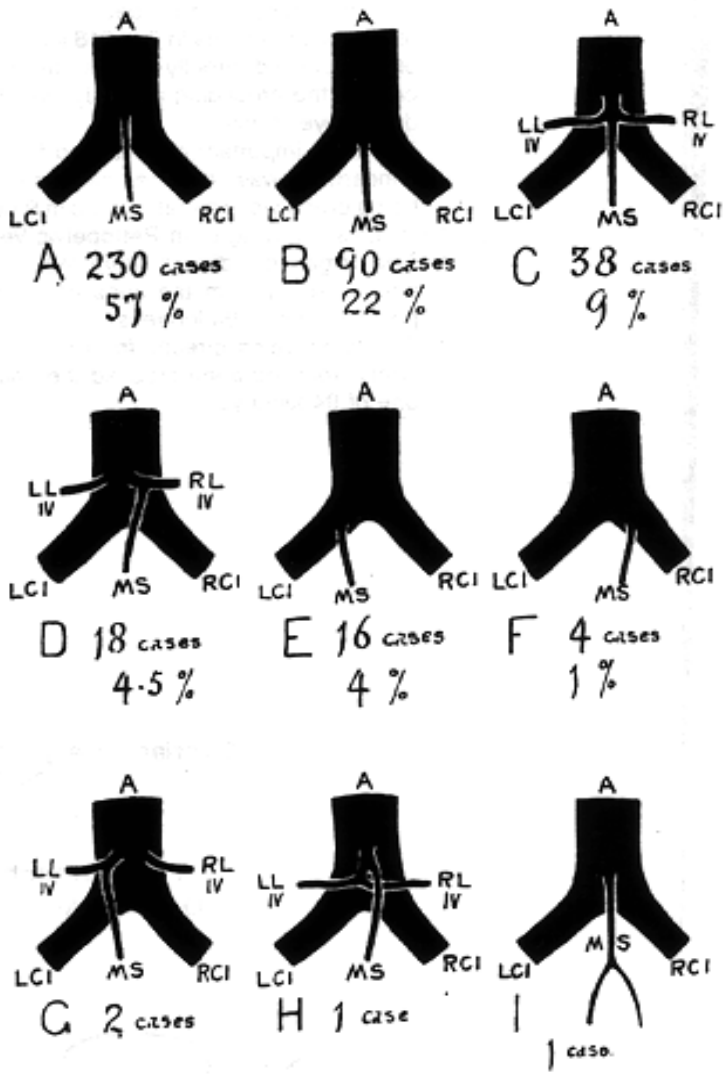


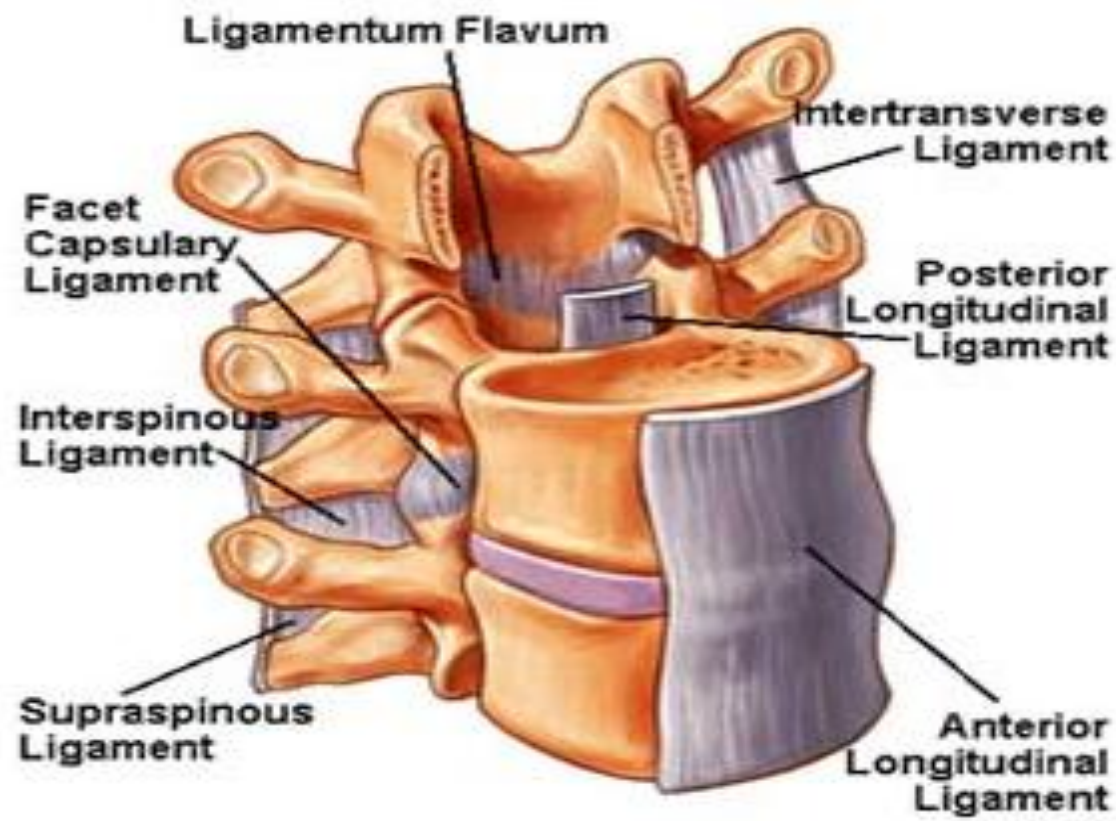
Arthure 1957
Lane 1962

Sacrocolpopexy: Anatomy



Sacrocolpopexy: Anatomy



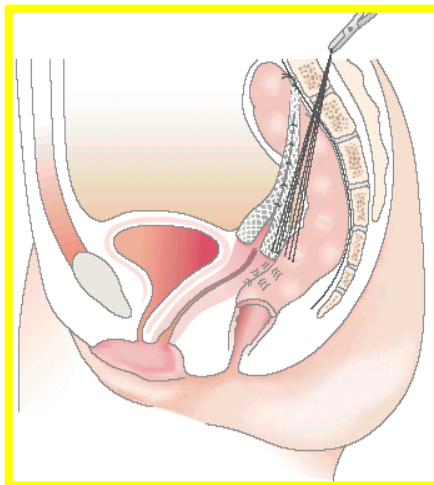


Bergman et al. 400 olgu

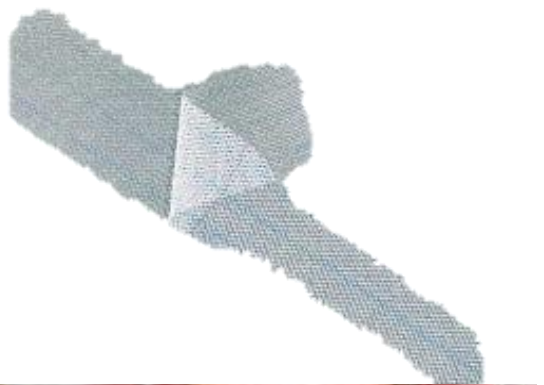
Sacrocolpopexy: Surgical technique

- Lower midline or Pfannenstiel incision
- vaginal probes are used to elevate and identify vagina
- Right ureter is mobilised laterally
- Rectum and sigmoid colon are retracted to the left
- Retroperitoneal tunnel can be created above vaginal vault towards anterior sacral ligament

Sacrocolpopexy: Surgical technique



- Y-shaped macroporous monofilament mesh is stitched to anterior and posterior wall to create artificial ‘uterosacral ligament.
- If anterior and posterior strips of mesh are taken down adequately cyctocele and rectocle might be resolved.
- It is not necessary to prolong the mesh downwards in isolated apical prolapse ’



