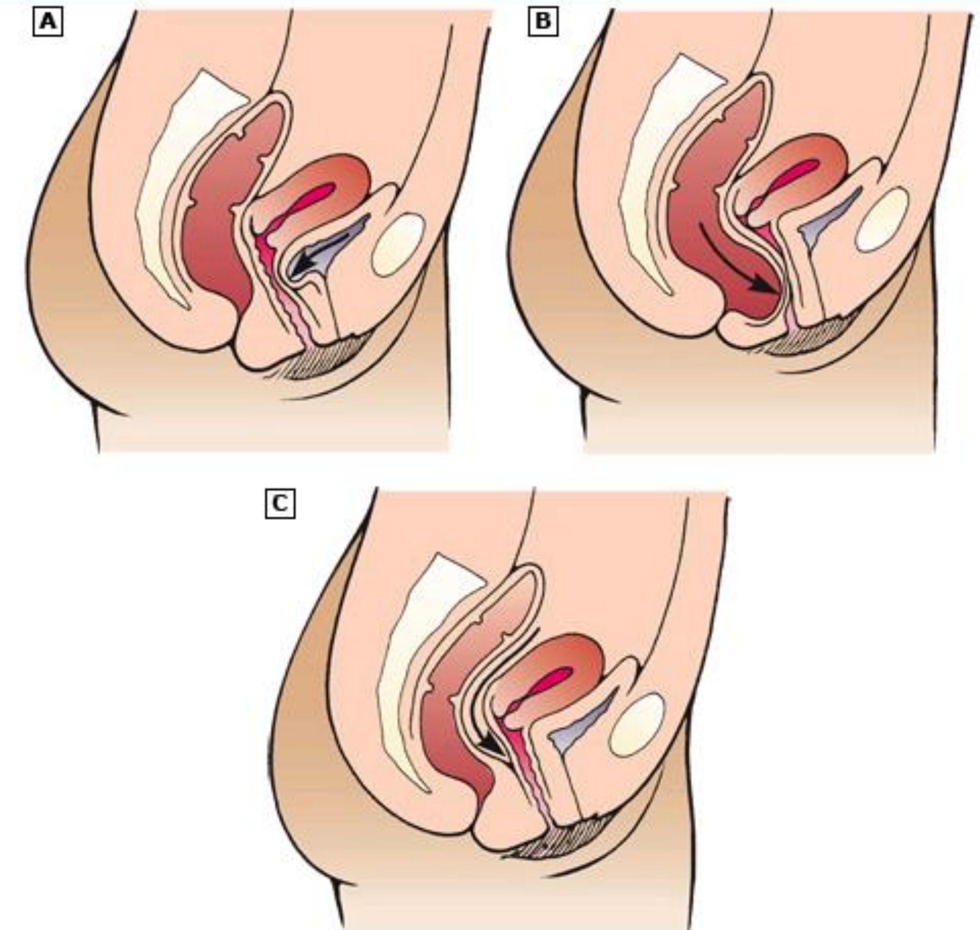
Conservative treatments pelvic organ prolapse (POP)

dilihat dari perspektif fungsionalitas
Daerah konflik!
- untuk memiliki kontrol untuk fungsi kandung kemih dan usus Anda <-x-> diizinkan masuk (koitus -> konsepsi),
- ->melahirkan)

*Excellent design, but the exhaust is too close to the ignition

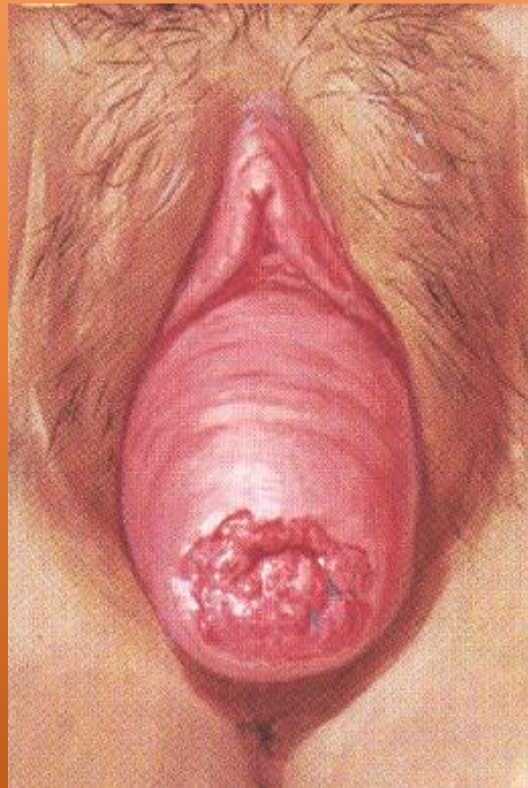


Pelvic support disorders.
(A) Cystocele.
(B) Rectocele.
(C) Enterocele.
Modified with permission from: Smeltzer, S, Bare, B. Brunner and Suddarth's Textbook of Medical-Surgical Nursing, Ninth Edition. Philadelphia: Lippincott Williams & Wilkins. *Copyright © 2000 Lippincott Williams & Wilkins.*

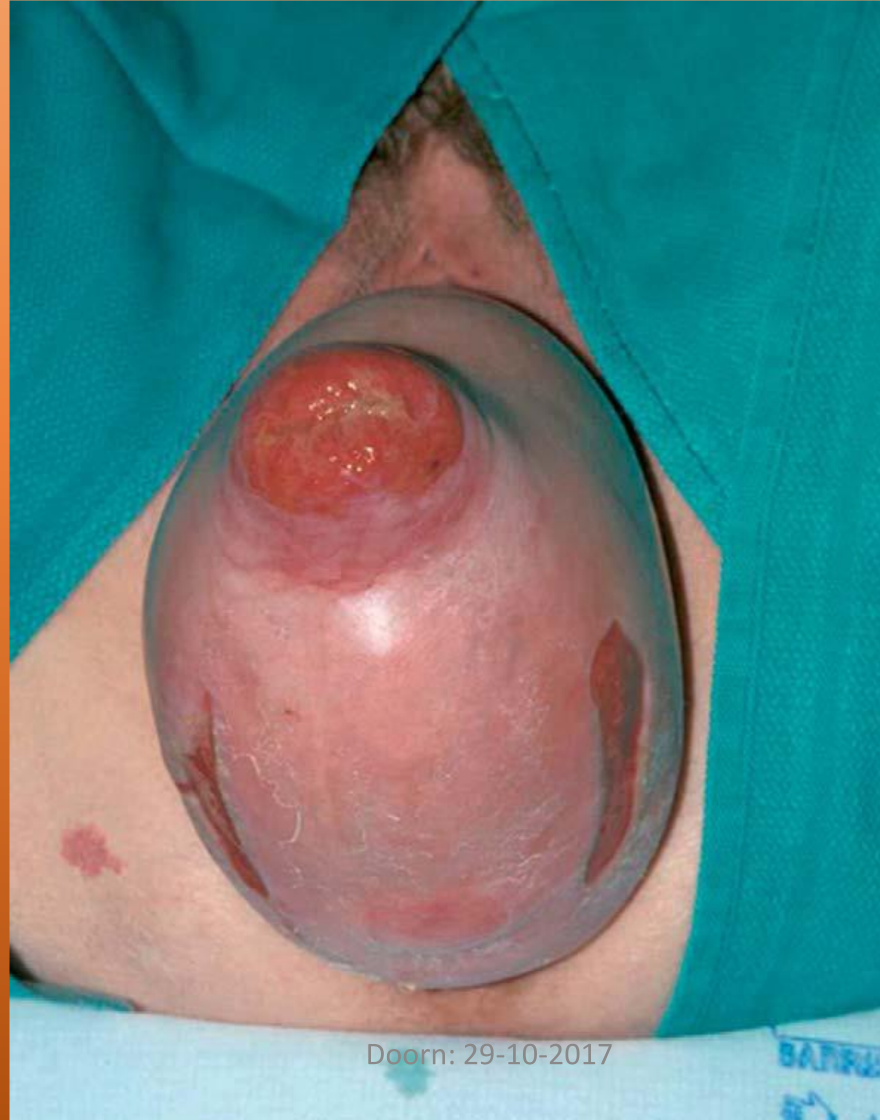
Indicatie stelling

Prolabor = Slipping

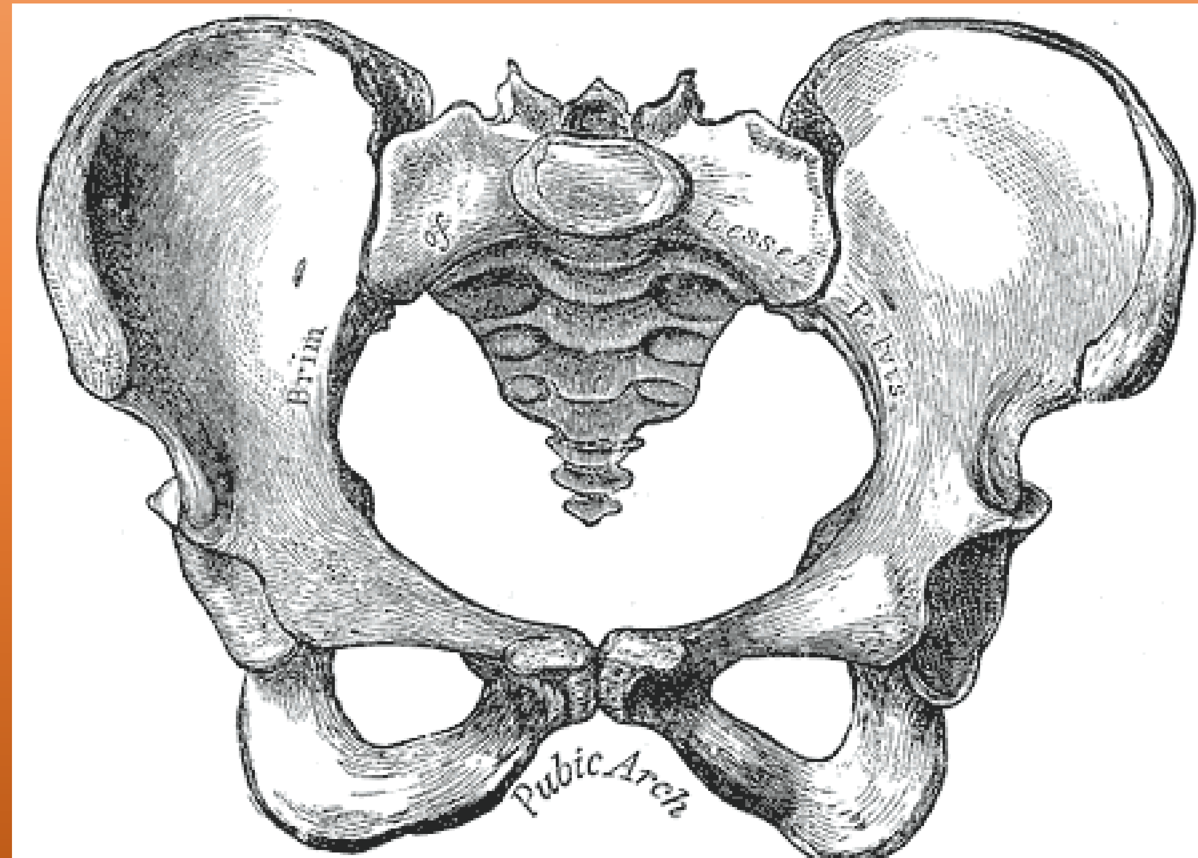
If the diagnosis is not properly set, you can also slip properly

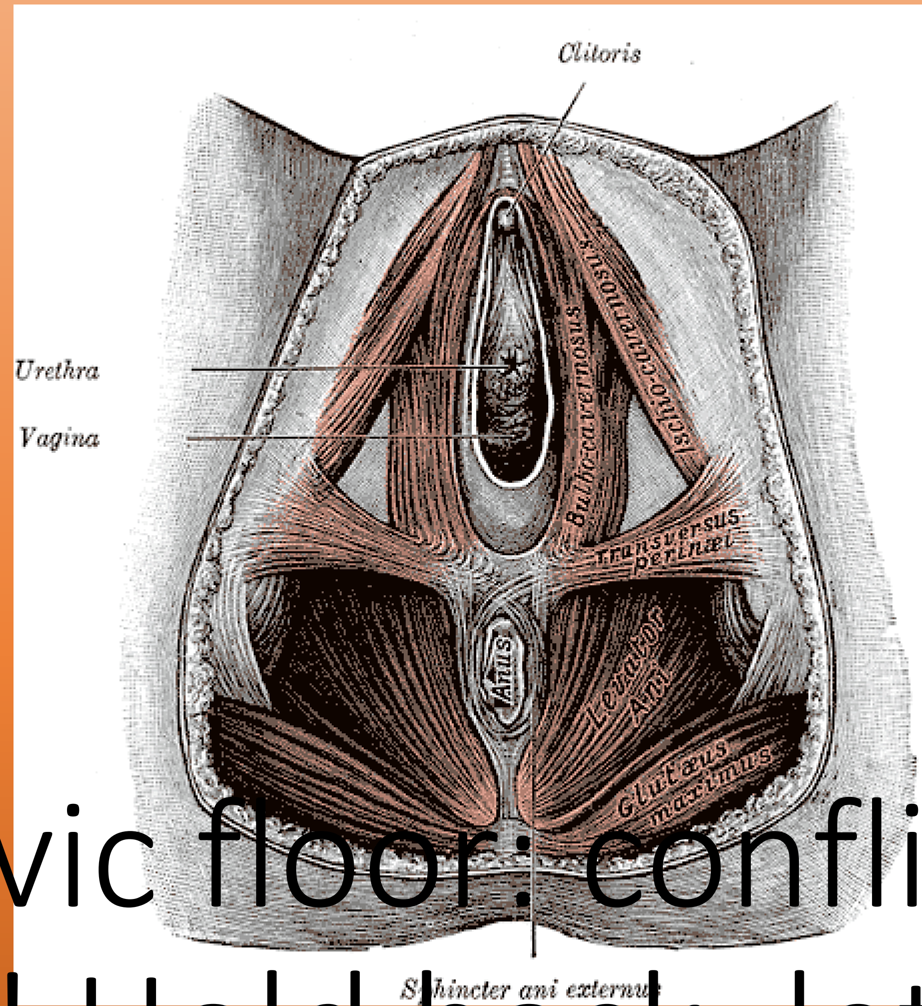


Total prolapse (all compartments)



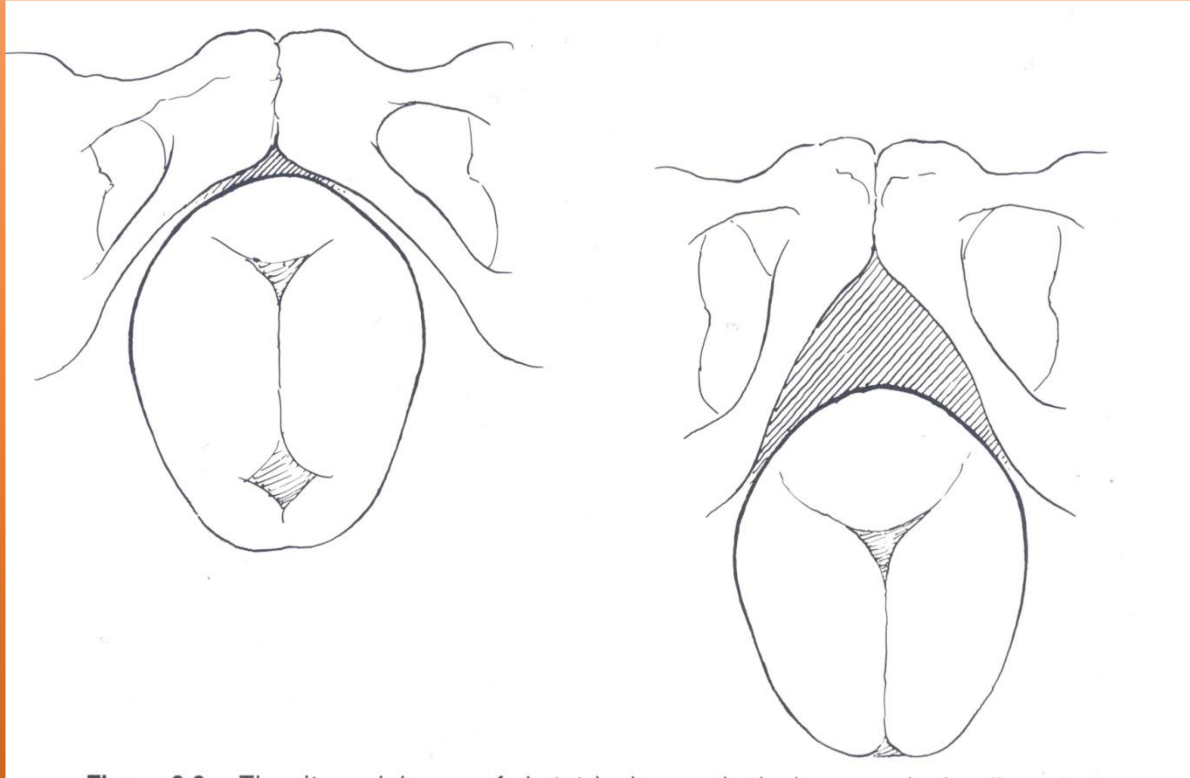
Female pelvis.
Entrance and exit perpendicular to each other; Spindle Pivot.

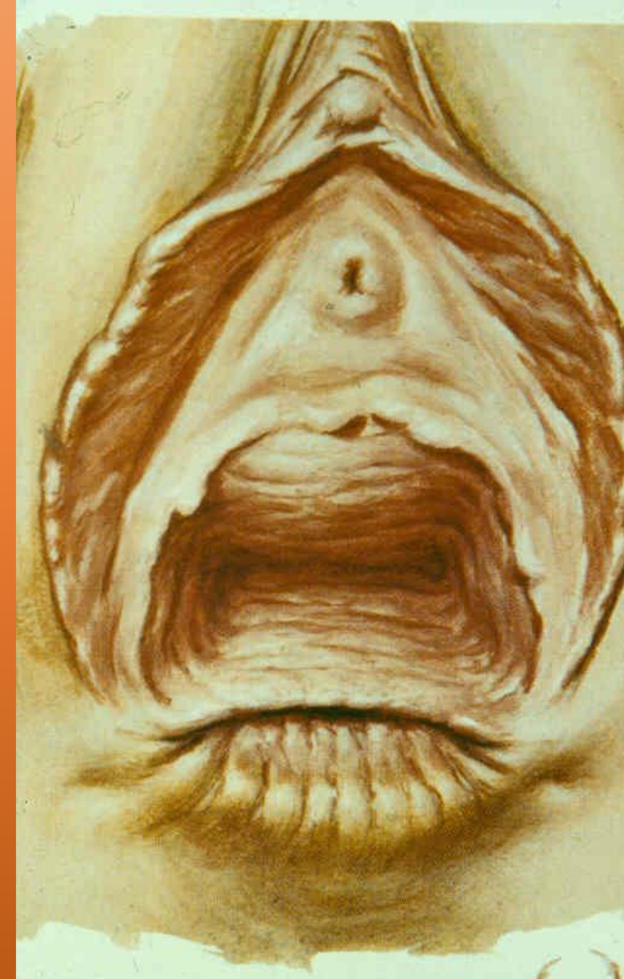




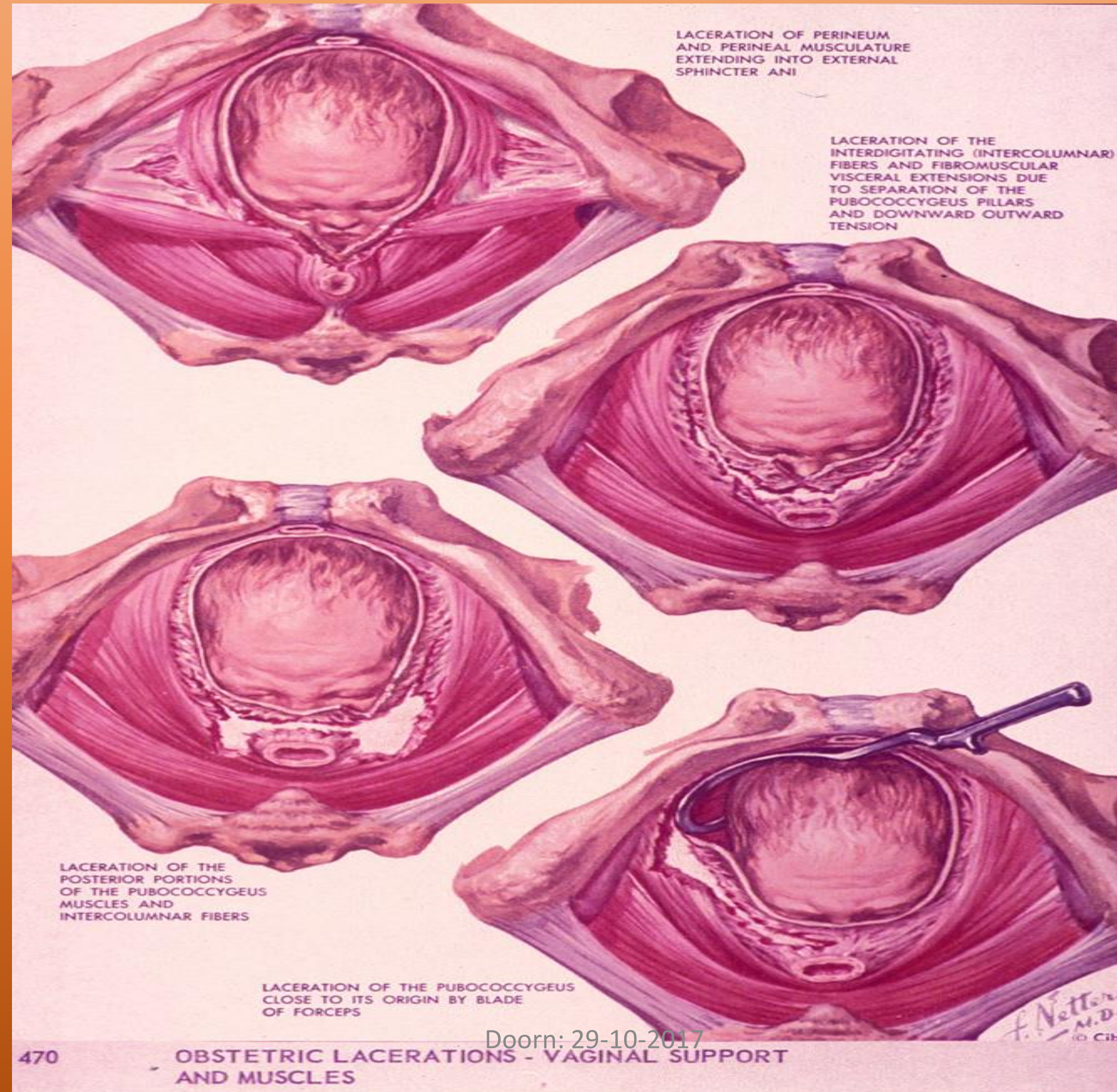
Pelvic floor: conflict area! Hold back, let in, and passed on

Obstetric paradox



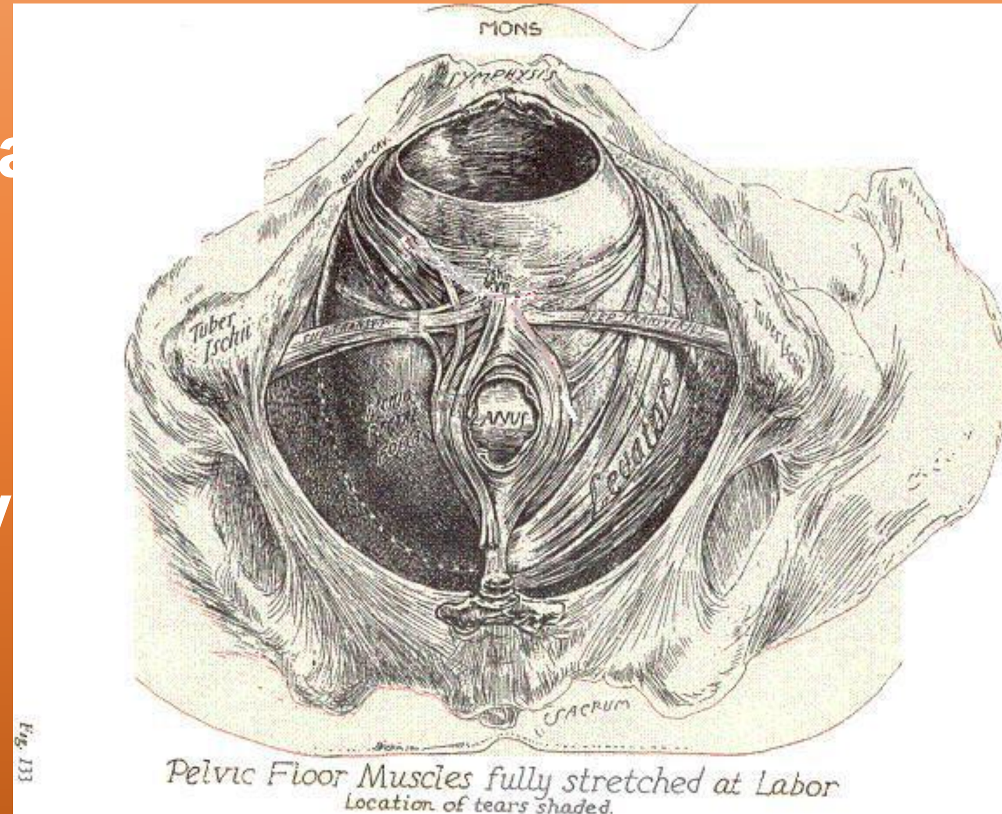


Overdistension or tissue rupture



Perineum intact?