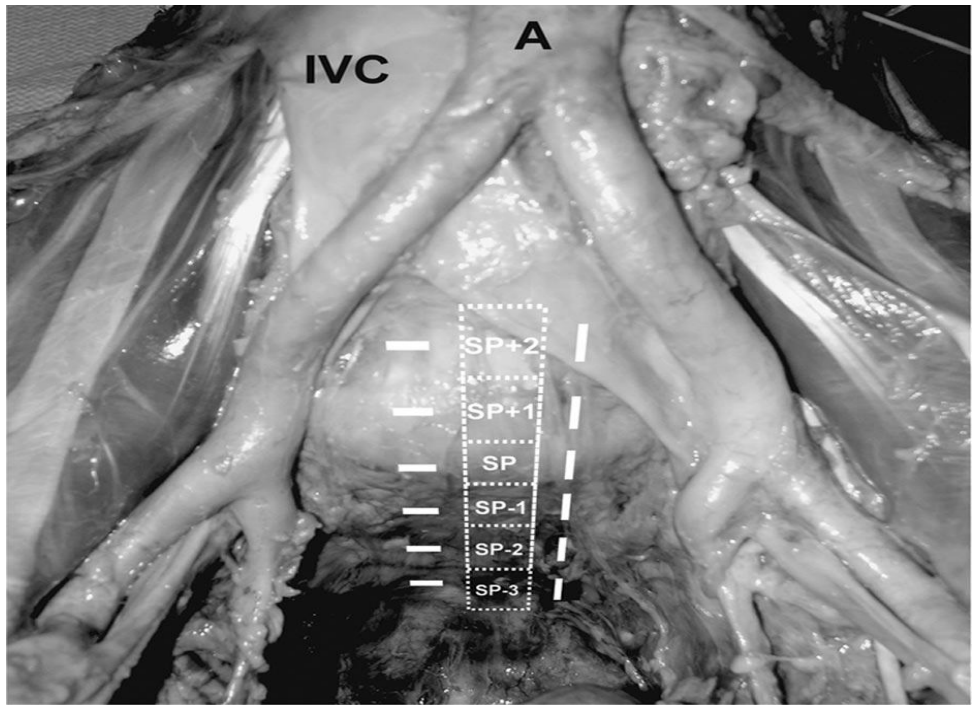
Sacrocolpopexy: Surgical technique

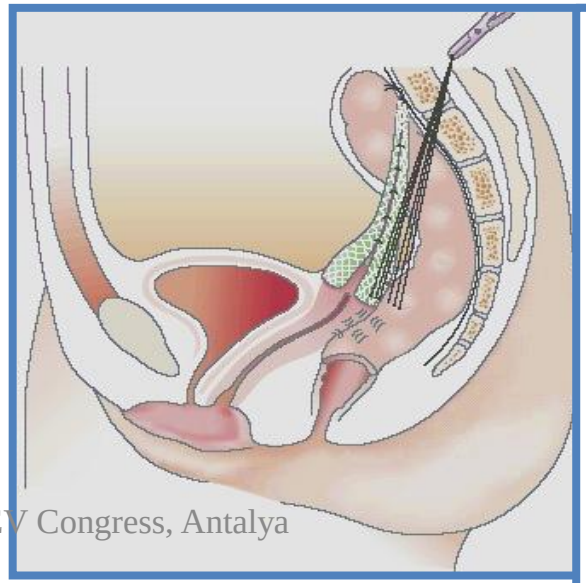
- Posterior leaf can be stitched to perineal body along posterior vaginal wall (Sacrocolpoperinopexy)
- Non absorbable sutures are used for vagina and sacrum
- Gentle elevation of mesh is done without tension
- It can be combined with colposuspension or TVT/TOT

Mesh placement area on sacrum

- The most appropiate and safest area of sutures is on promontorium. Therefore it is generally used

  In fact, suturing at the level of lower sacral part (S3-4) is more anatomicly correct than promontorium, since there is a 150 degrees of vaginal angle above levator plate