- “Location vagina
- avulsie
- sphincter injury
- Rectum lesion



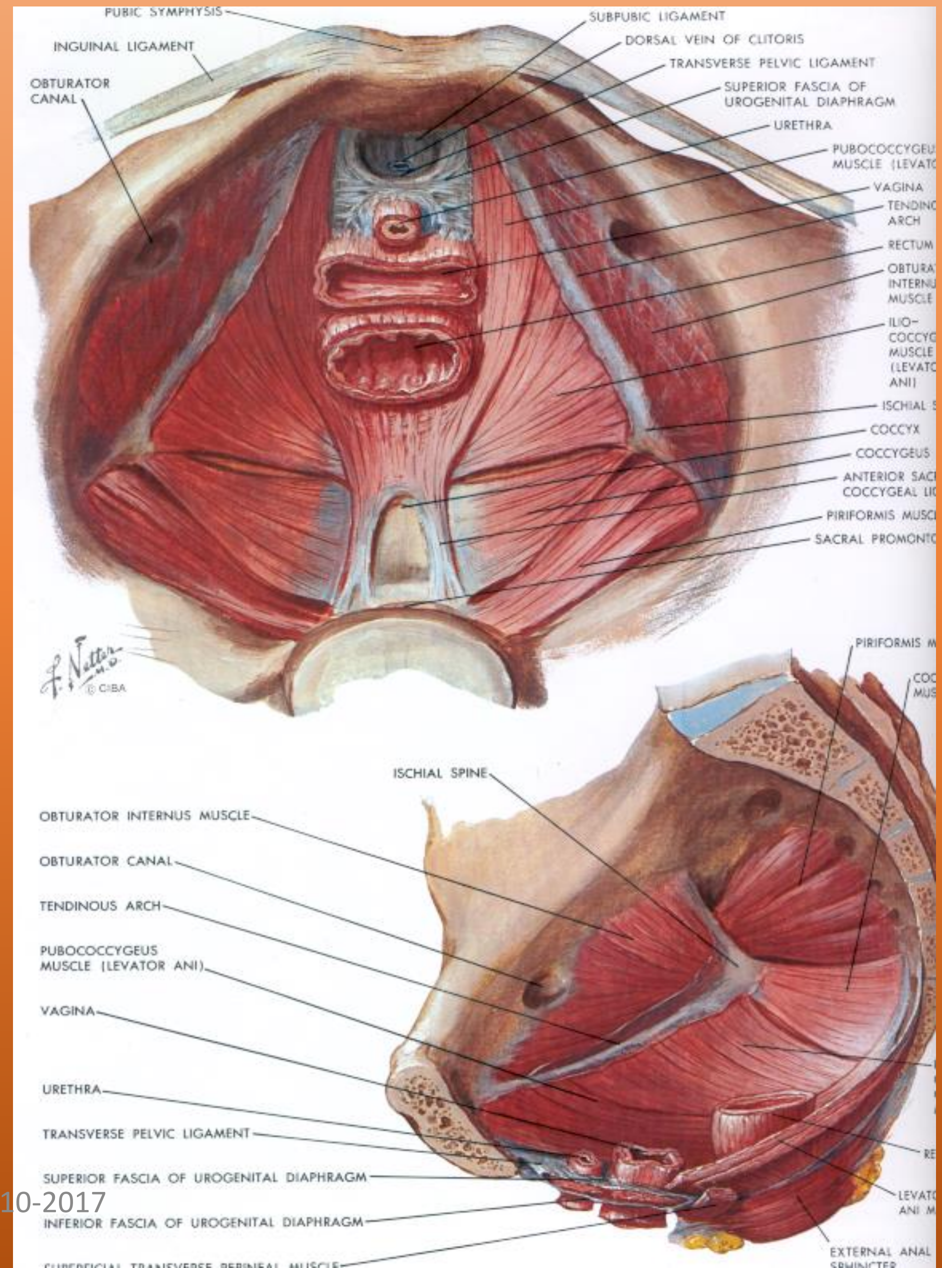
Anatomist

Diaphragm pelvis

m. pubococcygeus

m. iliococcygeus

m. coccygeus



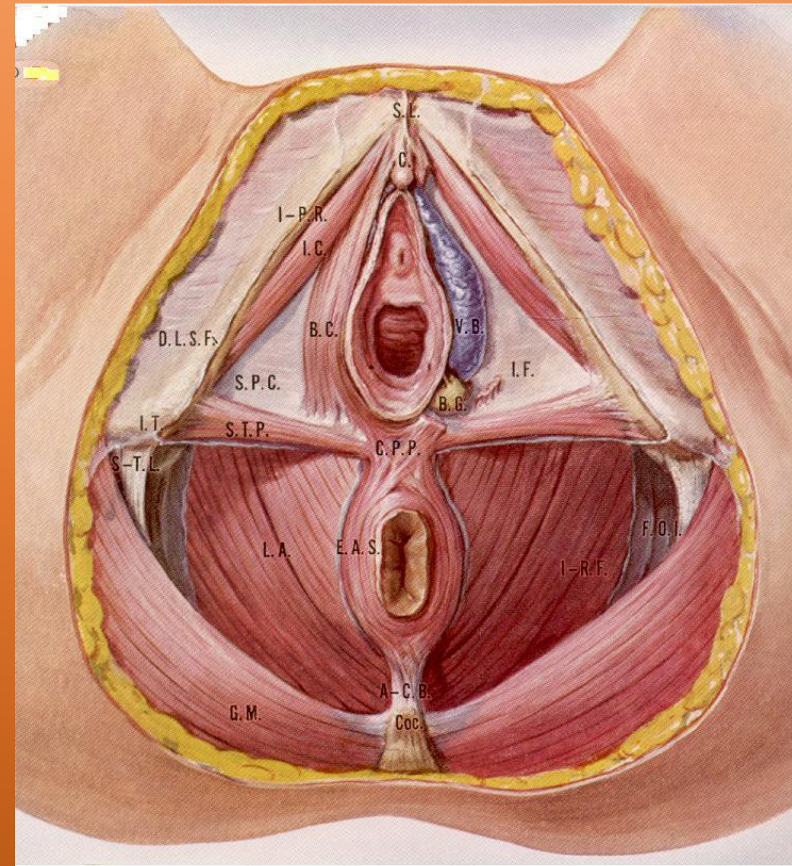
Anatomist

urogenital
diaphragm

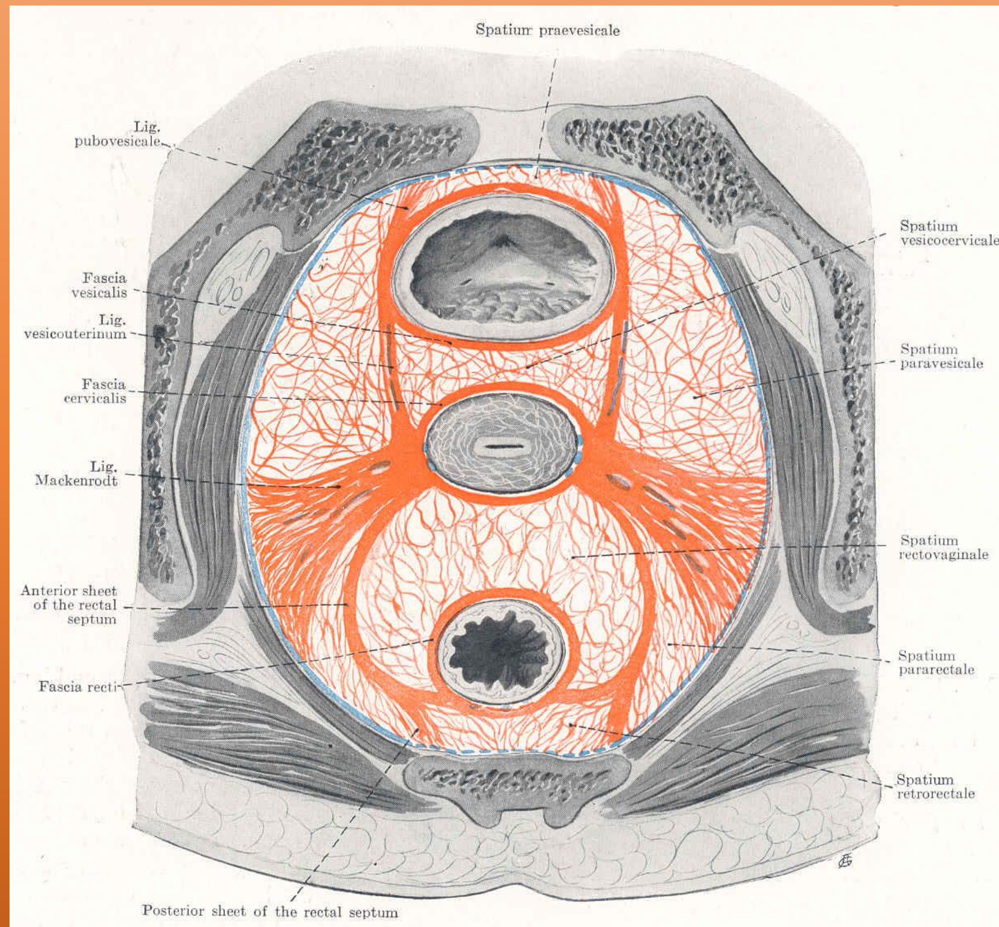
urogenital

m. transvrs perinei P/S

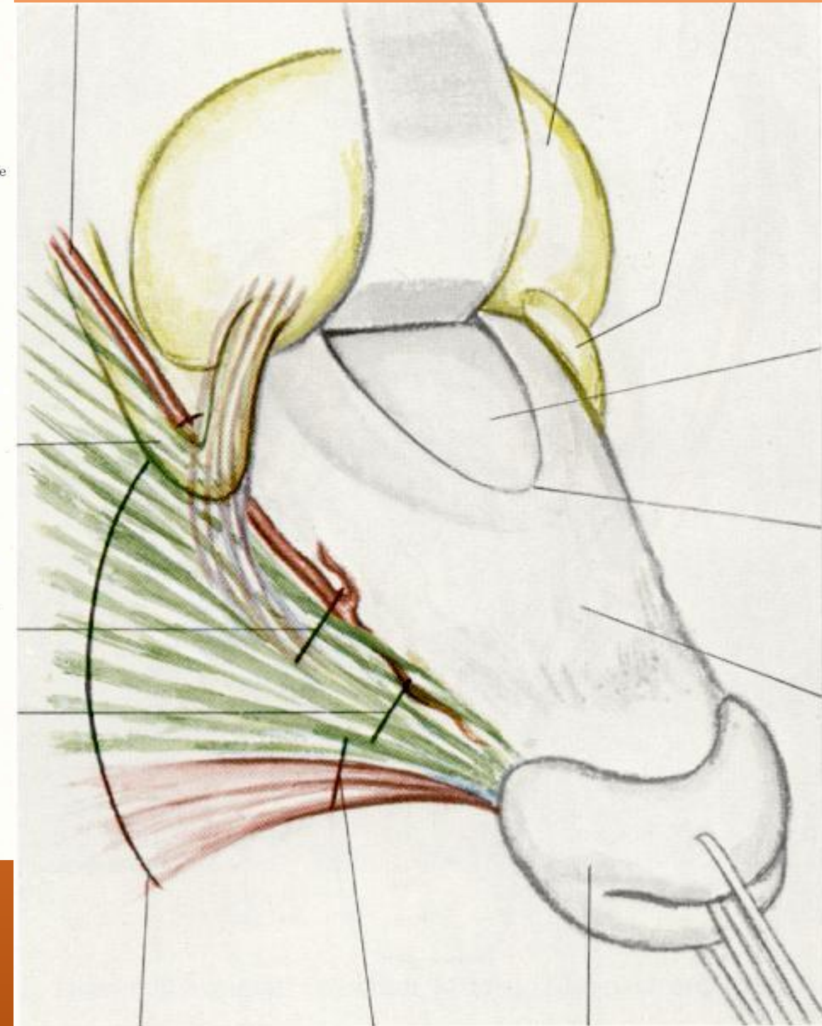
m. bulbocavernosus



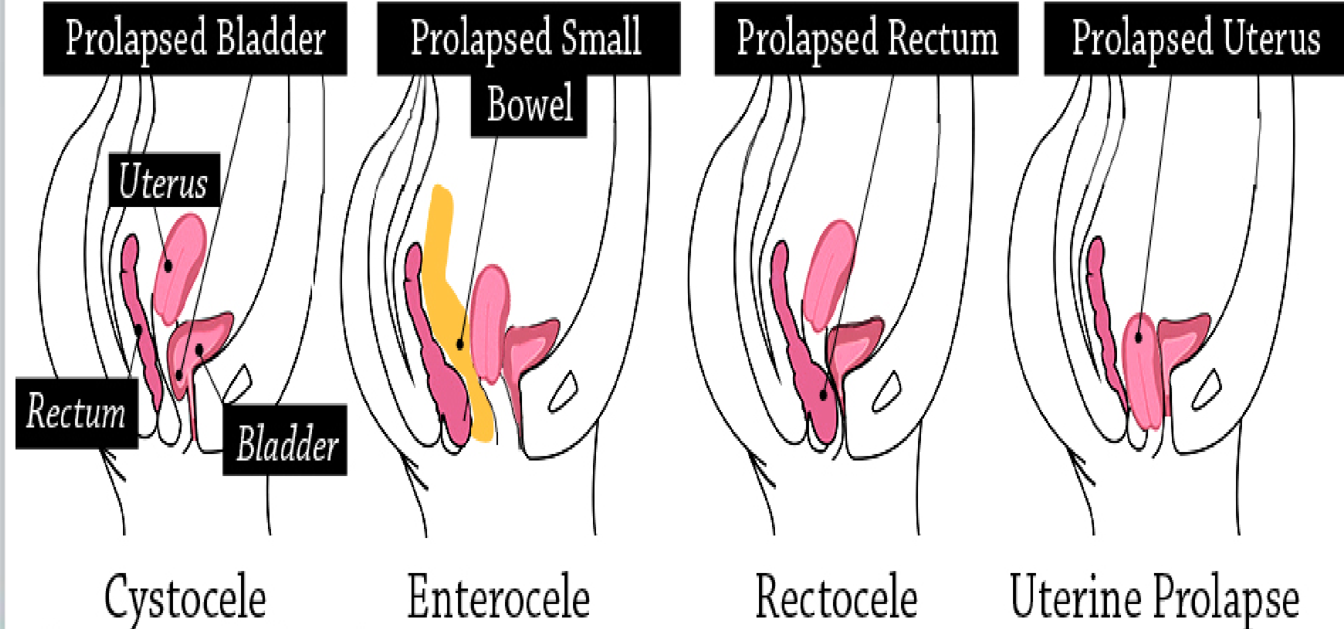
Cervix - Spokes



Jari-jari

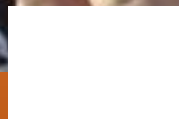


If my body was a car,
I'd trade it in for a
newer model.
Cause everytime
I cough or sneeze,
my radiator
leeks and my
exhaust backfires.

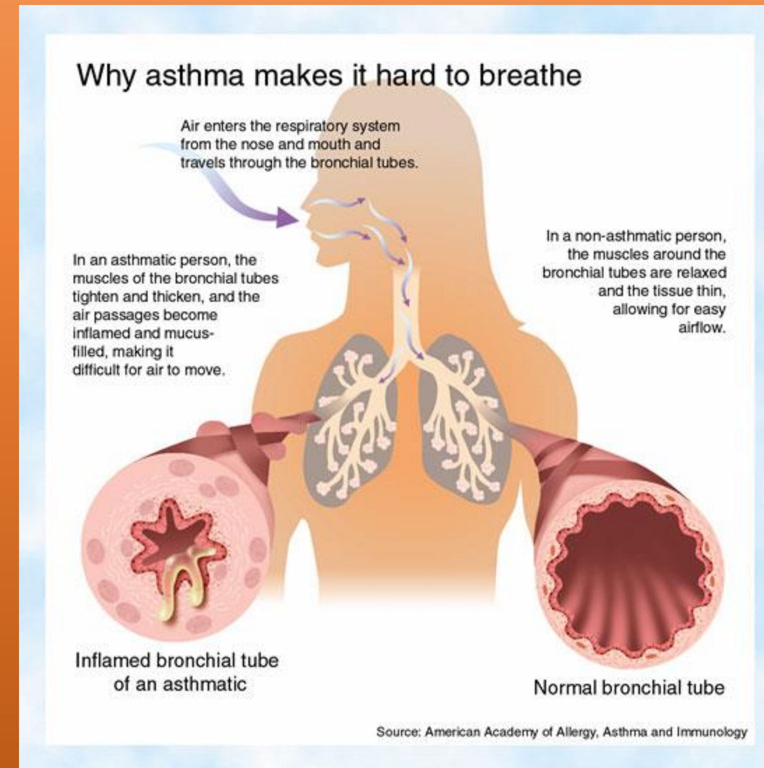


Risk Factors for prolapse

Constipation



Smoking



- Prevention

- Obstetric care to protect pelvic floor
  - Decreased pushing times
  - Avoid forceps, major lacerations
  - Permit passive descent
- General lifestyle changes
  - Smoking cessation and cough cessation
  - Routine use of Kegel pelvic floor exercises
  - Regular physical activity
  - Proper nutrition
  - Weight loss
  - Avoid constipation and repetitive heavy lifting
  - Hormone replacement therapy

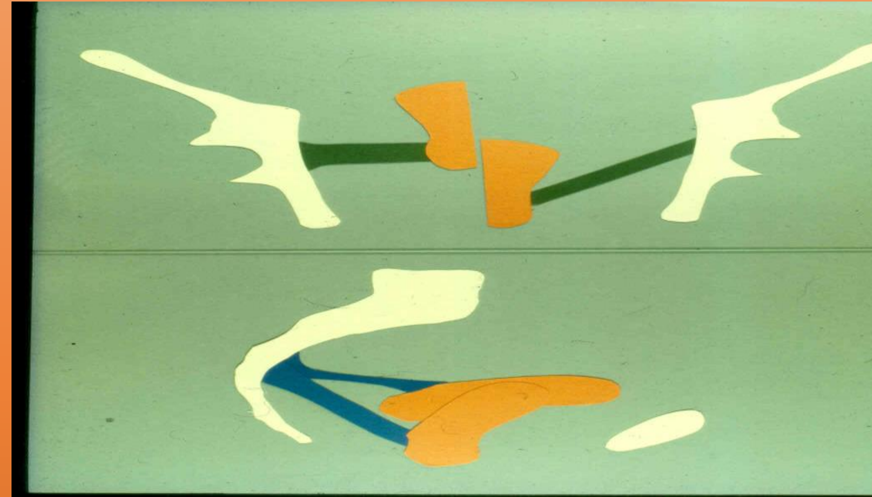
Why not always POP? (in-) adequat interactions/cooperation between the levator ani muscle and pelvic connective tissues

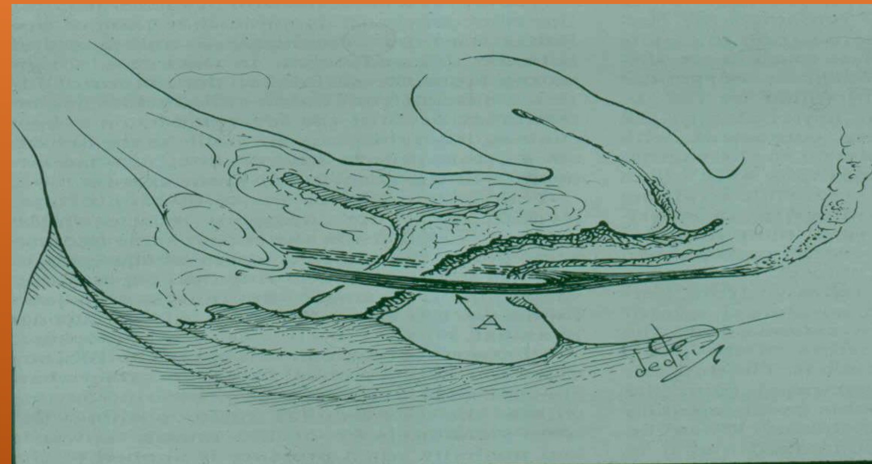
Suspension

- lig. SaUt-card.
- fascia endopelv
- pubo-urethr. lig.
- rectal pillars

Support

- levatorplate





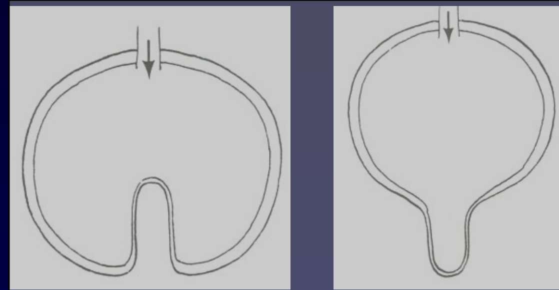
Prolapse - boat analogy

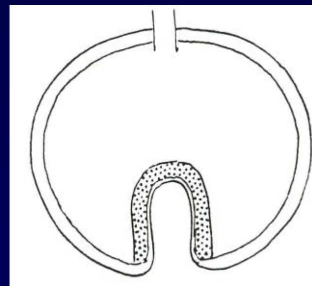
- Boat- pelvic organs
- Water- levator muscles
- Moorings- Endopelvic fascial ligaments
-
- Ligaments (suspension)
-
- Problem is with the water or
- moorings or
- both
-
- Result is sinking of the boat
- Really the boat itself is fine

kapasitas daya dukung air telah hilang

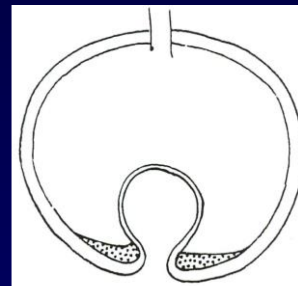
Conservative -> operative treatments; since 1914..

traditional methods in the surgical treatment of prolapse

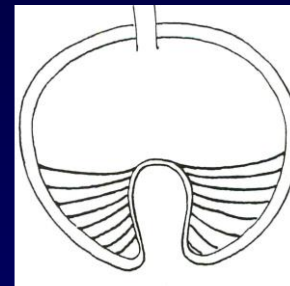




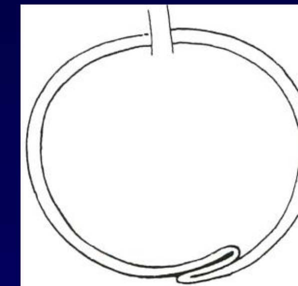
plication of fascia



perineoplasty



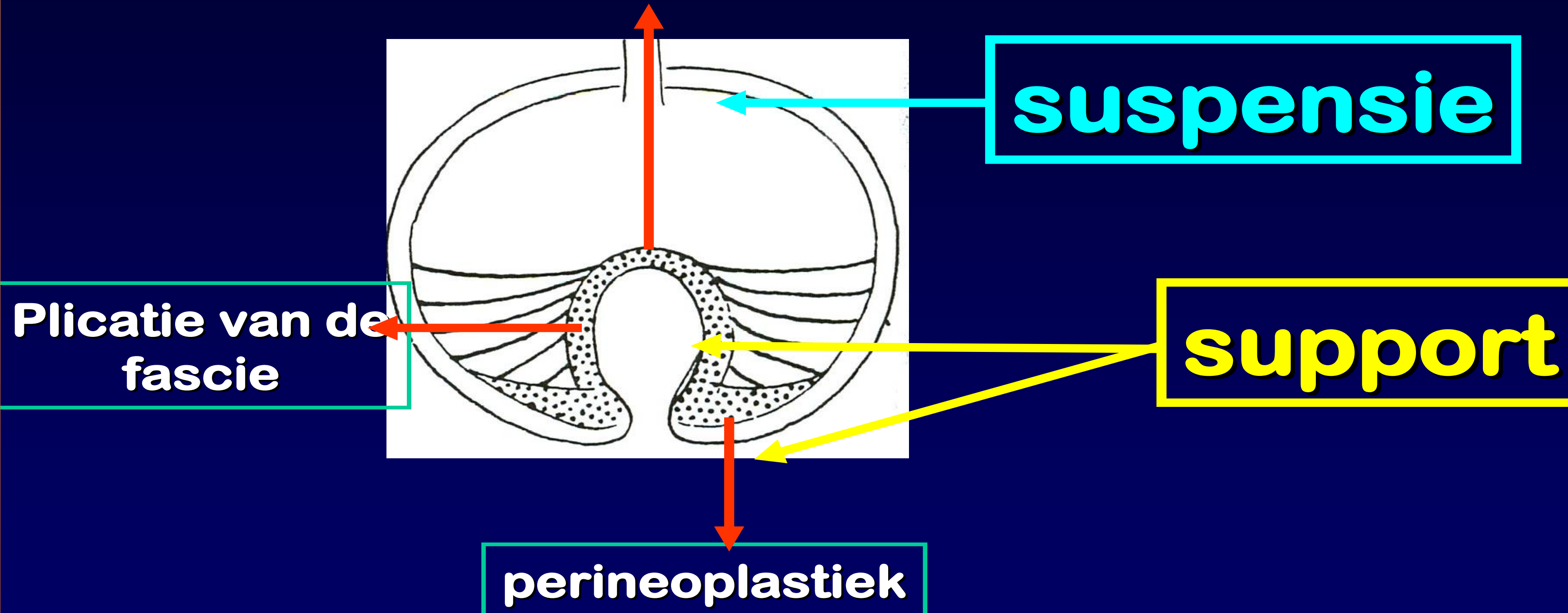
- abd. sacral colpopexy
- sacrospinous fixation
- infracoccygeal fixation



restoration of vaginal axis

Victor Bonney
J Obstet Gynaecol Br Emp 1914;45:328

suspension (ligaments) - Support (fascia -pelvicfloor)
How to translated into therapeutic options?
Non- surgical: pessaries as support measurement

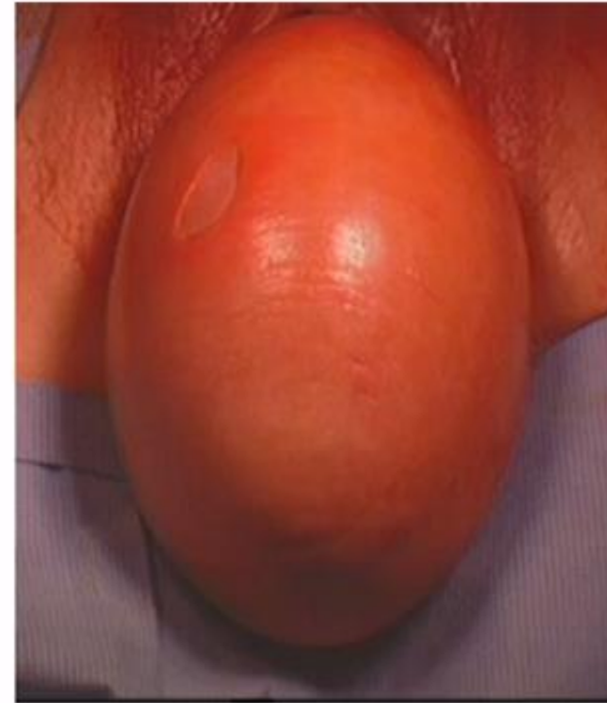


Aims of pelvic floor reconstructive surgery

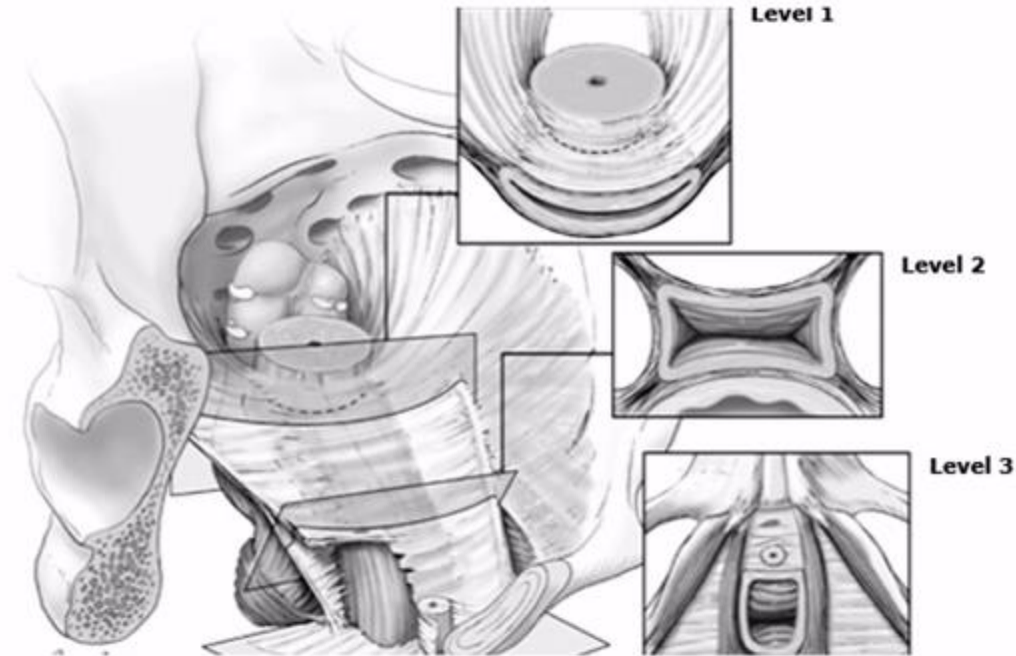
- Restoration of topography

- with respect to function of

  - Bowel
  - Bladder
  - Sexuality



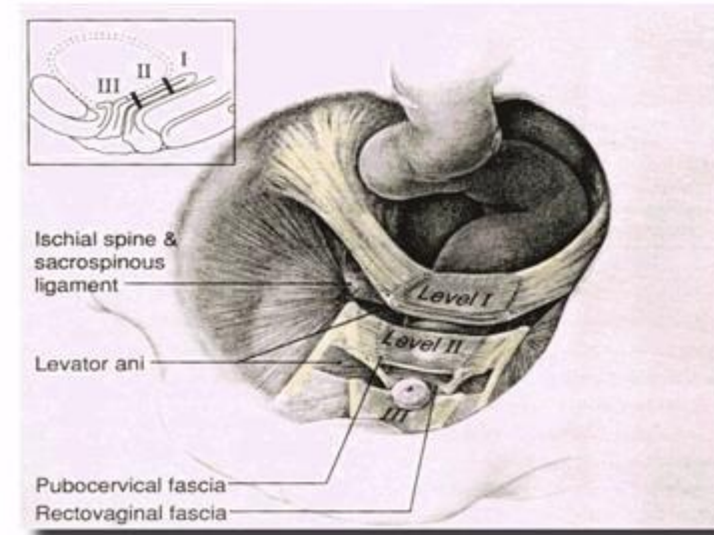
DeLancey levels of vaginal support



Cardinal and uterosacral ligaments

Walters MD, Karram MM. Urogynecology and reconstructive pelvic surgery, 3rd ed, Mosby-Elsevier, 2007

Loss of Level 1 support results in apical prolapse of the vagina



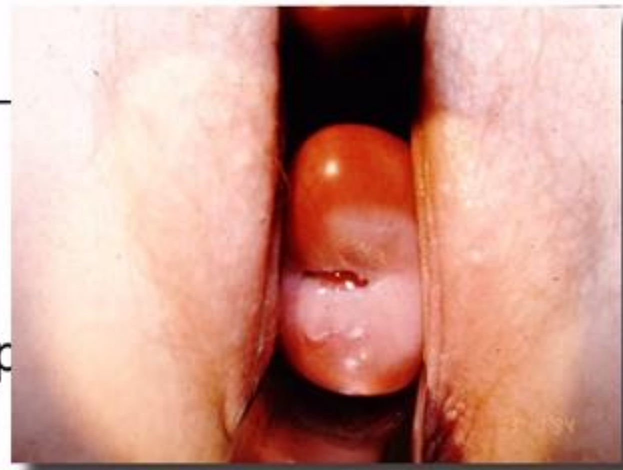
- *The role of apical vaginal support in the appearance of anterior and posterior vaginal prolapse.AULowder JL, Park AJ, Ellison R, Ghetti C, Moalli P, Zyczynski H, Weber AM SOObstet Gynecol. 2008;111(1):152.*

urogynecology

anterior compartment

anterior repair/ paravaginal repair

continence-surgery – sling, colposusp



middle compartment

abdominal hysterectomy ± sacrocolpopexy

vaginal hysterectomy ± sacrospinous/ iliococcygeus fixation

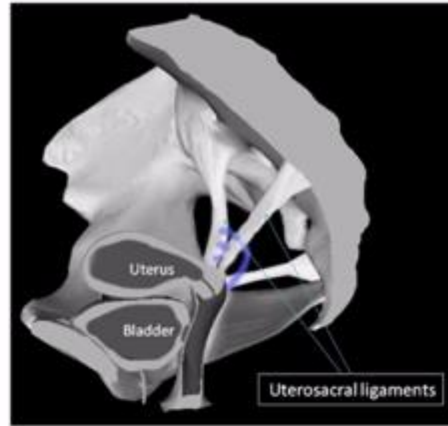
abdominal or vaginal sacrospinous fixation/ sacrohysteropexy

posterior compartment

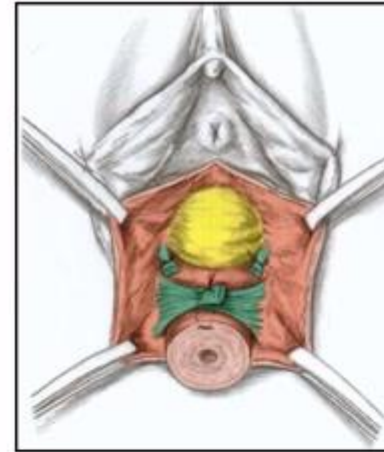
posterior repair

rectopexy

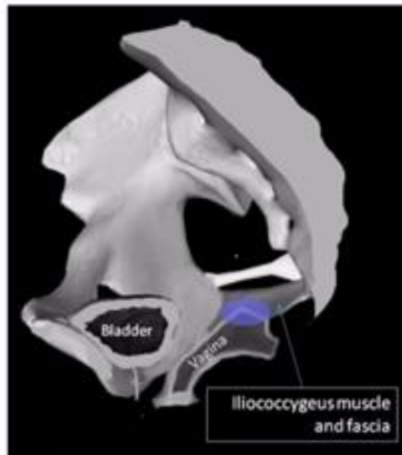
anal sphincter repair



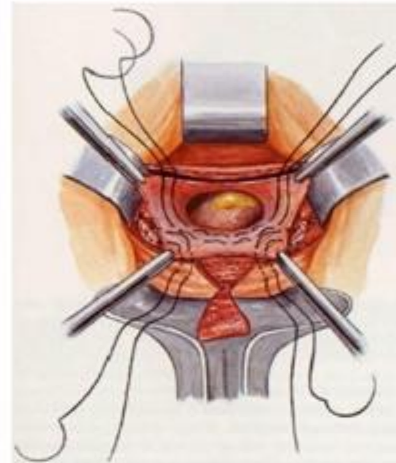
Uterosacral Fixation



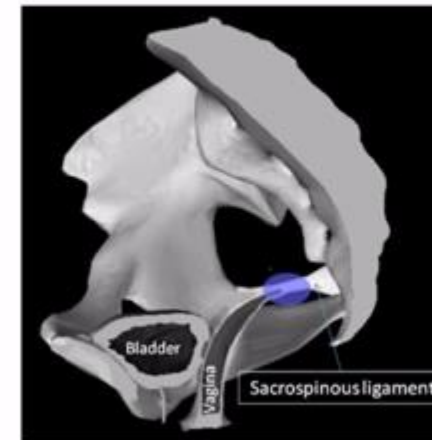
Manchester procedure



Iliococcygeus fixation

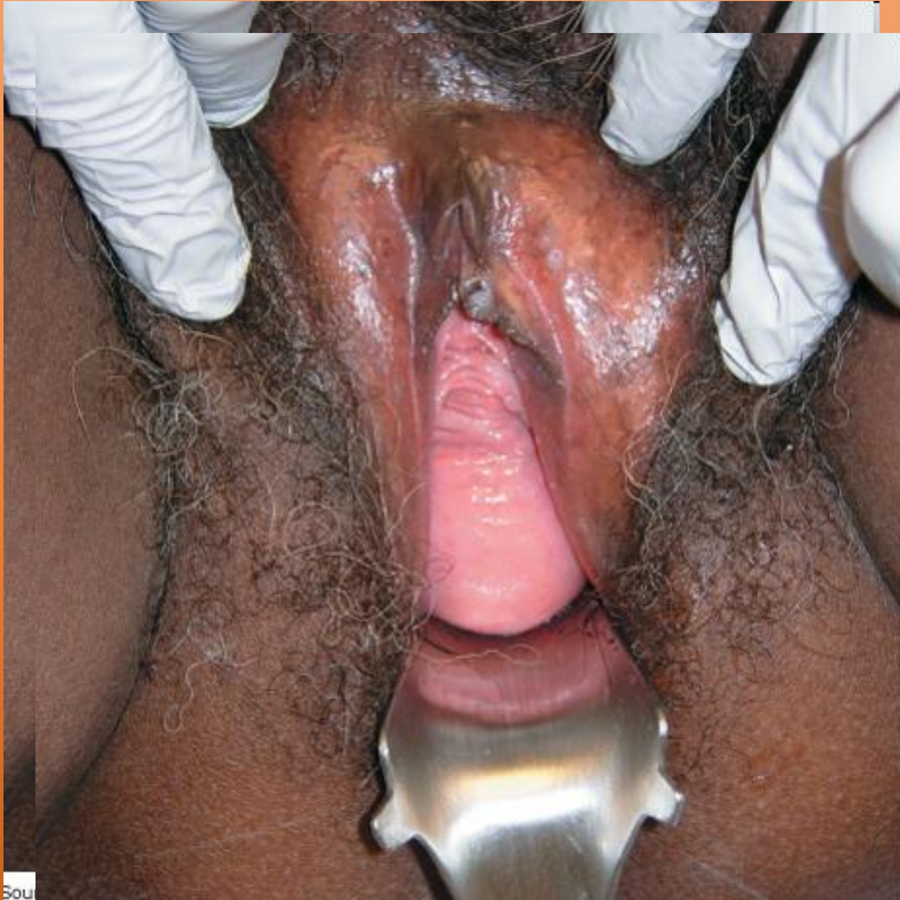


McCall Culdoplasty



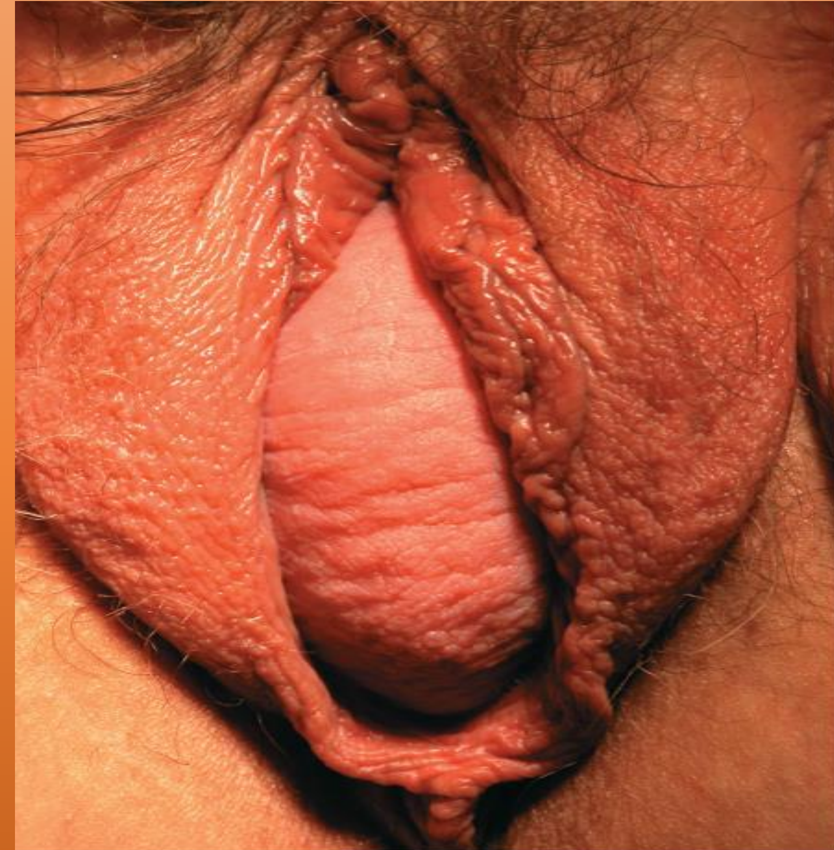
Sacrospinous Fixation

Tell me the difference; pathophysiology



Source: Schorge JO, Schaffer JI, Halvorson LM, Hoffman BL, Bradshaw KD, Cunningham FG: *Williams Gynecology*: http://www.accessmedicine.com

Copyright © The McGraw-Hill Companies, Inc. All rights reserved.