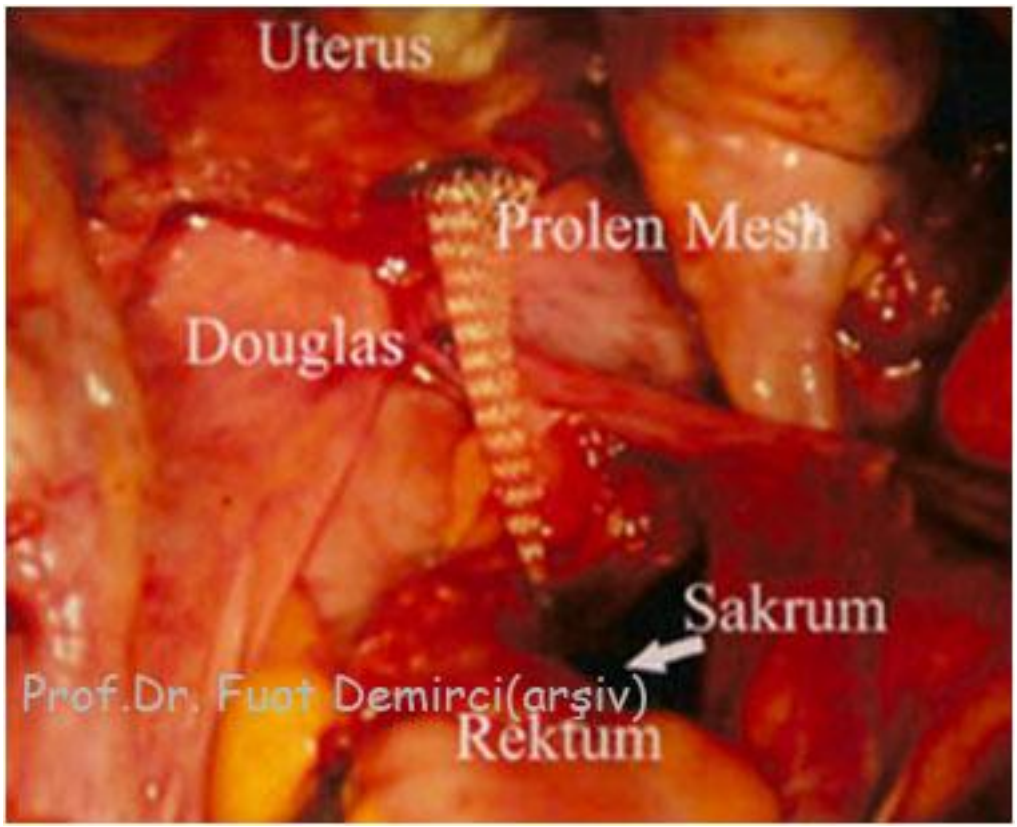
White 2009
Birnbaum 1973

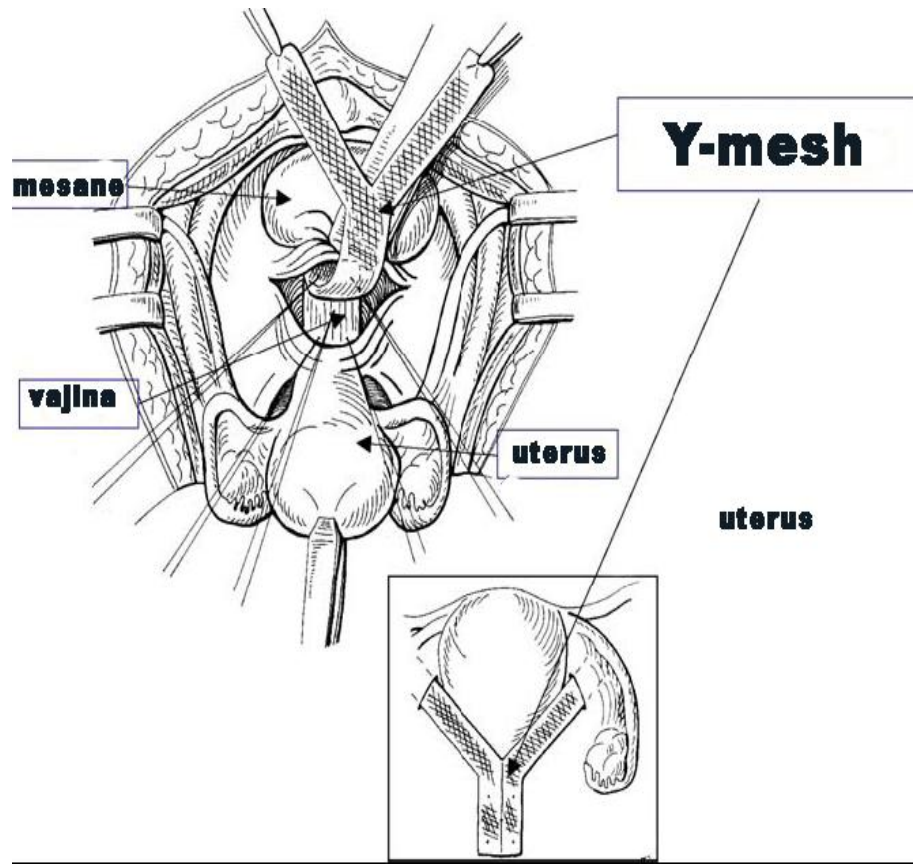
Abdominal sacrohysteropexy

Indications

- In young women
- Wishing to preserve fertility or uterus
- Avoiding morbidity and complications of hysterectomy
- Recently, it is gained importance in prolapse surgery, espescially in transvaginal mesh surgery

Sacrohysteropexy





Sacrohysteropexy

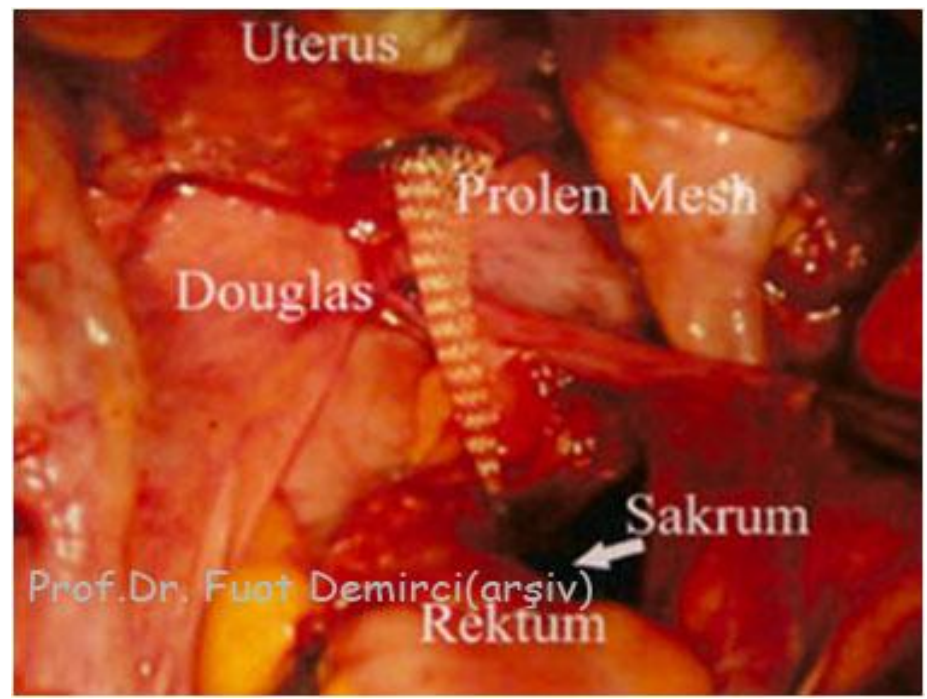
20 Sacrohysteropexy

de novo dyspareunia / pelvic pain in 3 patients (7.5 %)

Mean follow-up 25 months

succes rate: 95 %

Demirci ve ark. J Reprod Med 2005



Sacrocolpopexy - Complications

Perioperativ

- Injury
  - Right ureter, sigmoid, rectum
- Bleeding
- Presacral vein or mid sacral arter

- Late
  - Incontinence
    - Alteration of the vaginal axis
  - Mesh erosion
  - prolapse
    - Apical
    - Anterior wall
    - Posterior wall

Sacrocolpopexy: Complications

Meta-analysis, 65 studies, 3827 patients.