Source: Schorge JO, Schaffer JI, Halvorson LM, Hoffman BL, Bradshaw KD, Cunningham FG: *Williams Gynecology*: http://www.accessmedicine.com

Copyright © The McGraw-Hill Companies, Inc. All rights reserved.

garis tengah-lateral Cacat Garis tengah atau distension cystocele: perhatikan hilangnya karakteristik rugae vagina

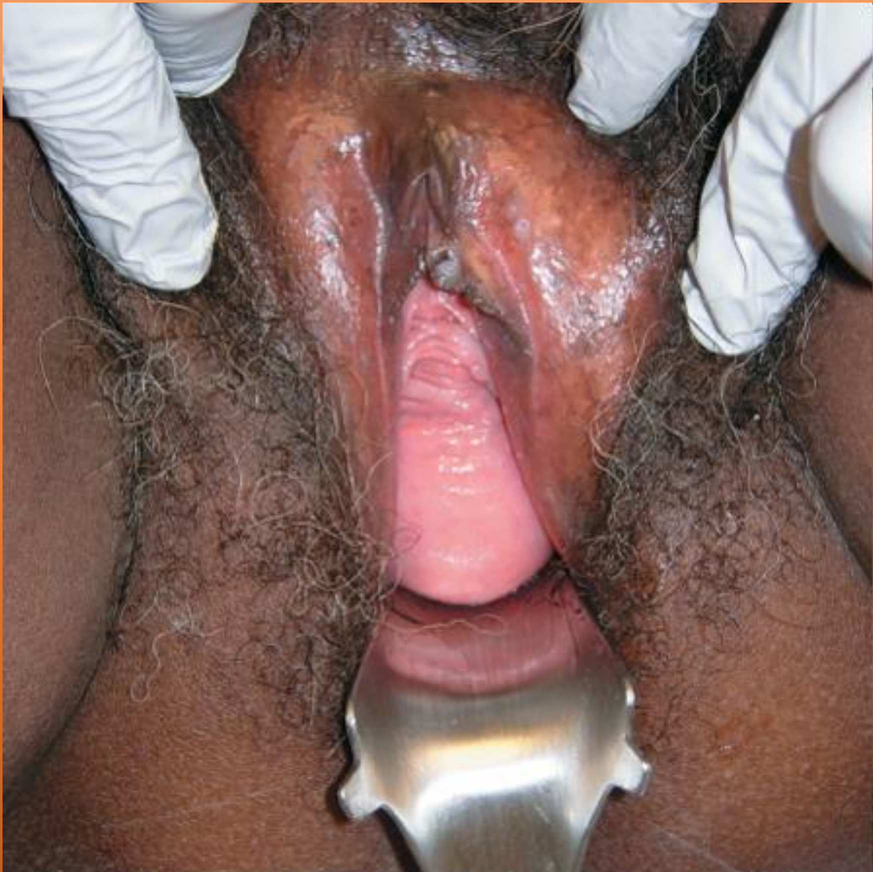


Foto menunjukkan cystocele lateral, juga disebut cystocele paravaginal atau perpindahan. Rugae yang hadir, yang menunjukkan bahwa hilangnya dukungan adalah lateral daripada pusat

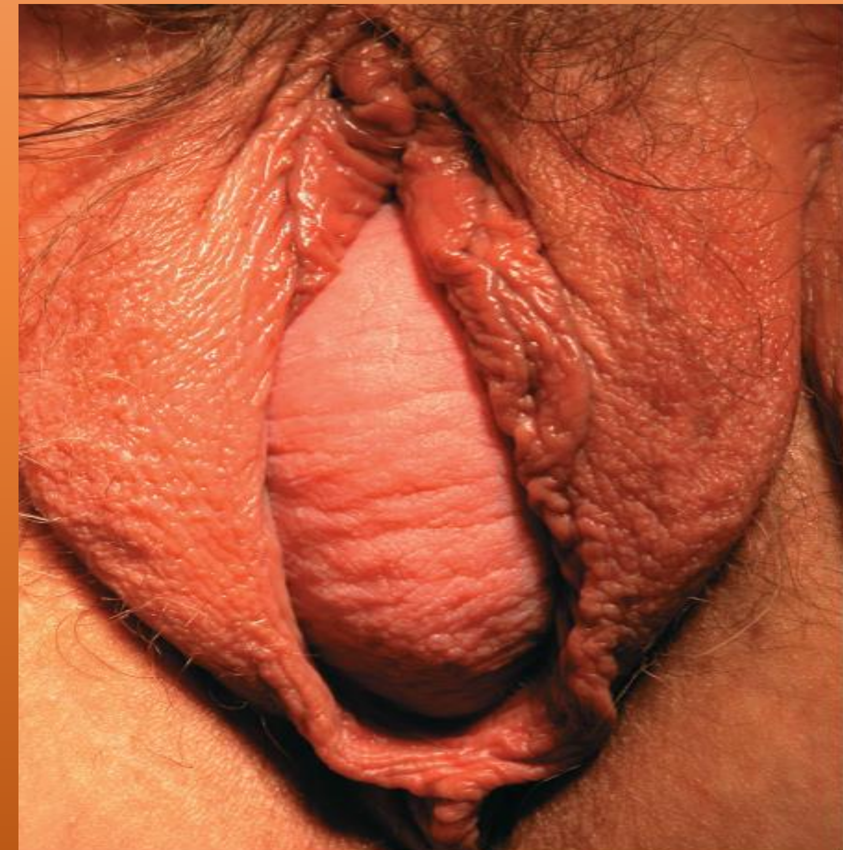
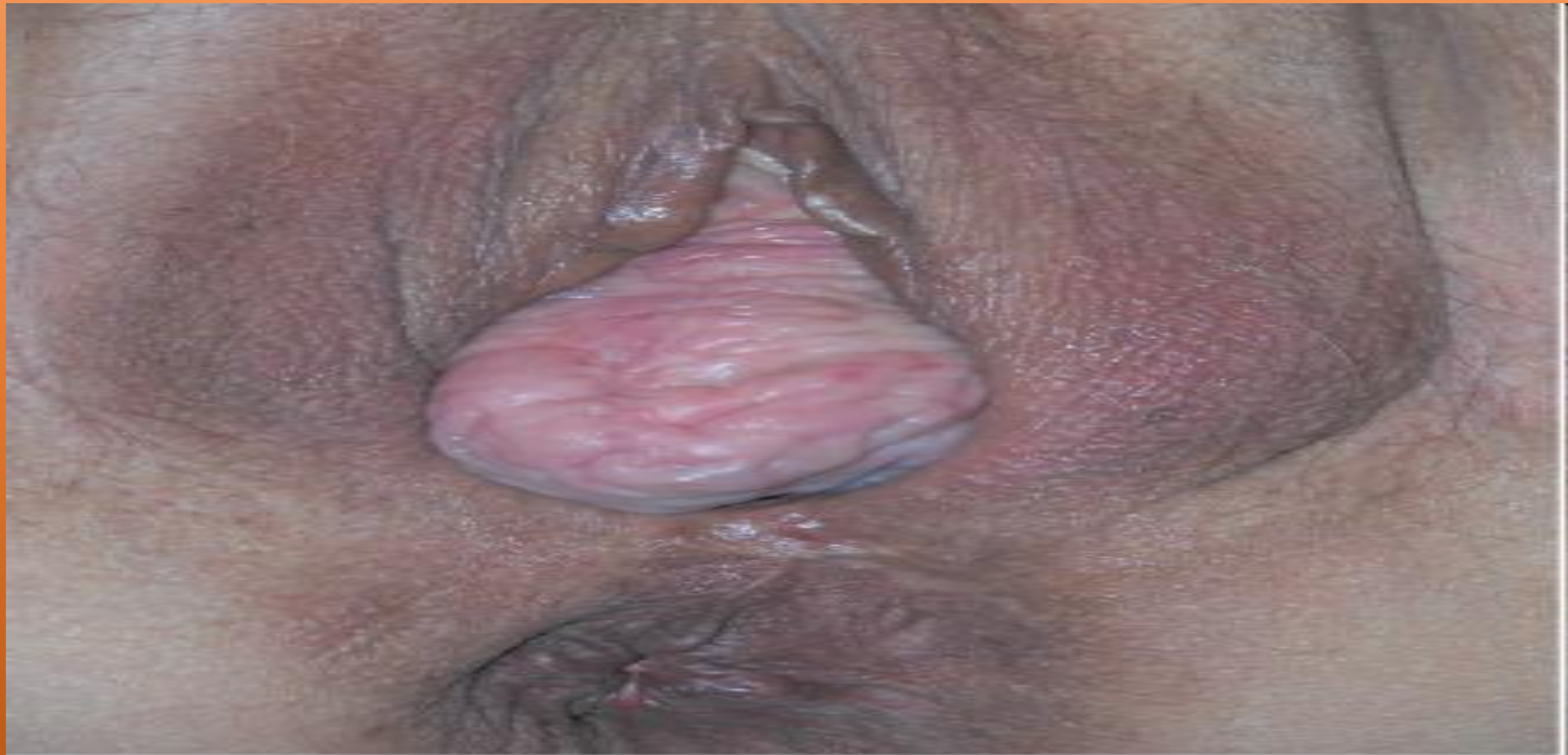


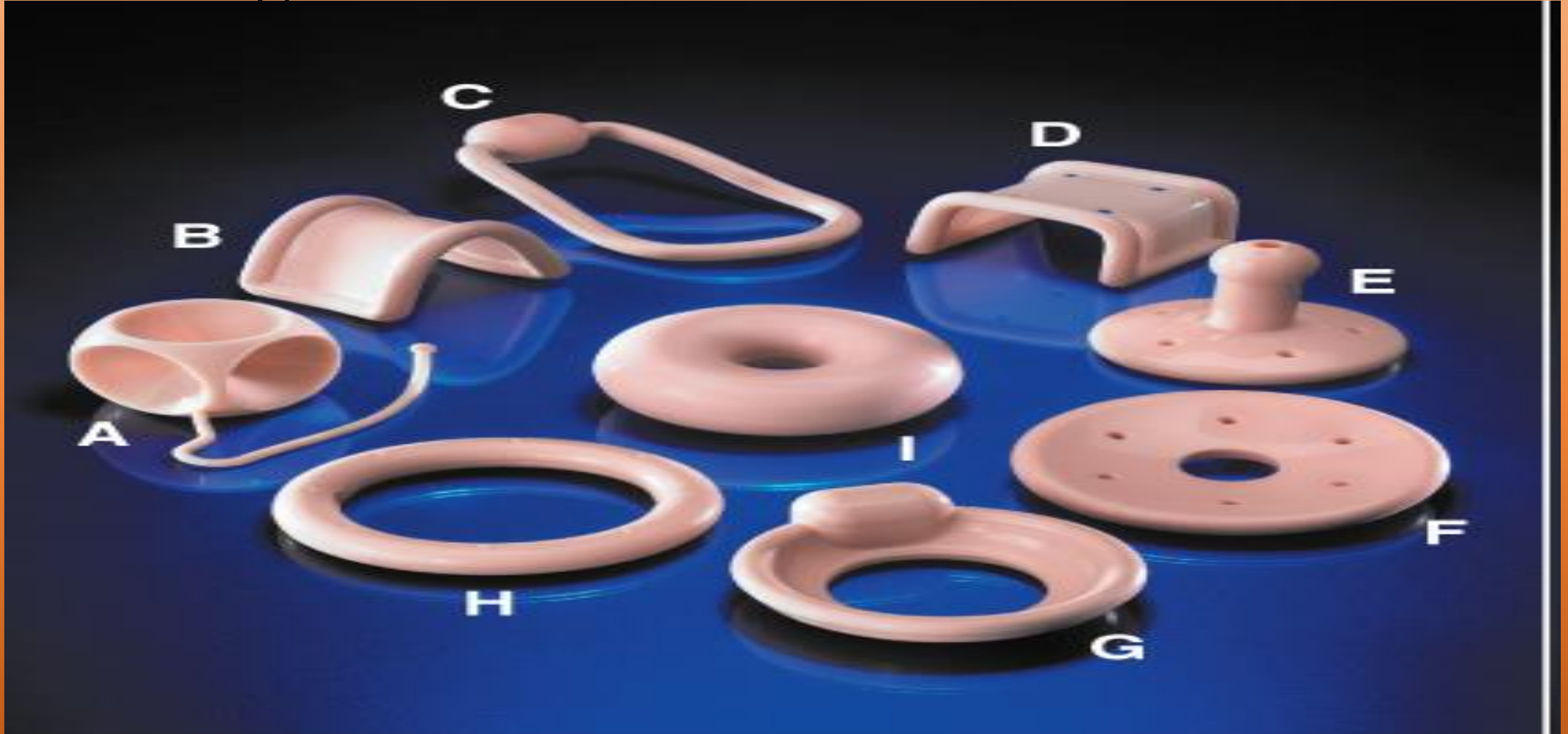
Foto menampilkan kerusakan dinding vagina melintang. Catatan “detachment” dinding vagina anterior dari puncak dan kehadiran Rugae, yang menunjukkan bahwa ini bukan garis tengah atau cacat pusat.



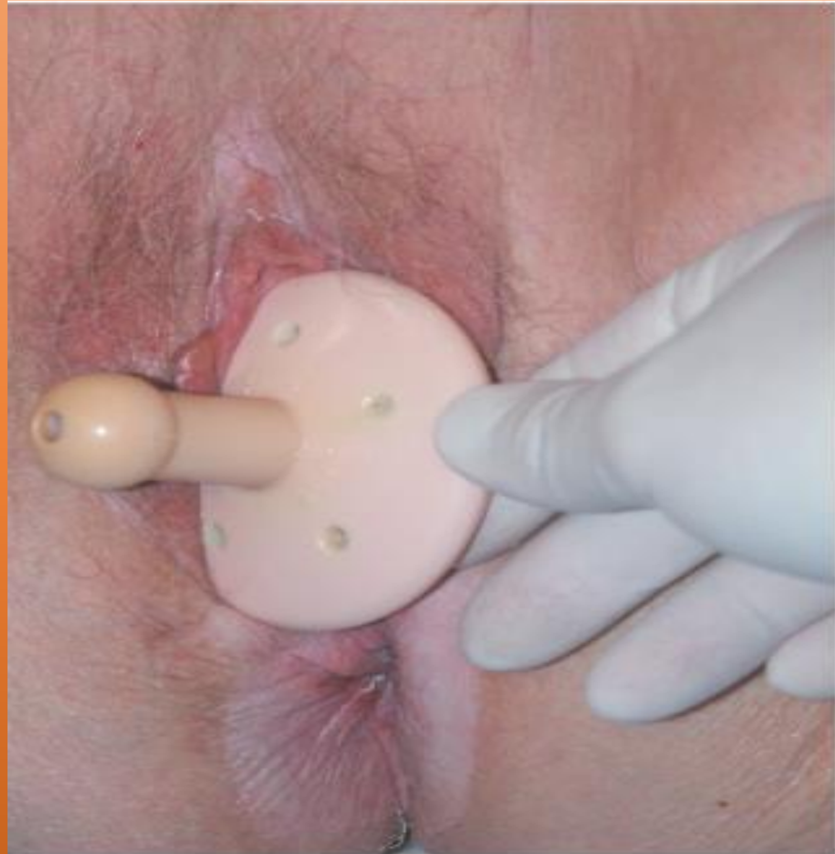
Source: Schorge JO, Schaffer JI, Halvorson LM, Hoffman BL, Bradshaw KD, Cunningham FG: *Williams Gynecology*: http://www.accessmedicine.com

Copyright © The McGraw-Hill Companies, Inc. All rights reserved.

Types of Pessaries



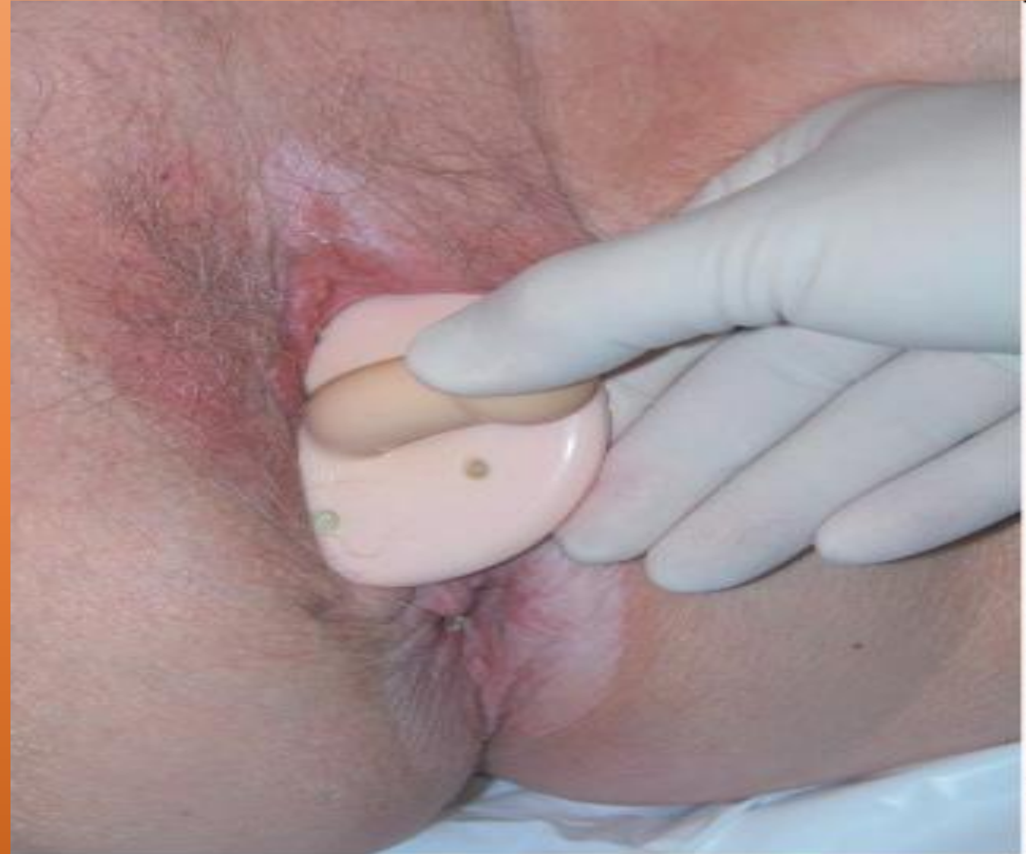
technique for placement and removal of a Gellhorn pessary (Youtube instruction video)



A

Source: Schorge JO, Schaffer JI, Halvorson LM, Hoffman BL, Bradshaw KD, Cunningham FG: *Williams Gynecology*: http://www.accessmedicine.com

Copyright © The McGraw-Hill Companies, Inc. All rights reserved.



B

Source: Schorge JO, Schaffer JI, Halvorson LM, Hoffman BL, Bradshaw KD, Cunningham FG: *Williams Gynecology*: http://www.accessmedicine.com

Copyright © The McGraw-Hill Companies, Inc. All rights reserved.

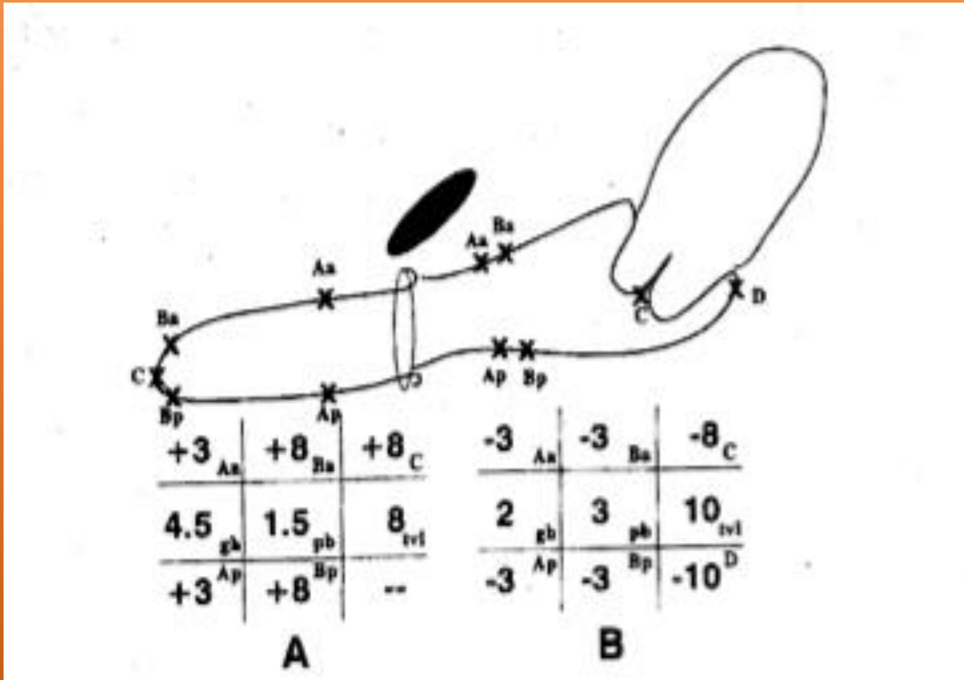
Who do we operate?

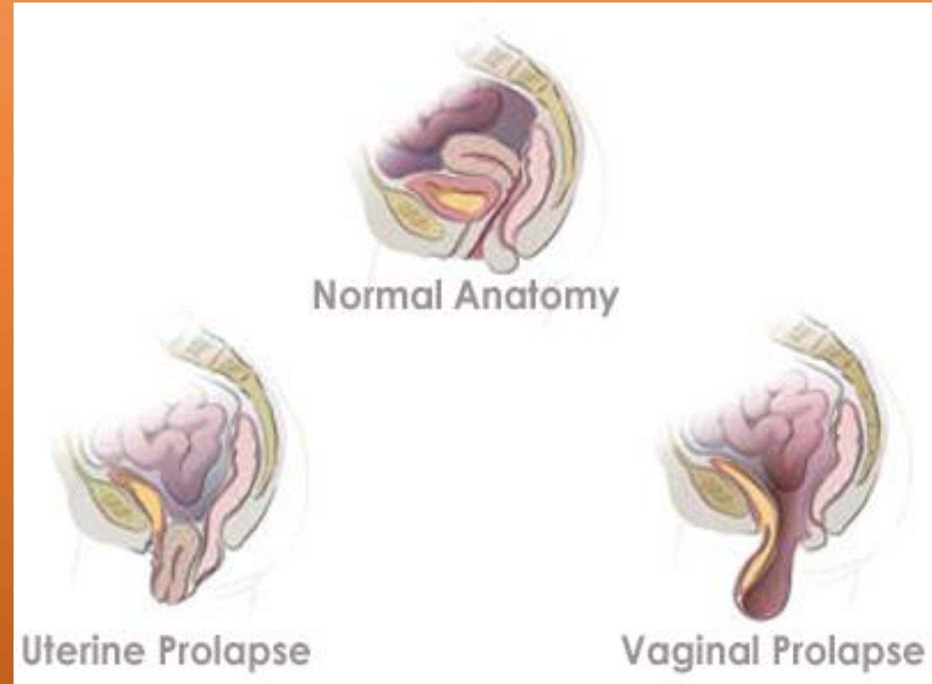
- 1. functional complaints are leading
- 2. there appears to be a relationship between abnormal anatomy and abnormal function
- 3. good life expectancy
- 4. well considered question
- 5. we have good solution

How do we operate?

- **1. Operation per compartment**
- **2. Optionally combine with incontinence surgery**
- **3. Vaginal or abdominal**
- **4. With or without mesh**
- **5. Obliterative or not**

The standardization of terminology





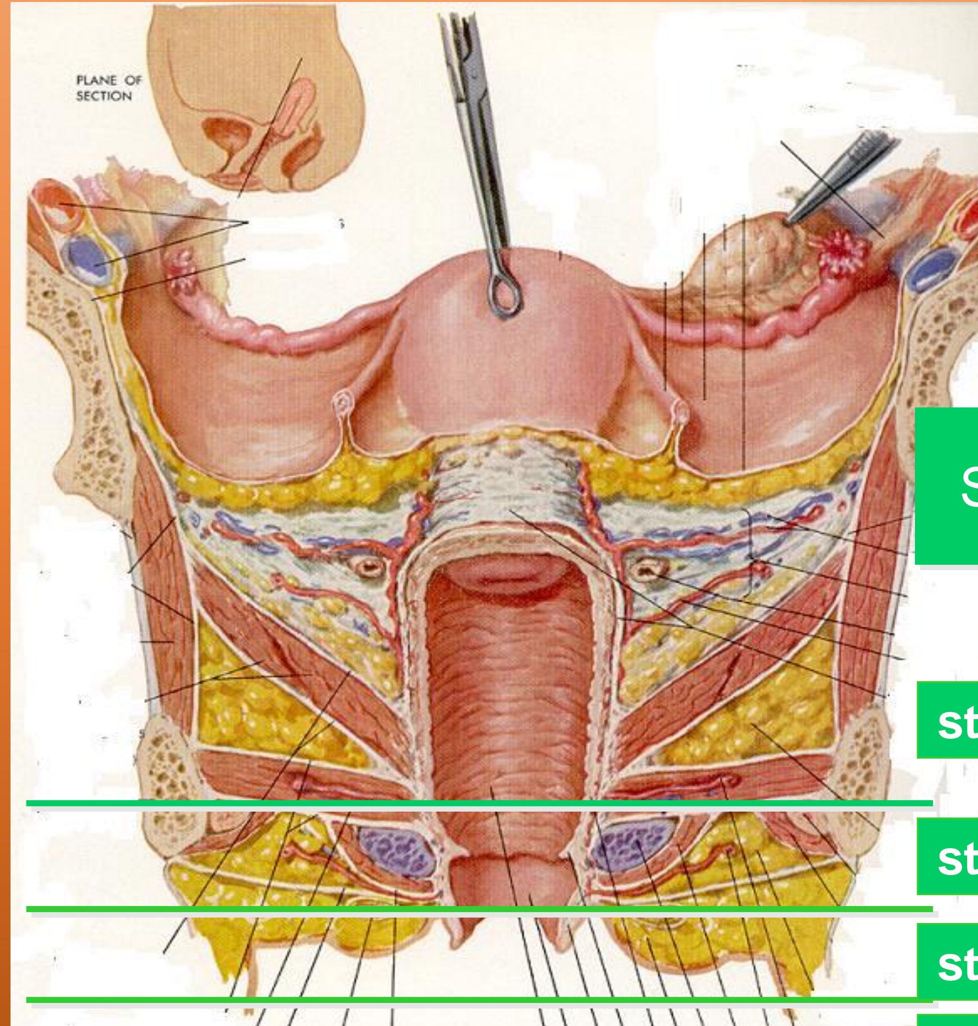
prolaps repair

Suspension & support
bridge Calatrava

Operasi konvensional
Menangguhkan operasi (pemulihan anatomis)
Dengan autologous tissue
Vaginal approach:
- Cysto- recto-enterocele repair
- Fiksasi SacroSpinal
- Uterus in situ: cervico (hystero)pexy
- Obliterative (kolpocleisis)

Abdominal approach: Laparoscopy

Simplified POPQ (Valsalva)



Simplified POPQ

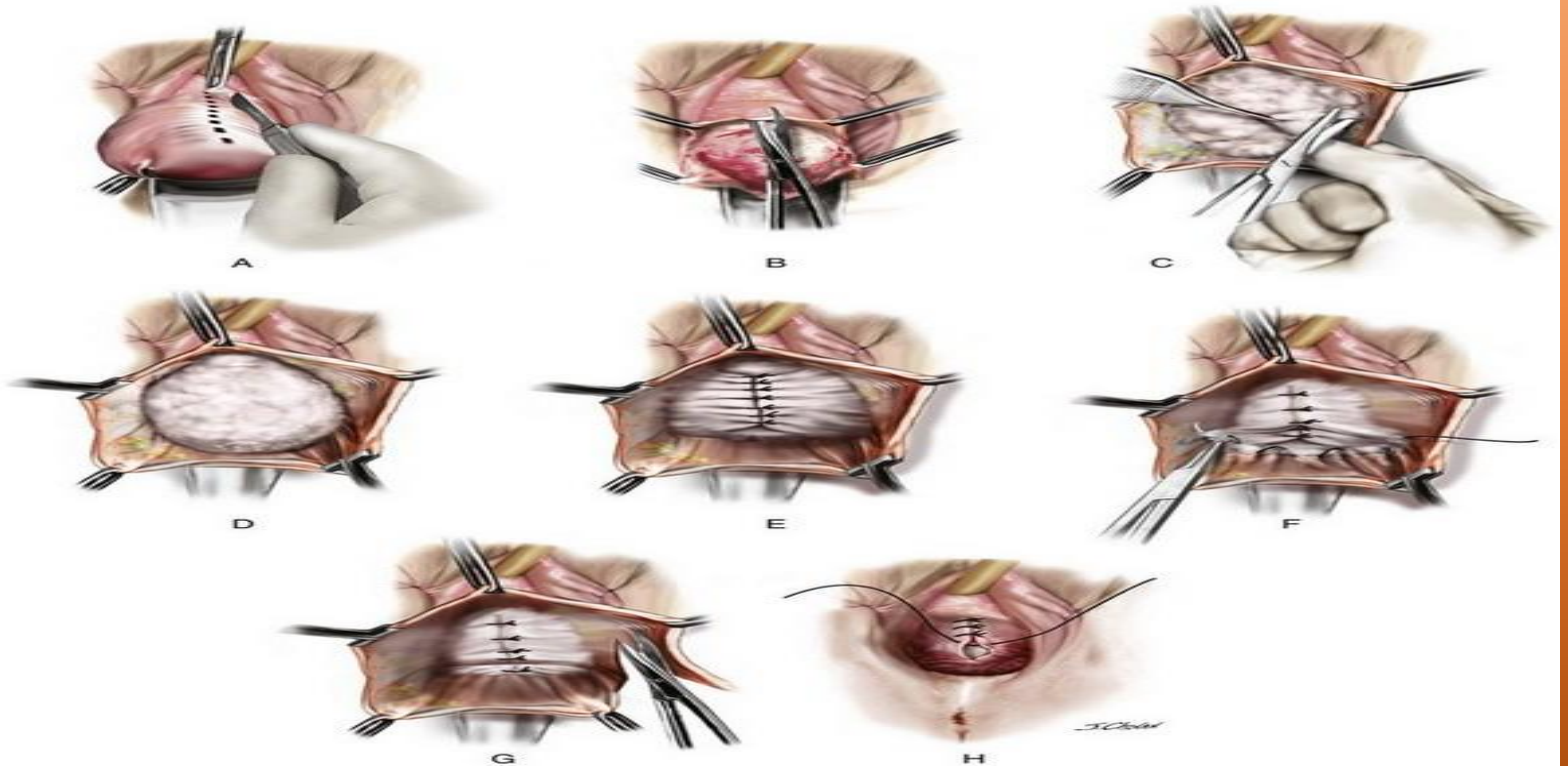
stadium I: < -1 cm

stadium II: -1 tot +1

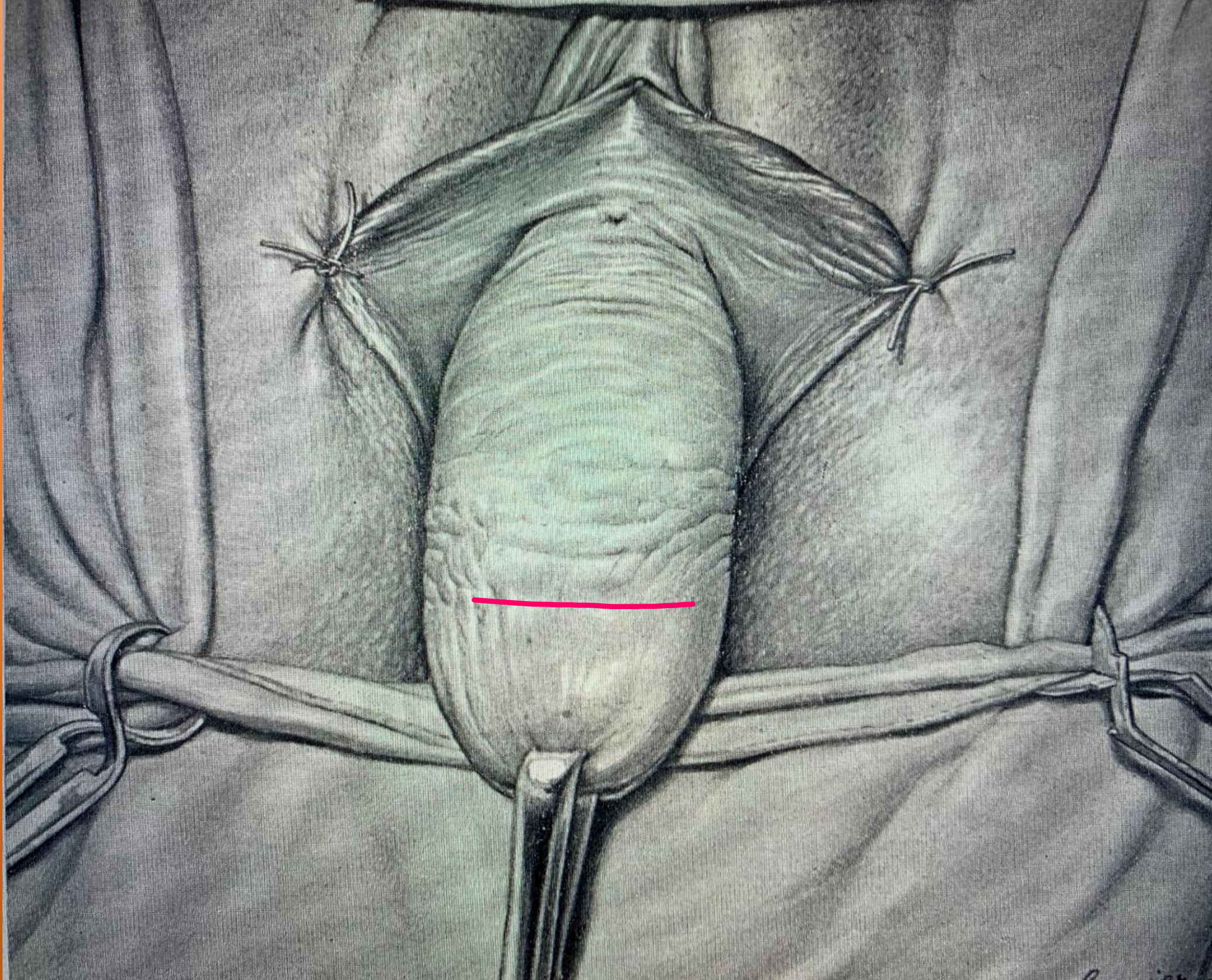
stadium III: > +1

stadium IV: totaal

anterior colporrhaphy

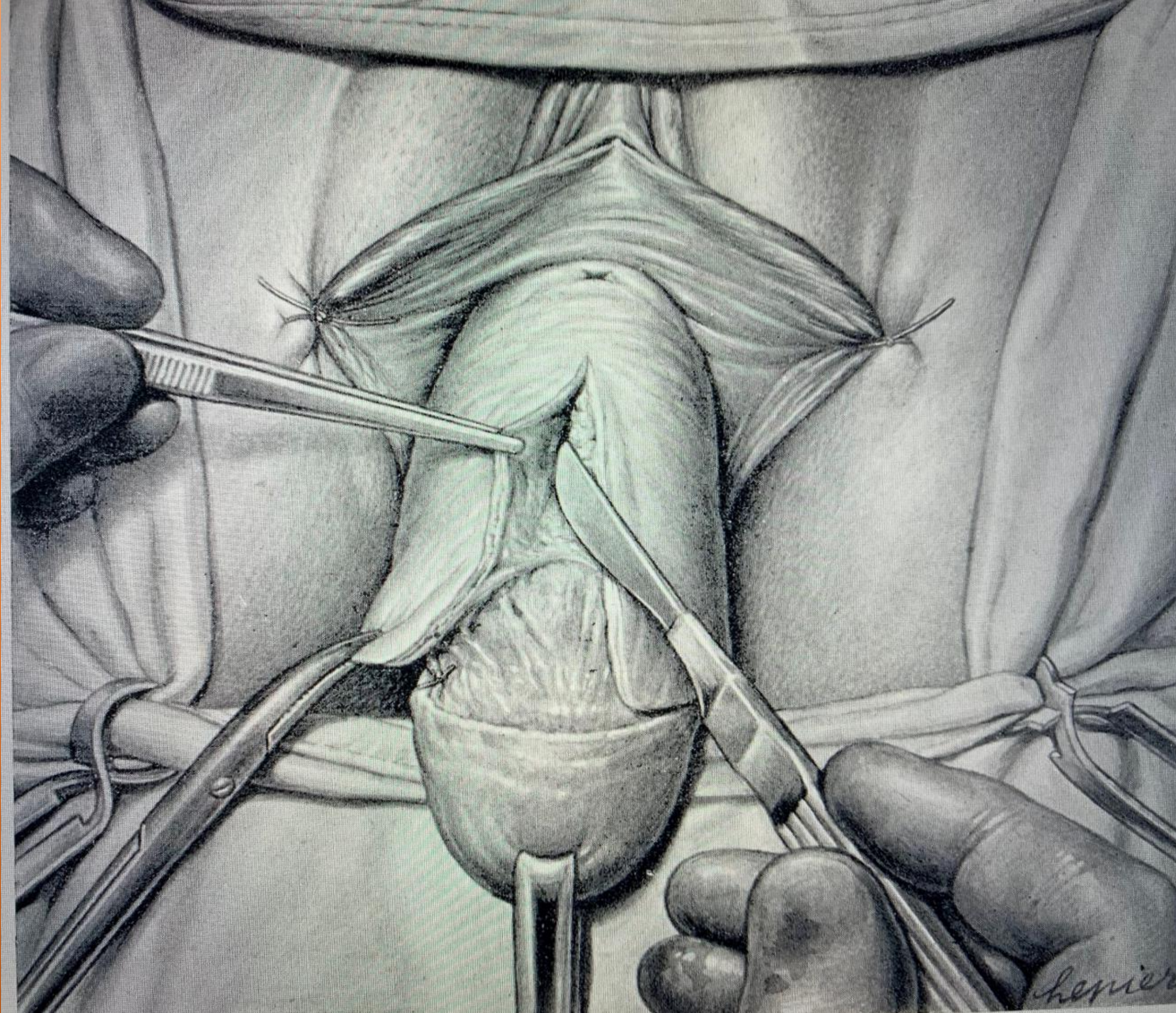


anterior colporrhaphy step by step



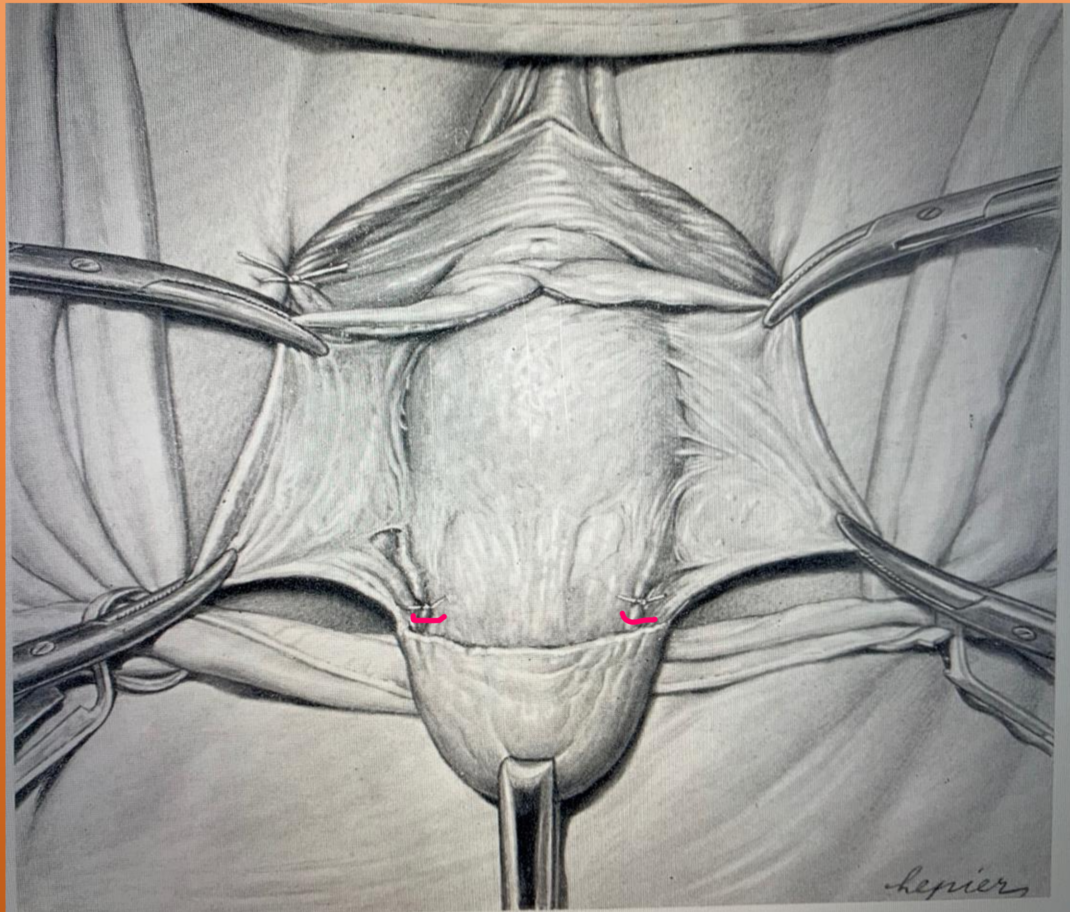
The labia minora have been sutured away from the operation area and the cervix has been pulled downwards. Note particularly the positions of the bladder sulcus and the transverse vaginal sulcus.

Anterior colporraphy (1): most common POP operation

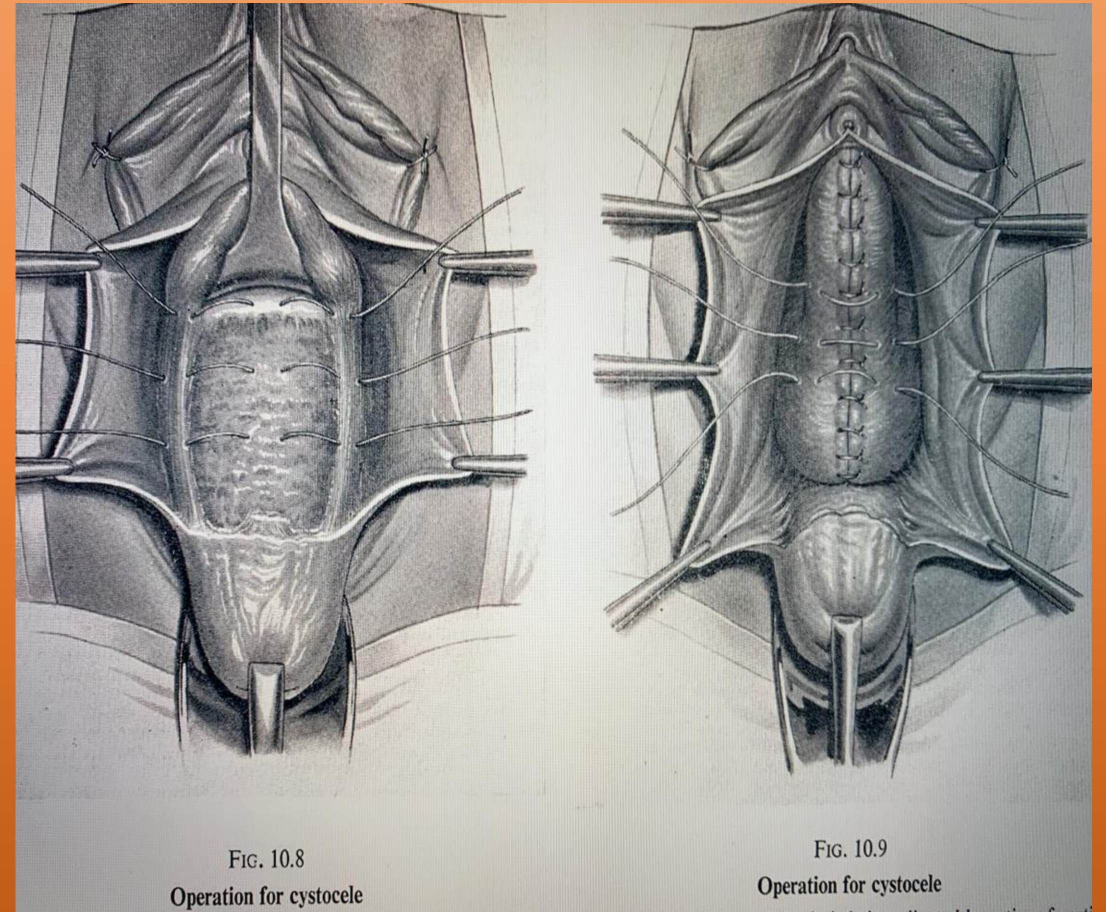


A longitudunal incision has been made in the anterior vaginal wall together with a transverse incision. Note the method of dissecting the vagina together with the vaginal fascia away from the vesicovaginal space

anterior colporrhaphy (2)

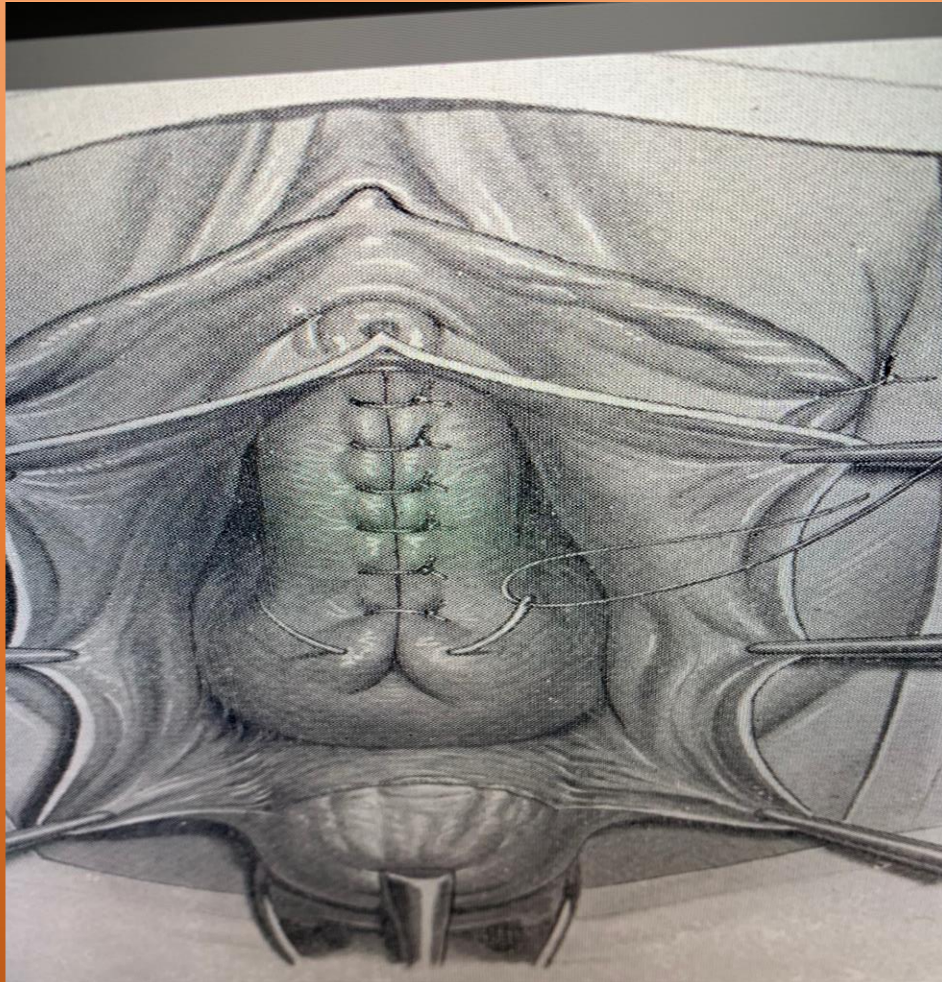


The vaginal wall, together with the vaginal fascia, has been striped away from the vesicovaginal space. The bladderpillars can also be seen (with stitches)



The vesical and urethral fascia is being plicated by a tier of vertical mattress sutures to form a firm buttress (penopang yang kuat) from the urethral meatus to the cervix.