Intraoperative	%
Bleeding/transfusion	4.4
Bladder injury	3.1
Intestinal injury	1.6
Ureteral injury	1
Postoperative	
Urinary infection	10.9
İncisional problems	4.6
İntestinal obstruction	1.1
İleus	3.6
DVT/pulmonar embolism	3.3
Mesh erosion	3.4

Nygaard et al. Obstet Gynecol 2004

Sacrocolpopexy vs. Sacrospinous fixation

Table 4 Comparison between the two groups

Parameter	Abdominal group (n=18)	Vaginal group (n=29)	P
Operating time (minutes)	191.7±38.2	140.9±28.3	<0.001
Hospital stay (days)	7.3±1.8	5.5±1.9	<0.01
Preoperative Hb (g/dl)	12.3±0.9	12.1±1.8	N.S.
Postoperative Hb (g/dl)	10.2±1.3	10.0±1.7	N.S.

N.S. Not significant

Table 3 Complications in the two groups

	Abdominal (n=45)	Vaginal (n=60)	P
Major complications			
Bladder injury, n (%)	1 (2.2)	–	
Rectal injury, n (%)	–	1 (1.7)	
Hemorrhage, n (%)	4 (8.9)	–	
Overall major complications, n (%)	5 (11.1)	1 (1.7)	0.01
Minor complications			
Urinary retention (>5 days), n (%)	7 (15.6)	5 (8.3)	
Urinary infection, n (%)	7 (15.6)	6 (10.0)	
Febrile morbidity, n (%)	4 (8.9)	2 (3.3)	
Wound infection, n (%)	5 (11.1)	1 (1.7)	
Wound dehiscence, n (%)	3 (6.7)	–	
Overall minor complications, n (%)	26 (57.8)	14 (23.3)	0.01

Demirci et al. Int Urogynecol J .2006

Colposuspension at Sacrocolpopexy in Continent women

Multicentre RCT

- 231 patients, follow up 2 years
- Randomised as SCP with or without colposuspension during surgery
- Report of SUI :32 % Burch group
  45.2 % Non Burch group
- No difference in other LUTS
- Burch colposuspension did not affect outcome of apical support
- Colposuspension at time of SCP in continent women significantly decreases post op SUI

Brubaker et al, 2005

At 7 years follow up, 90 patients

- Report of SUI :62 % Burch group
  77 % Non Burch group

Nygaard JAMA 2013

Prolapse surgery with or without stress incontinence surgery for POP. Meta-analysis of randomised trials. Van der Ploeg, BJOG 2014