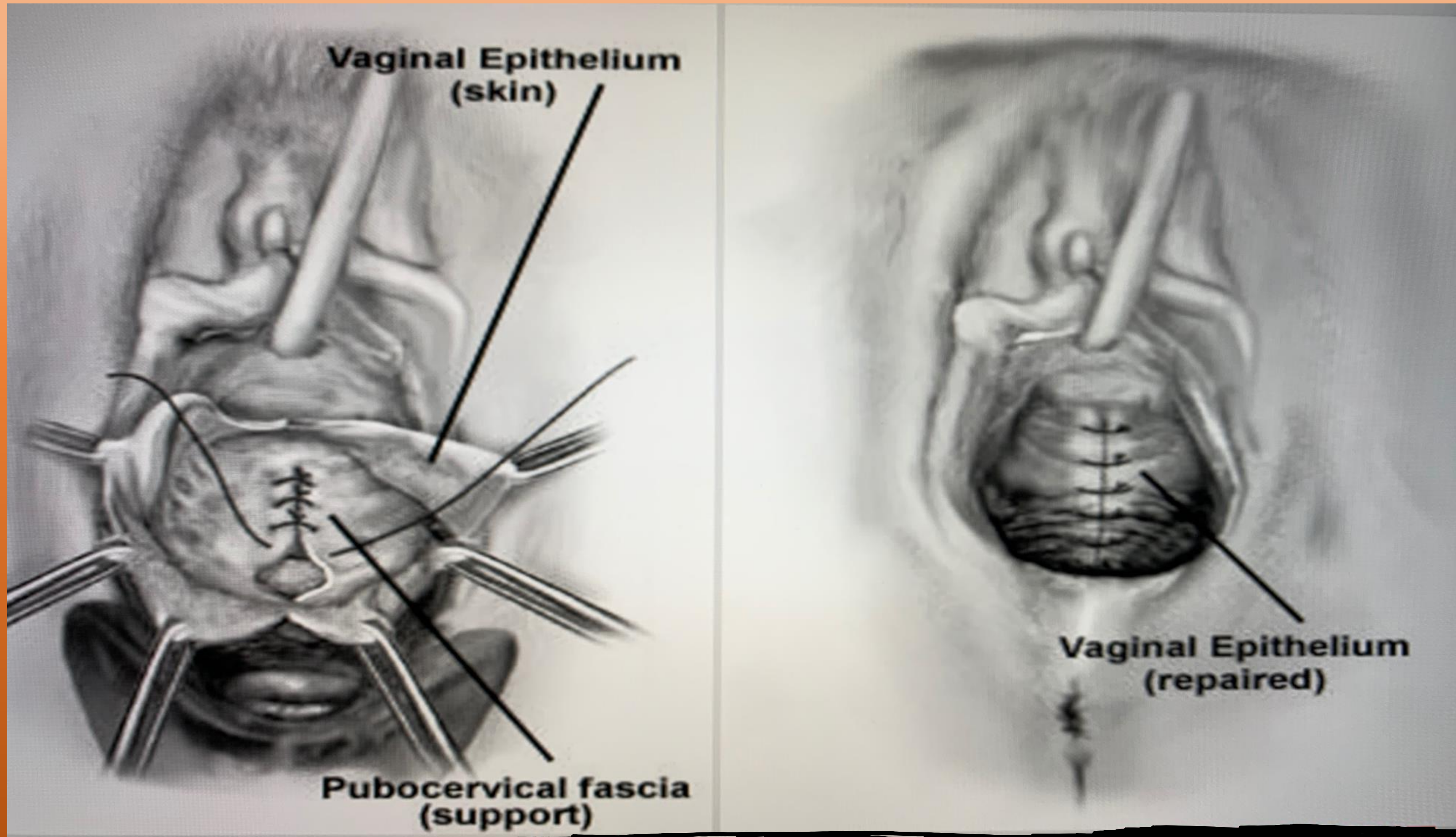
anterior colporrhaphy (3)



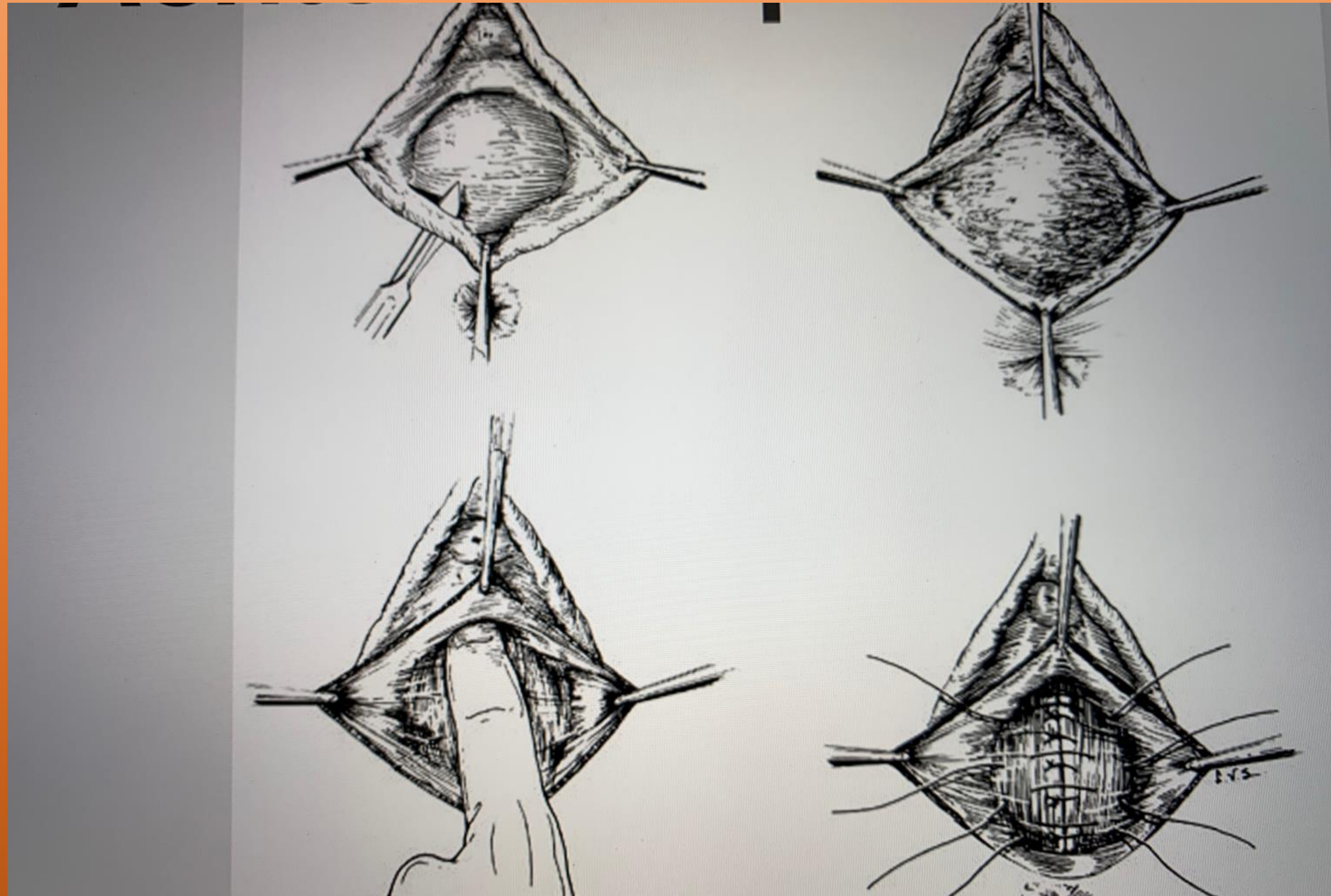
Three additional sutures are being placed below the tier in the region of the bladder neck.

These additional sutures are important in the control of stress incontinence (*evidence?)

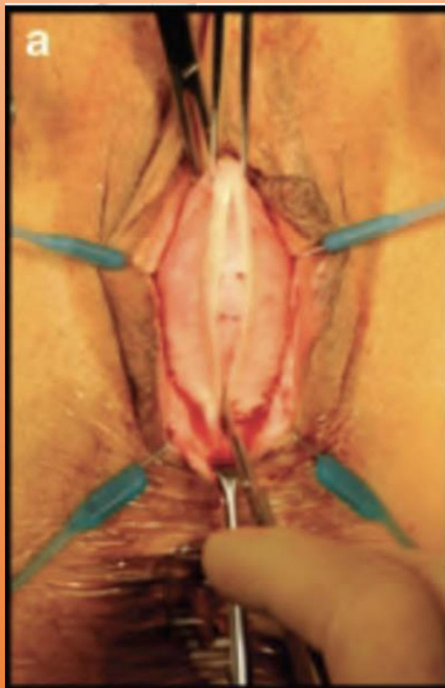
Ant. colporrhapy (4) – pubocervical fascia (support)

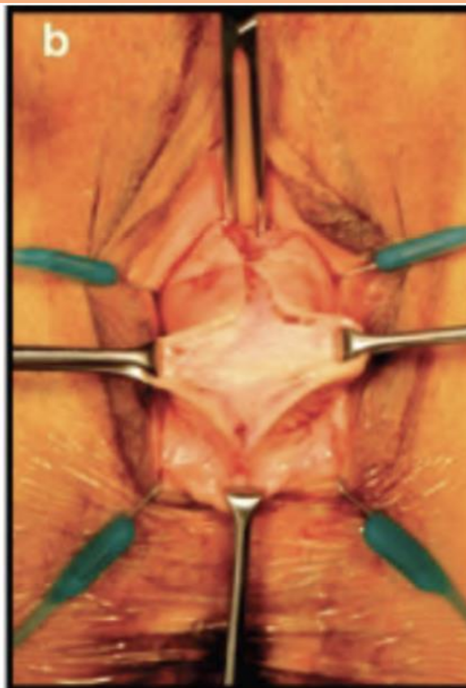


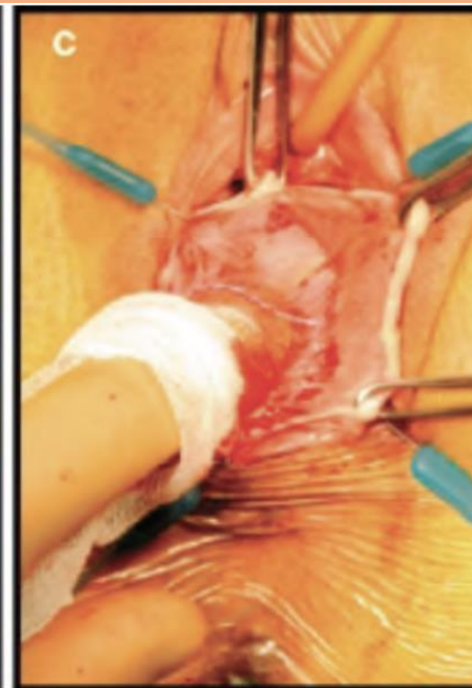
Posterior colporrhaphy

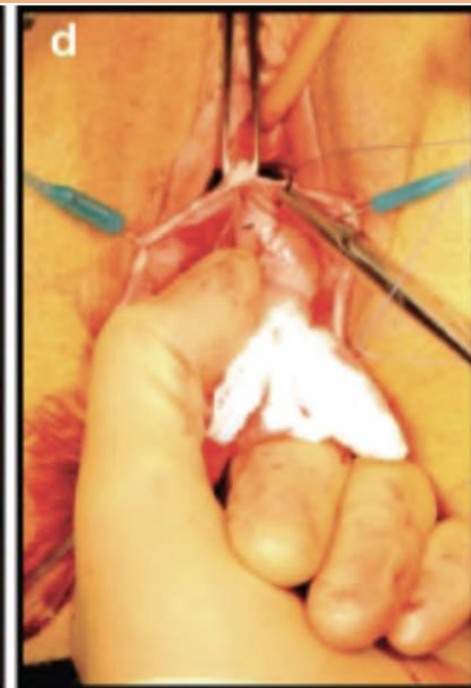


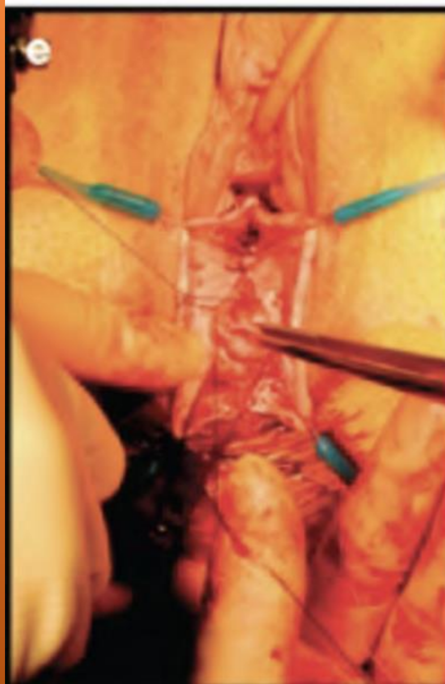
Posterior colporrhaphy

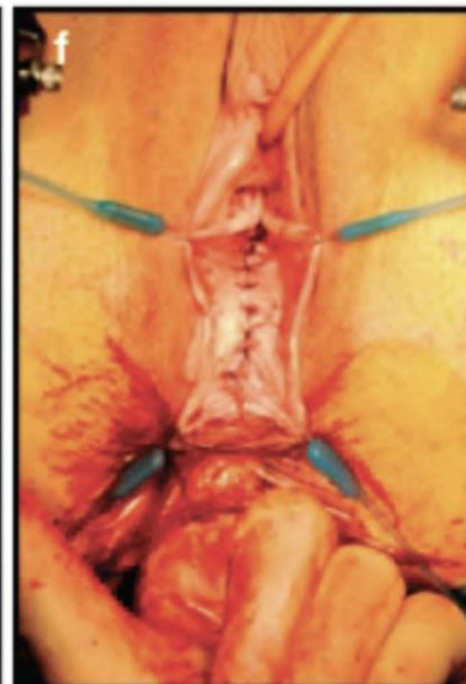


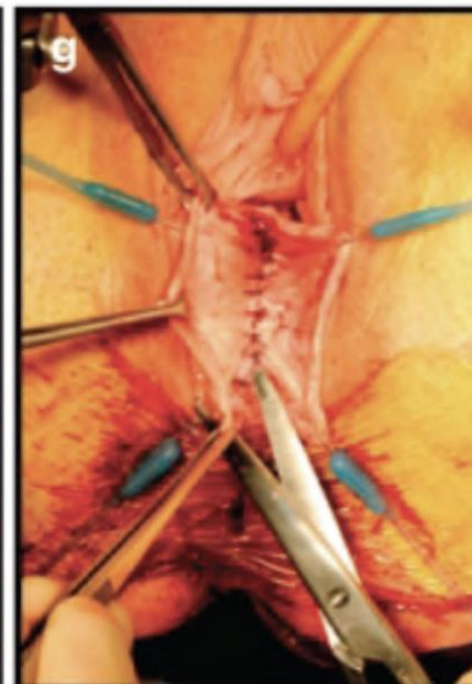


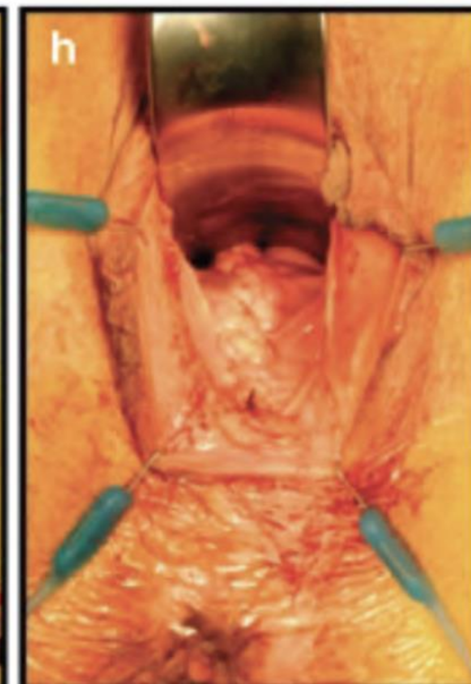








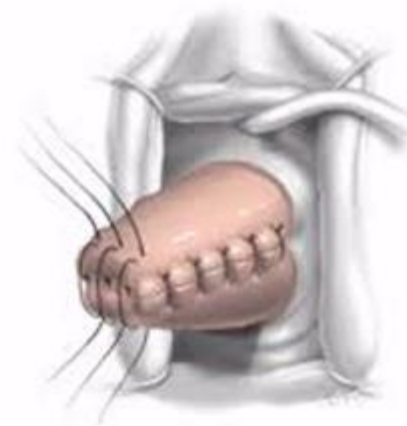




Also vaginal route...

<u>Obliterative surgery</u>:

- Colpocleisis (colpectomy) moves pelvic organs back into the pelvis with partial or total closure of the vaginal canal.
- Reserve colpocleisis for elderly women who:
    - are at high risk for complications with reconstructive procedures
    - prefer to avoid hysterectomy
    - do not desire to maintain vaginal use for intercourse



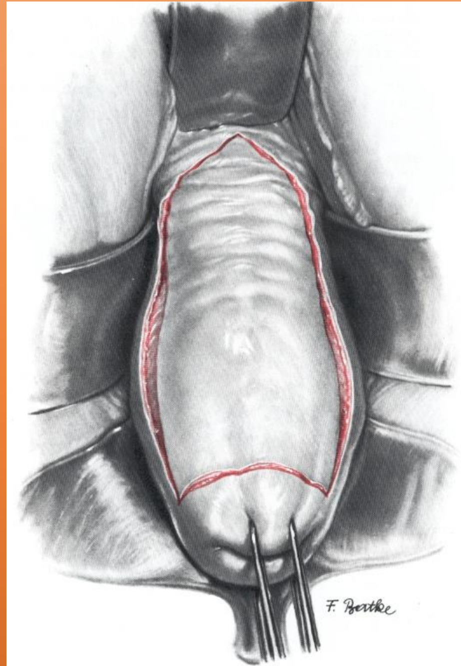
Colpocleisis

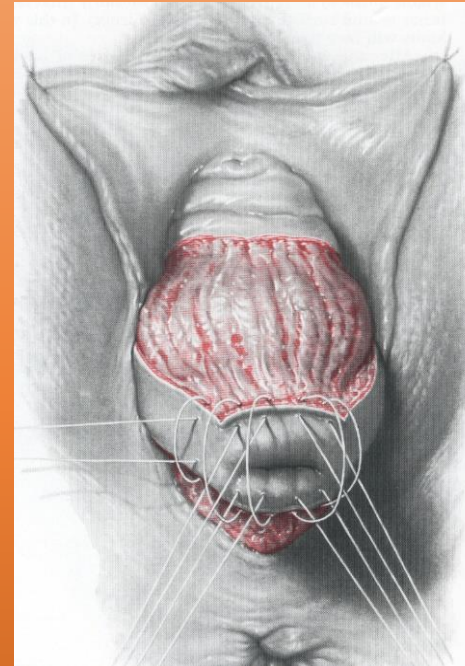
- Neugebauer-LeFort (1867)
- Doederlein cross-bar colporrhaphy
- Conill colpocleisis
- Labhardt (1932)

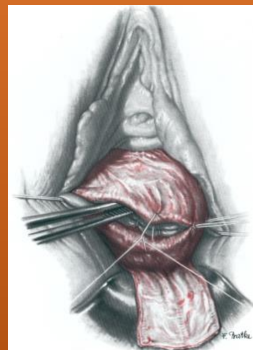
Colpocleisis

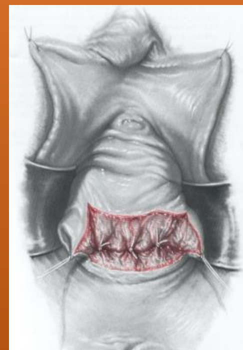
- Manfaat:
- Anestesi lokal
- Waktu perekaman singkat/perawatan hari
- Solusi sederhana untuk masalah serius
- Kerugian:
- Coitus kurang mungkin lagi (*)
- Jarang memburuknya inkontinensia berkemih (lefort)
- Probabilitas relapse (Labhardt)
- Rahim tidak tersulasi (skrining pra-endometrium dan serviks dalam operasi perencanaan)