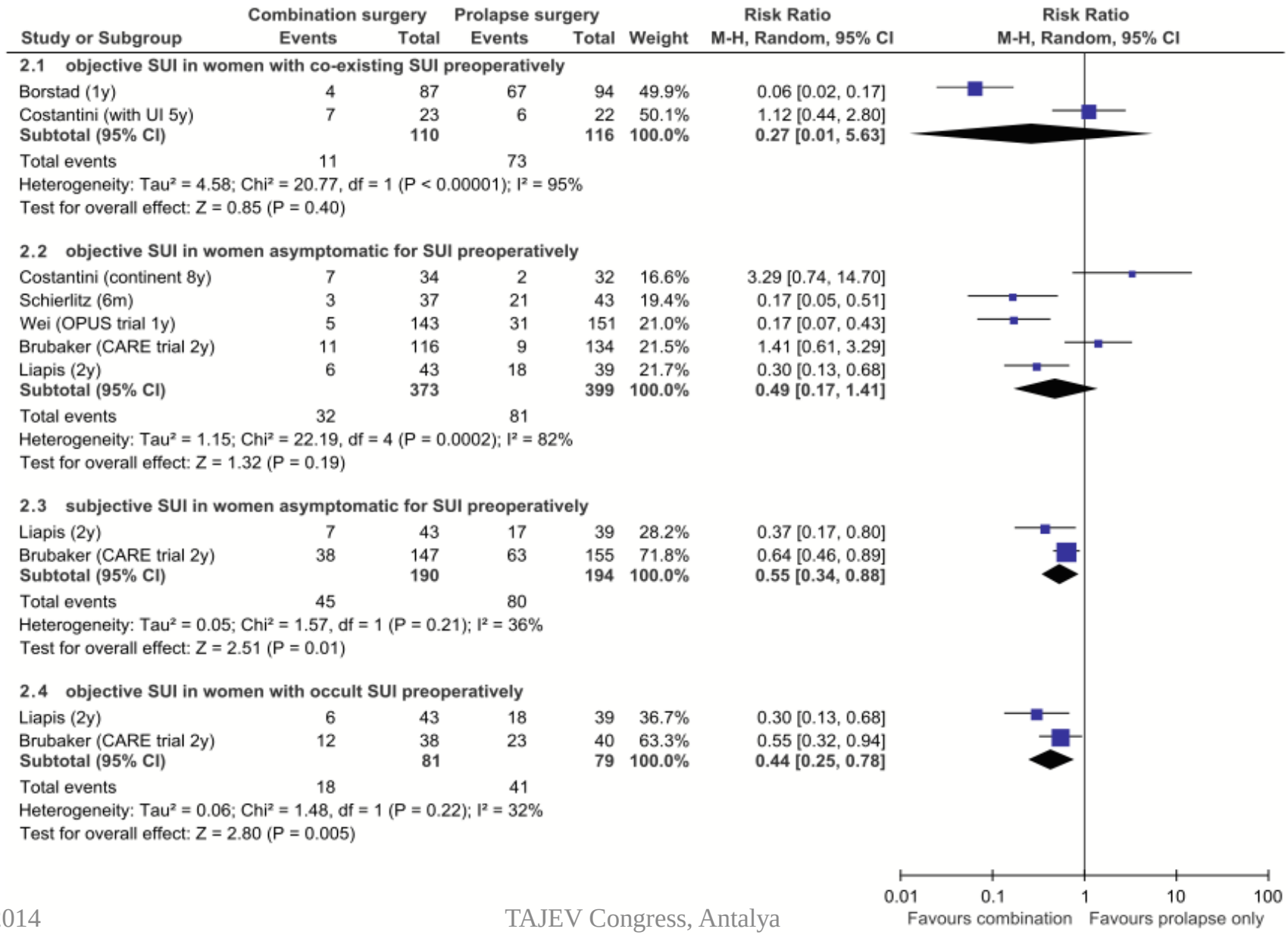


Figure 2. Postoperative stress urinary incontinence (SUI) after combination surgery versus prolapse surgery only.

Prolapse surgery with or without stress incontinence surgery for POP. Meta-analysis of randomised trials. Van der Ploeg, BJOG 2014

- Combination surgery reduces the risk of postoperative stress incontinence, but short-term voiding difficulties and adverse events were more frequent after combination surgery with a midurethral sling.

Abdominal sacrocolpopexy+ Burch? /TOT?

Prolapse cases with USI

49 abdominal sacrocolpopexy + Burch colposuspension

60 abdominal sacrocolpopexy+ TOT

In abdominal sacrocolpopexy+ Burch colposuspension group:
Longer operation time
More frequent urinary retention
Longer hospital stay
More De novo urgency
Less success rate (% 70 vs. % 98) were found

Moon ve ark. Int J Gynecol Obstet 2010

Sacrocolpopexy: Success

	year	*Patients*	*Follow up(mts)*	*Success*	
Snyder ve Krantz	1991	147	43	93	
Timmons	1992	163	33	99	
Sandra and Stanton	1994	43	21.2	88	2.5 % erosion
Lecuru et al	1994	203	32.5	87-100	
De Vries et al	1995	101(29)	48	71	
Benson et al	1996	60	60	84	
Occelli	1999	271(54)	66	98	
Pastner	1999	175	>12	97	
Sullivan et al	2001	236	64	100	Perineopexy
Lefranc et al	2002	85	10.5year	98	0
Culligan et al	2002	245	61.2	85	6% erozyon
Collopy ve Barham	2002	89	56.7	100	
Wesley et al	2003	38	13.7 years	74	
Hilger et al	2003	69	14 years	74	
Brizzolara ve Allen	2003	124	26-36	98	0.8 % erosion
Maher et al	2004	47	24	94	
Bessinger et al	2005	121	6	--	4.8% erosion

Sacrohysteropexy: Success

	Year	*Material*	*Patients*	*Follow up*	*Success*
Stoesser et al	1955	Fascia	22	--	100
Addison et al	1993	Mersilen	3	2-240	100
Van Lindert et al	1993	Gore-tex	8	32	100
Banu et al	1997	Mersilen	19	36-60	100
Costantini et al	1998	Gore-tex	7	33	100
Buonaguidi et al	2000	Gore-tex	3	20	100
Leron & Stanton	2001	Teflon	13	16	100
Barranger et al	2003	Gore-tex	30	45	93
Roovers et al	2004	Gore-tex	41	12	95
Costantini et al	2005	Marlex	34	51	91
Demirci et al	2006	Polypropylene	20	3-60	95

Sacrocolpopexy vs. Sacrospinous fixation

- The succesful anatomical repair in SCP operations is reported to be better than SSF

Table 2. RCTs comparing abdominal versus vaginal approaches to POP surgery

	n	Mean f/umos)	Outcomes abd v vaginal	Major complications	Reoperation rate abd v vag
Benson 1996 [25]	80*	29 mos (12-78 mos)	Optimal [a] 22/38 (58%) v 12/42 (29%)	Dyspareunia 0/15 v 15/26 (58%)	6/38(16%) v 14/42 (33%)
Lo 1998 [26]	118**	25 mos (12-74 mos)	49/52 (94%) v 53/66 (80%)	Dyspareunia 1/52 (9%) v 7/66 (39%)	Not stated
Maher 2004 [22]	95	24 (6-60 mos)	Subjective [b] 43/46 (94%) v 39/43 (91%) Objective [c] 35/46 (76%) v 29/42 (69%)	Dyspareunia 1/52 (9%) v 7/66 (58%), UI 23% v 44%	6/47(13%) v 7/43 (16%)

Sacrocolpopexy vs. Sacrospinous fixation

Cochrane review

- Abdominal sacrocolpopexy
  - High succsess rate (reccurence RR: 0.23)
  - Lower dyspareunia rate (RR: 0.46)
- Sacrospinous fixation
  - Fast
  - Cost-effective
  - Short recovery time

Maher et al 2010

Selection of Patients. Which conventinal approach?

We should consider following conditions:

- Age
- Sexual activity
- Expectation of patient from the surgery
- Isolated vaginal vault prolapse
- Multiple previous vaginal operations
- Co-existing lower urinary tract symptoms
- Concomitant intra-abdominal pathologies
- Concomitant anterior or posterior wall defects
- Capability of the surgeon

Conclusion

- Colpocleisis
  - Short operation and recovery time
  - Relatively simple to perform
  - Less morbidities and complications.
- Uterosacral ligament suspension
  - Longer vaginal depth
  - Ureters must be checked

- Sacrospinous fixation
  - Short operation and recovery time
  - Less morbidities and complications
  - Relatively less success rate than abdominal SCP
- Abdominal sacrocolpopexy
  - High success rate
  - Low dysparunia
  - Higher morbidities and complications

Thank you for your attention

I celebrate with all of you this labor day