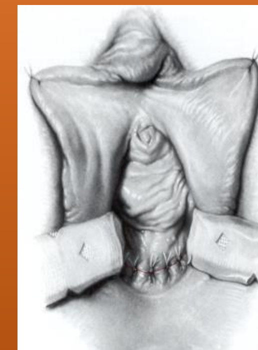
Lefort

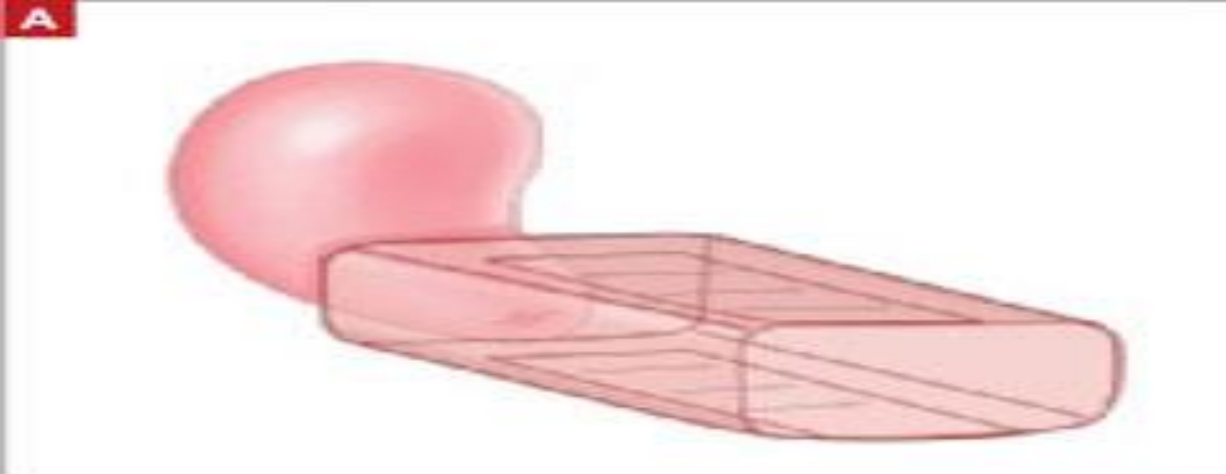




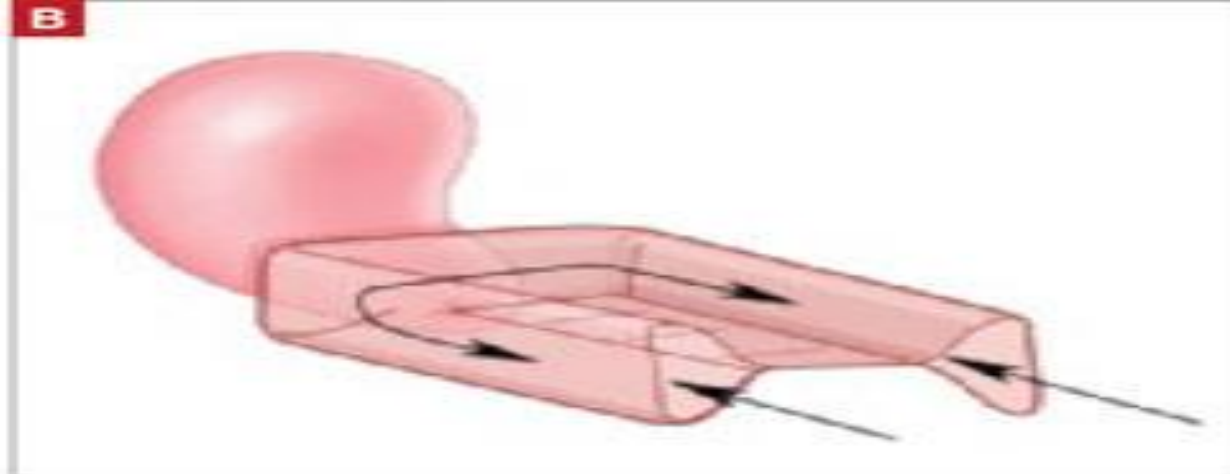




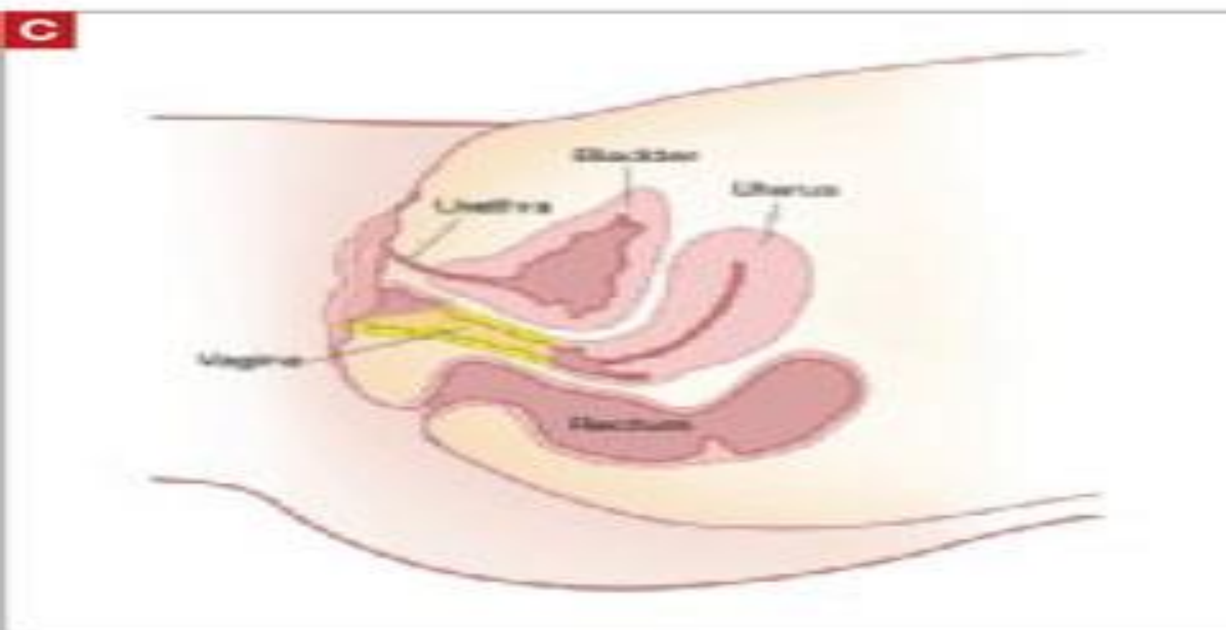




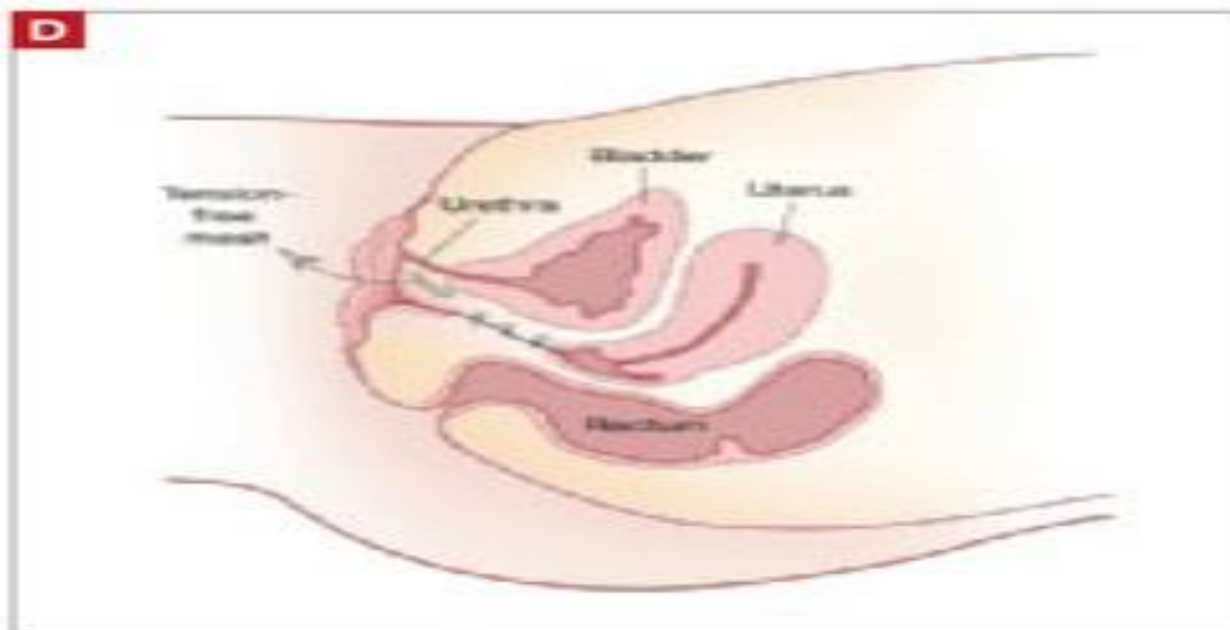
Two rectangular pieces of vaginal epithelium are removed, one each from the anterior and posterior vaginal walls.



The corresponding sides of these rectangles are sutured together, creating bilateral channels that connect at the vaginal apex. (Three short transverse lines represent row-by-row suturing of the raw surfaces.)



Sagittal representation of the denuded rectangular areas on the anterior and posterior vaginal walls (highlighted in yellow).



The procedure is completed by suturing the corresponding sides of the rectangles and denuded surfaces in three rows.

Apical prolaps (1)

- **Descensus uteri**
  - **Preservation uterus**

    - Sacrospinal Fixation

    - Manchester Fothergill

  Vaginal uterus extirpation

    - McCall procedure

  Abdominal approach

  -Supravaginal uterus extirpation & sacrocolpopoxie

  -Sacrocolpopexie & uterus preservation

  Hysteropexie

Apical prolaps (2)

- Vaginatop prolaps

  Vaginal approach

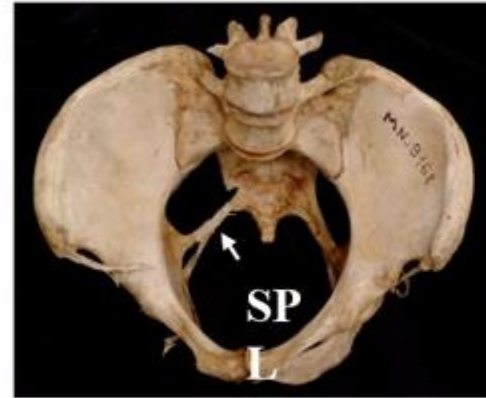
  - - SacroSpinalFixation
  - - Plication sacro-uterine ligaments (Bob Shull)
  - - Mesh (single incision technique)

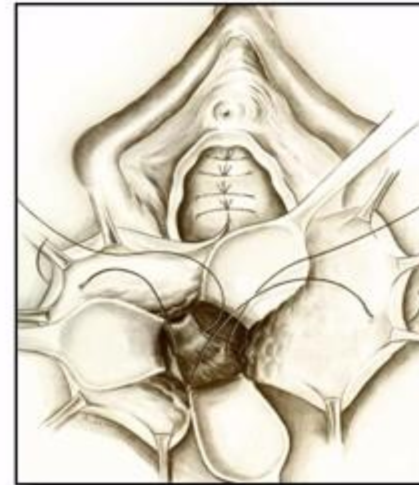
  Abdominal approach

  - McCall procedure
  - Laparoscopic sacrocolpopexie

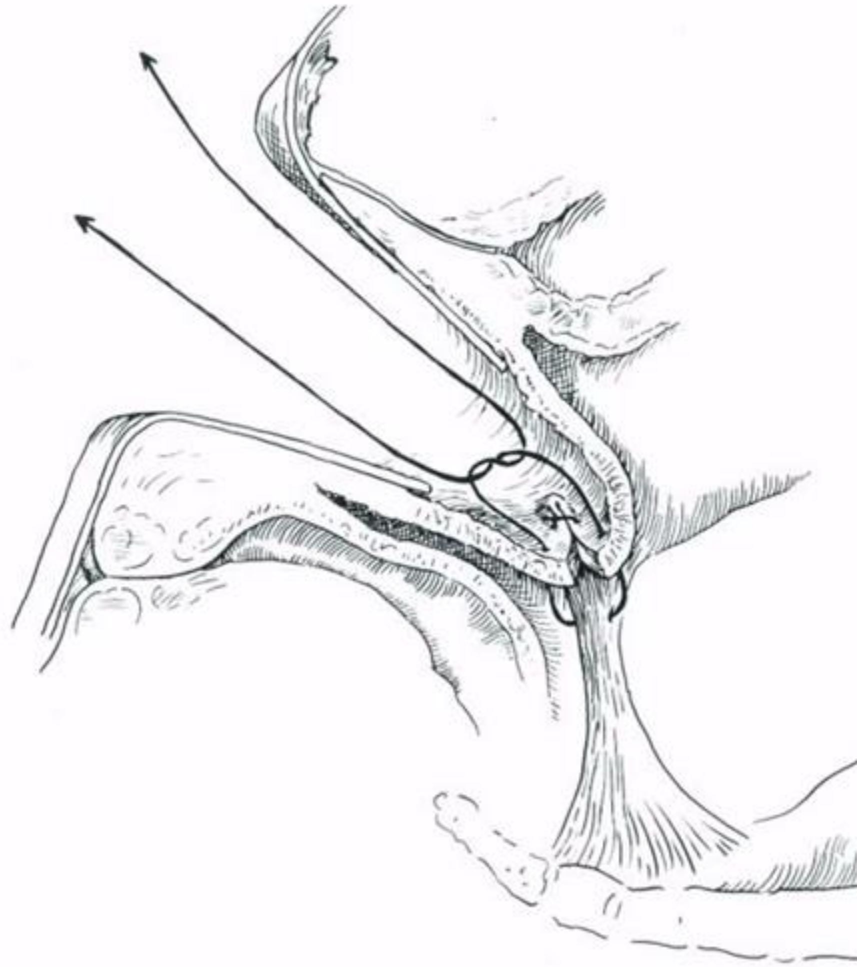
Sacrospinous fixation of the vagina

- Simple approach
- Technique providing maintenance of sexual function
- Achieves adequate vaginal length and width
- Combined reconstructive procedures/Incontinence surgery possible
- Regional anesthesia

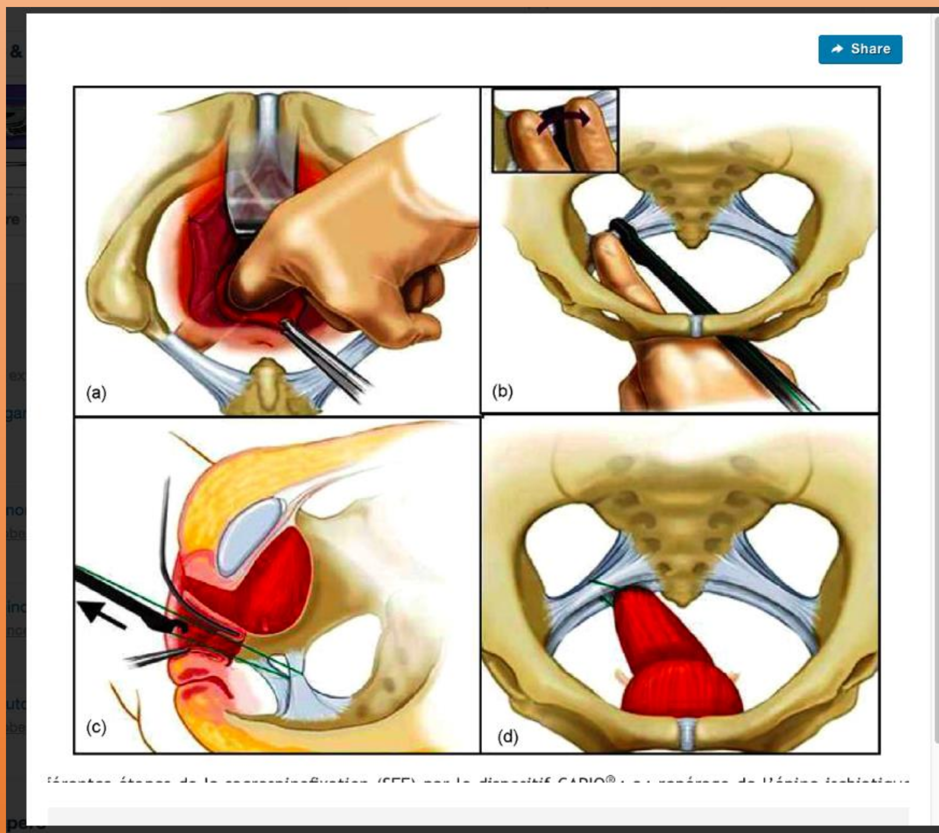




Sacrospinous fixation of the vagina



De Lancey 2013

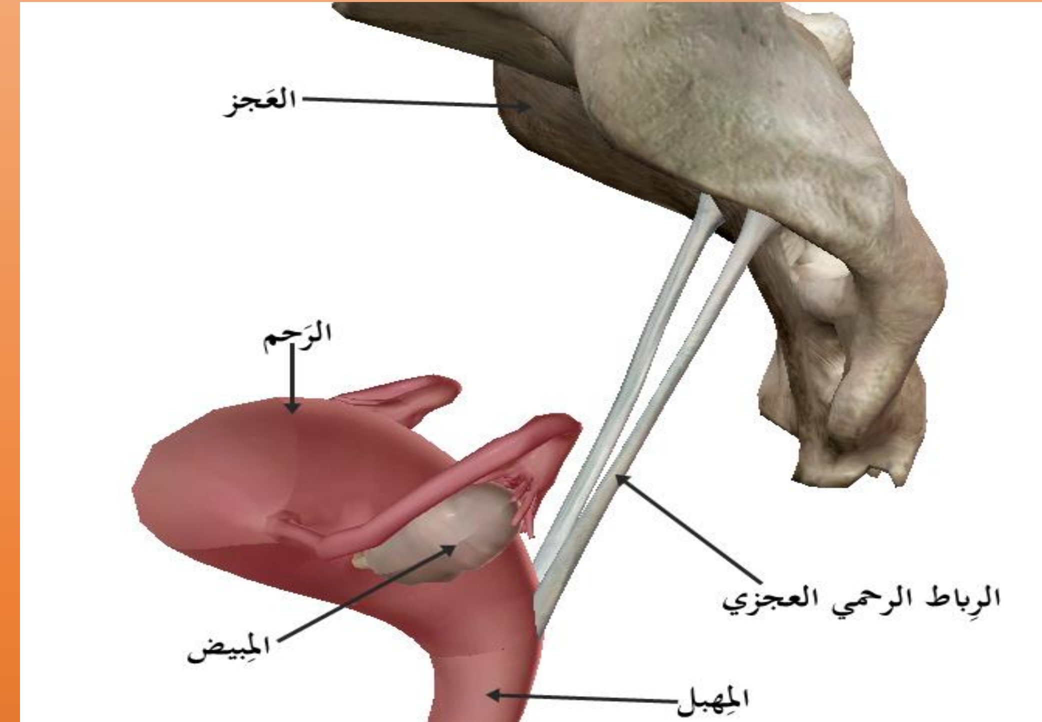


Sacrospinal fixation

- Benefit vs. vaginal uterine extirpation: shorter hospitalisation, quicker recovery, quicker return to work, longer vaginal length, little dyspareunia Complication: Pain in the buttock (may also be so severe that the adhesion should be loose again), bleeding, urinary retention Aftercare: Tampon and catheter for 1 day, determine residue Recurrence Rate: 10-21% top, 40-50% cystocele

Dietz V et al. One year follow-up after sacrospinous hysteropexy and vaginal hysterectomy for uterine descent: a randomised controlled trial. 2010, Save U

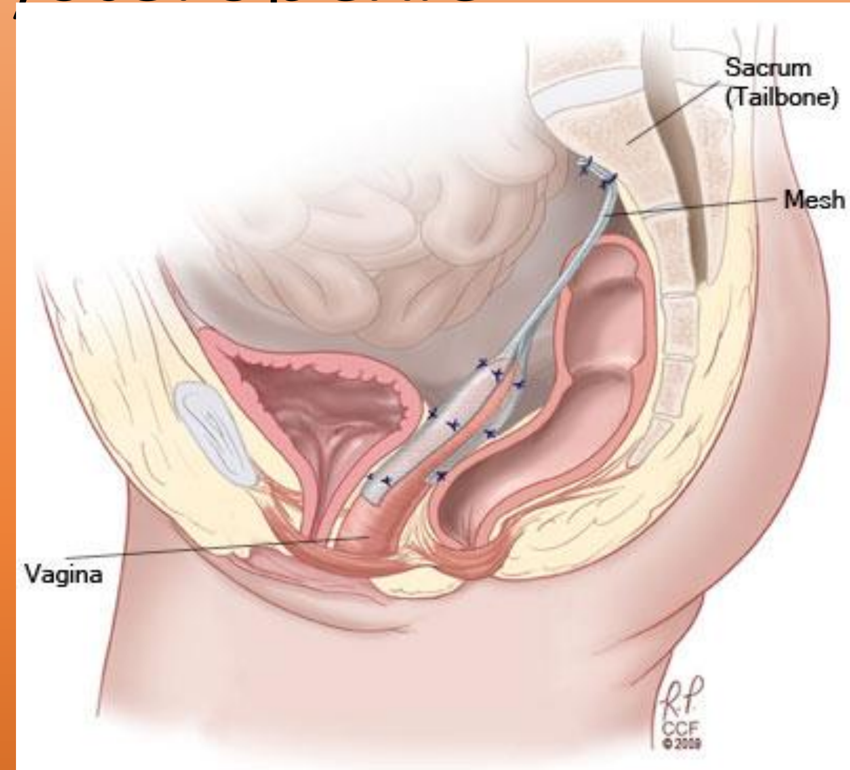
Manchesterprocedure



- Complication: bleeding, urinary retention, urinary incontinence, injury ureter Possible cervix stenosis
- Aftercare: Tampon and catheter for 1 day, determine residue Recurrence rate: None in apical compartment, possible up to 40% (anatomically) in all compartments (cystocele)

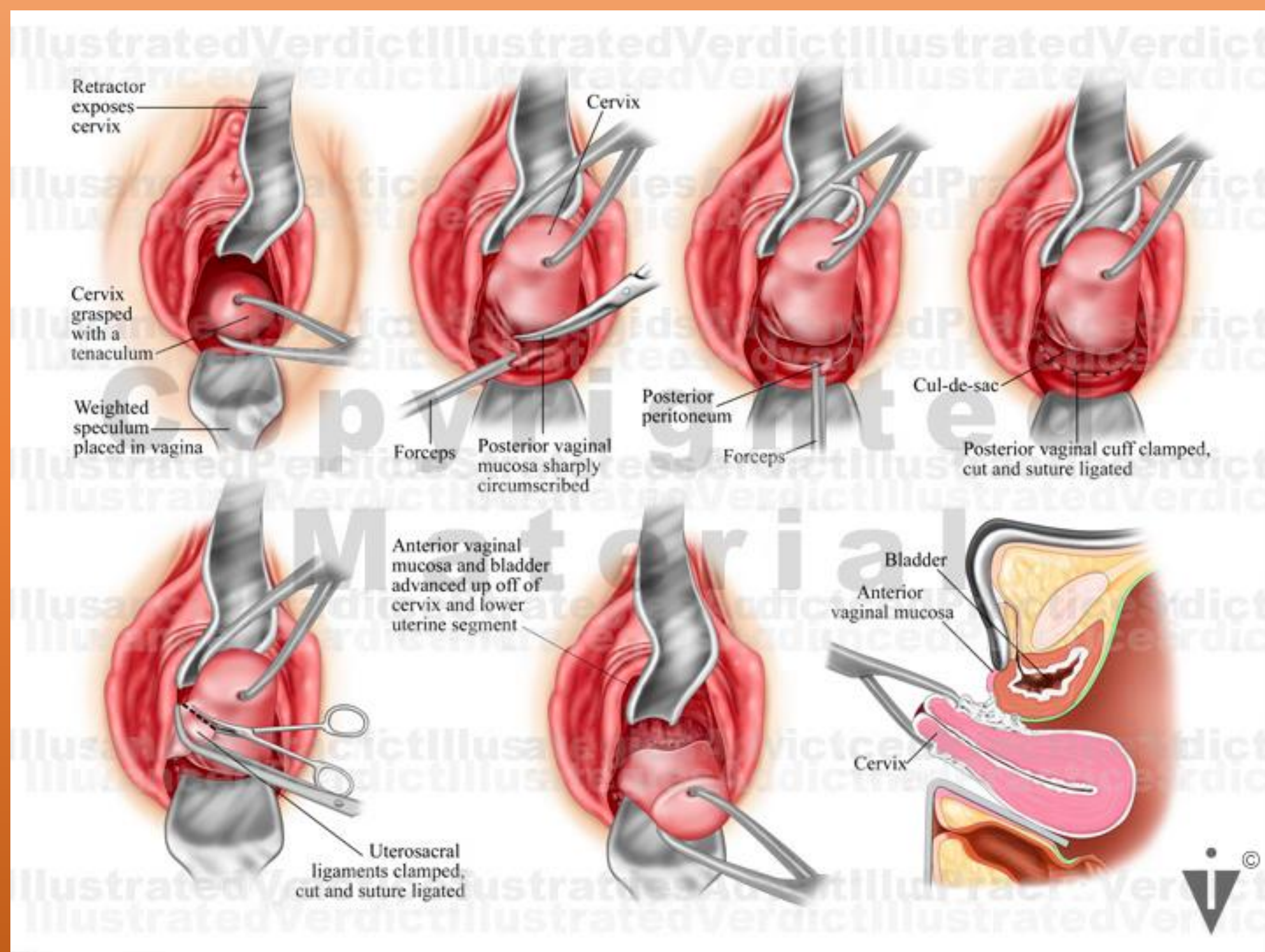
Ayhan A, et al. The Manchester operation for uterine prolaps. Int J Gyn Obstet 2006
De Boer et al. The effectiveness of surgical correction of uterine prolapse: cervical amputation with uterosacral ligament plication (modified manchester) versus vaginal hysterectomie with high uterosacral ligament plication. Int Urogyn J Pelvic Floor dysfunct 2009

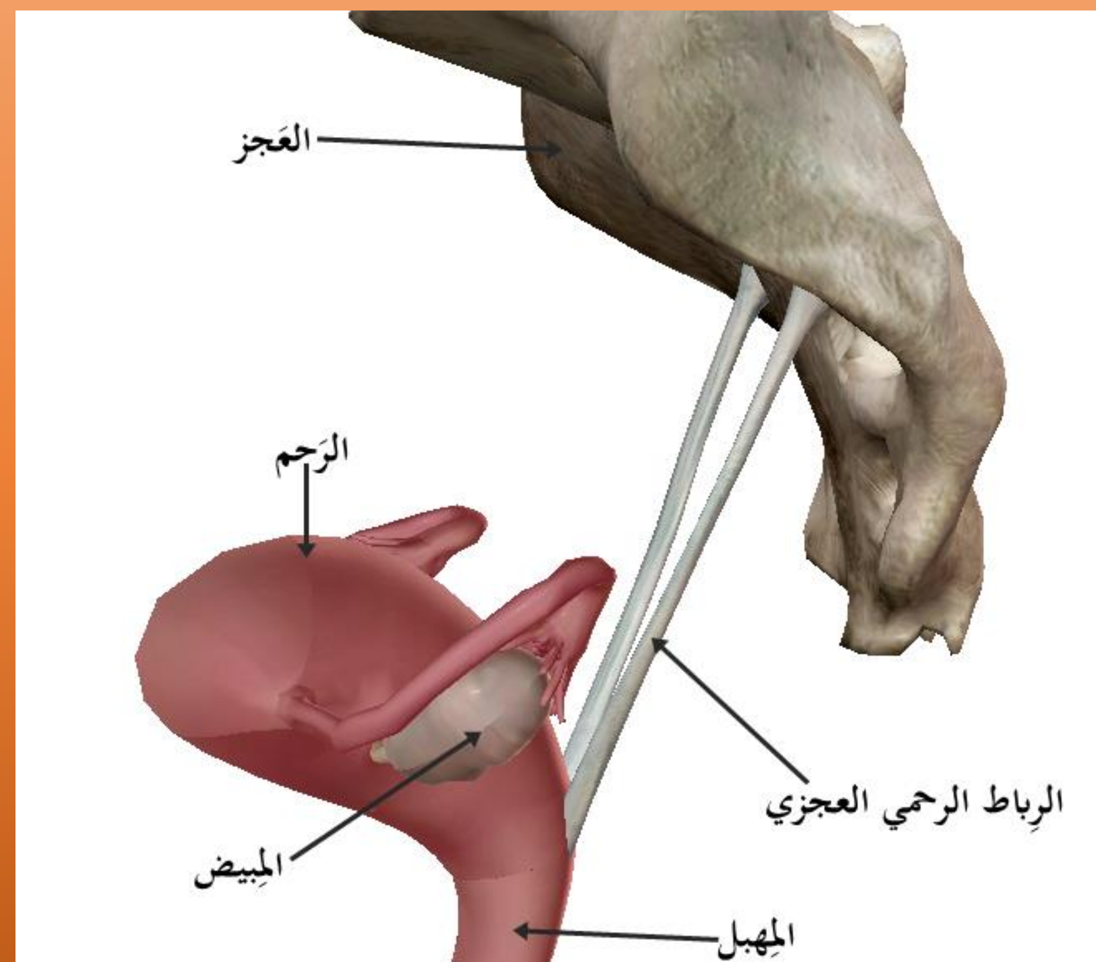
Sacrocolpo/hysteropexie



- Route: Abdominal, laparoscopic, robot
- Complications: pre-sacral bleeding, pain, bowel injury, ileus, bladder injury, exposure mesh
- Aftercare: No catheter or tampon for non-vaginal surgery

VUE & reven sacro-uteriene ligaments (Shull)





Aftercare: Tampon and catheter for 1 day, determine residue

Complications: bleeding, lesion rectum, lesion bladder, dyspareunia

operasi prolaps

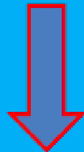
- Recovery is 1st choice
- obliterating operations are 2nd choice
- recovery position uterine/vaginal atop is the basis of any prolapse
  operation (lifting Inversiecele), with autologous suspensors as
  long as it can
- mesh as own suspensors fail
- if vagina length is recovered, it follows correction of the (remaining) eversiecèle after cysto-rectocele repair and recovery support

NOTE: This is not synonymous with a high levator plasty!

Middle compartment prolaps

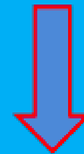
Chirurgie Middelste compartiment

Abdominaal
laparoscopisch



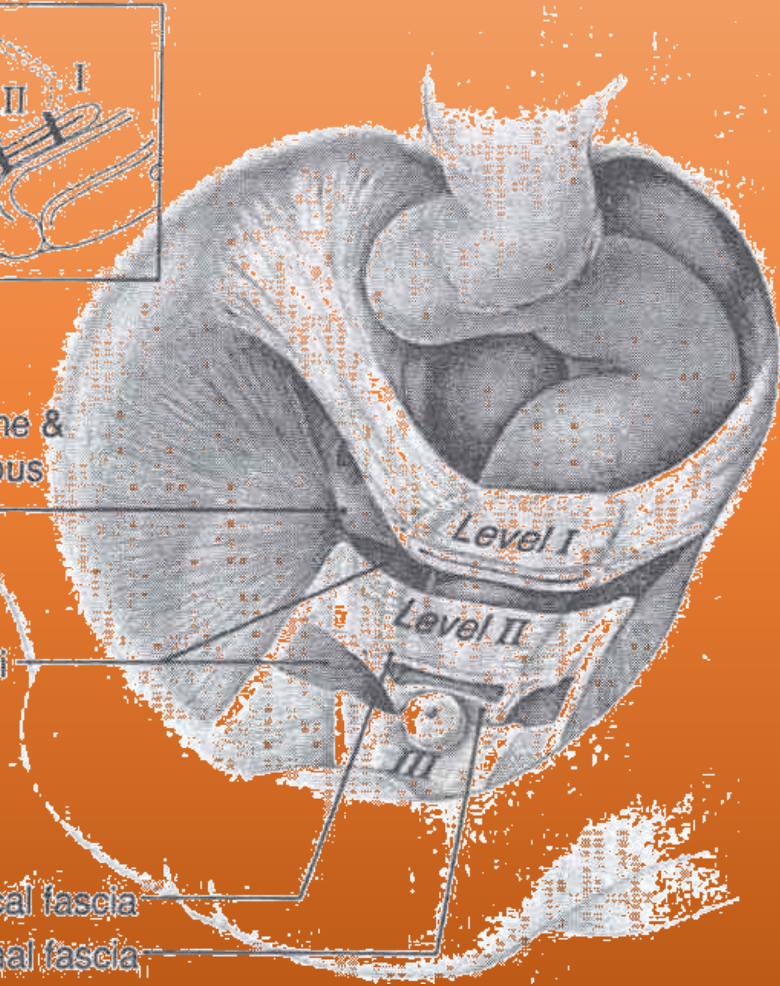
Vaginaal

Uterus verwijderen (VUE)



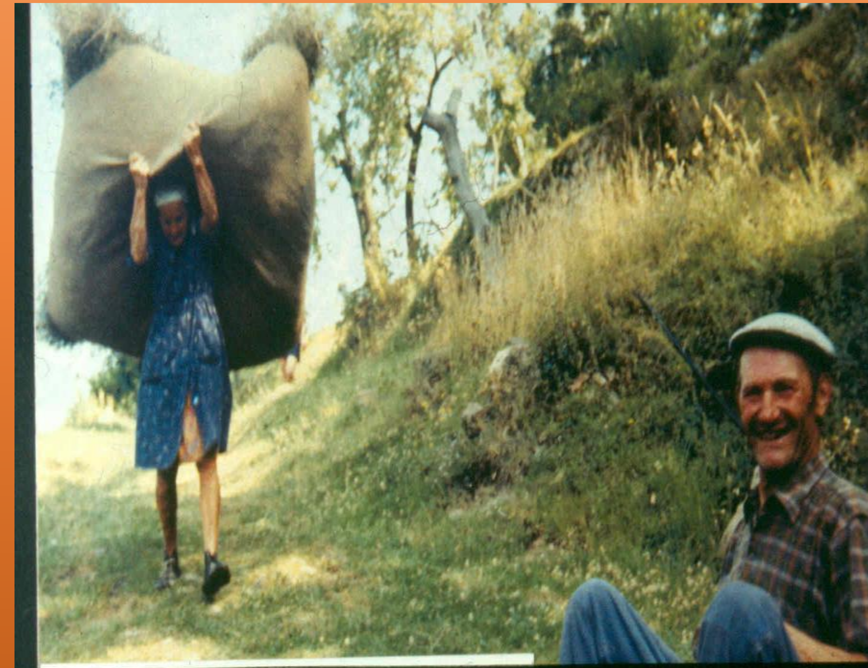
Uterus sparend (SSH of
Manchester)

Levels of support, according to DeLancy

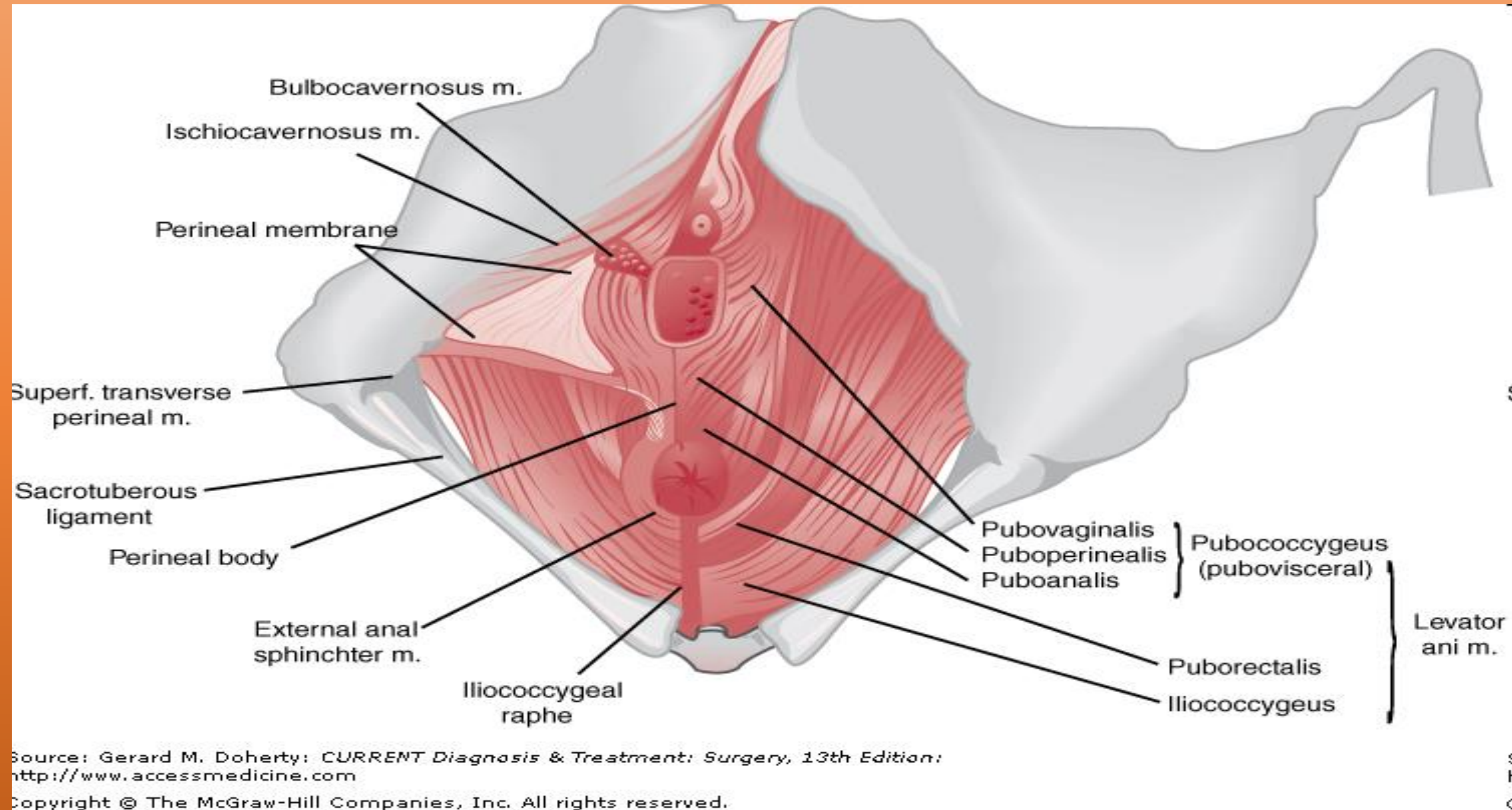


Sejarah kesahitan..kegelisahan?

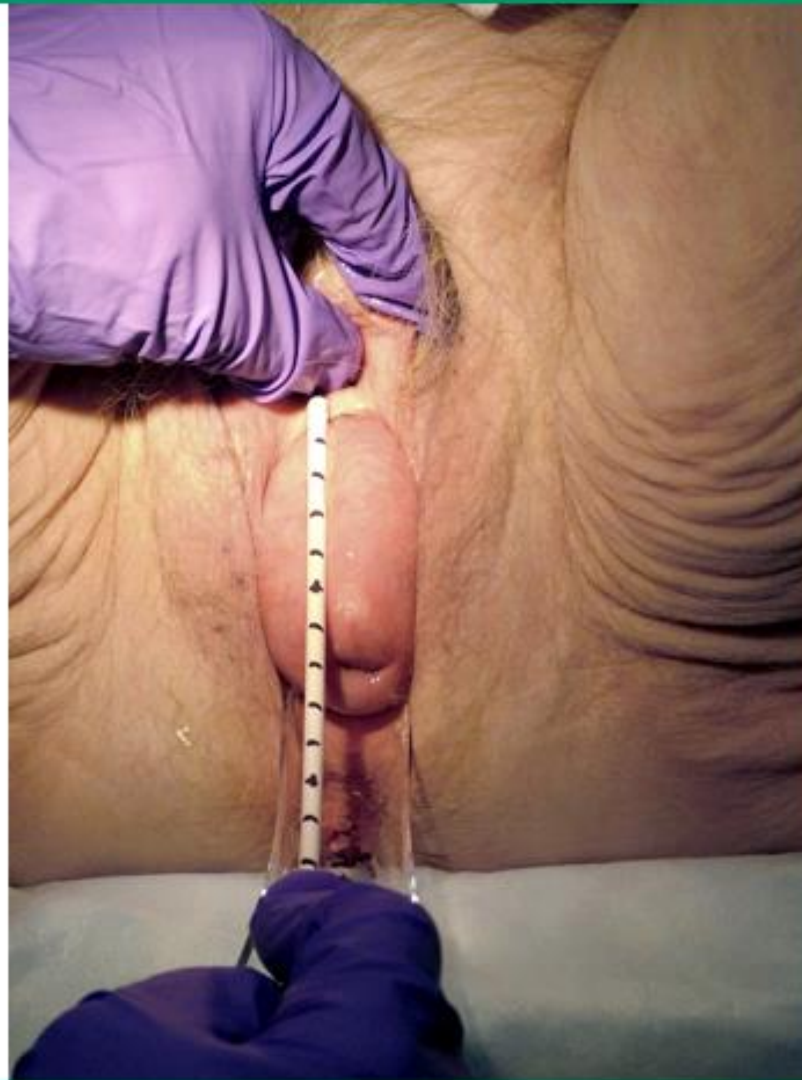
- complaints + symptoms
- dysfunctional voiding/constipation
  - bladder/urethra
  - rectum/anus
  - sex
- straining
  - heavy lifting
  - sports
  - hypermobility (Ehler Danloss)



Anatomy of pelvic support. (From Schorge JO, Williams JW: *Williams Gynecology,* Figure 38–8. McGraw-Hill Medical, 2008.)



Evaluation of uterine prolapse



Reproduced with permission from: RG Rogers, MD, Division of Female Pelvic Medicine and Reconstructive Surgery, University of New Mexico Health Sciences Center, Albuquerque, NM.

UpToDate

prolaps operaties

Operasi konvensional

Menangguhkan operasi (pemulihan anatomis)

Dengan autologous tissue

MC Call

Manchester,

Richter (SSF-SSH)

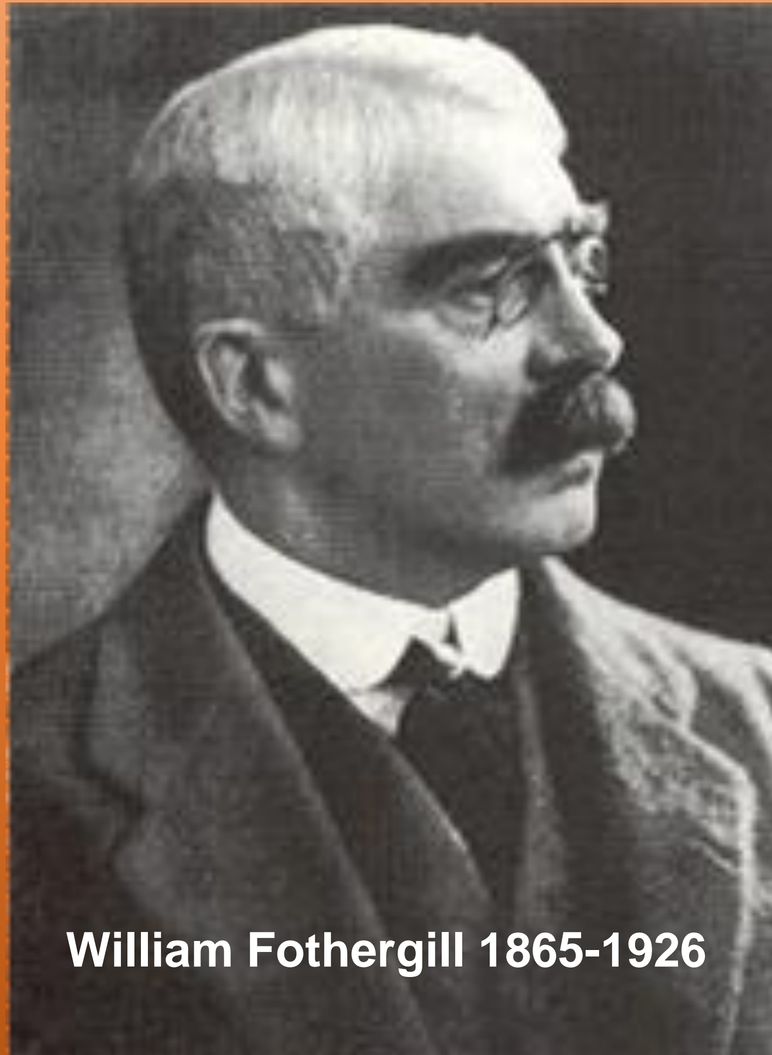
Dengan mesh

Rust (SCP)

Post IVS

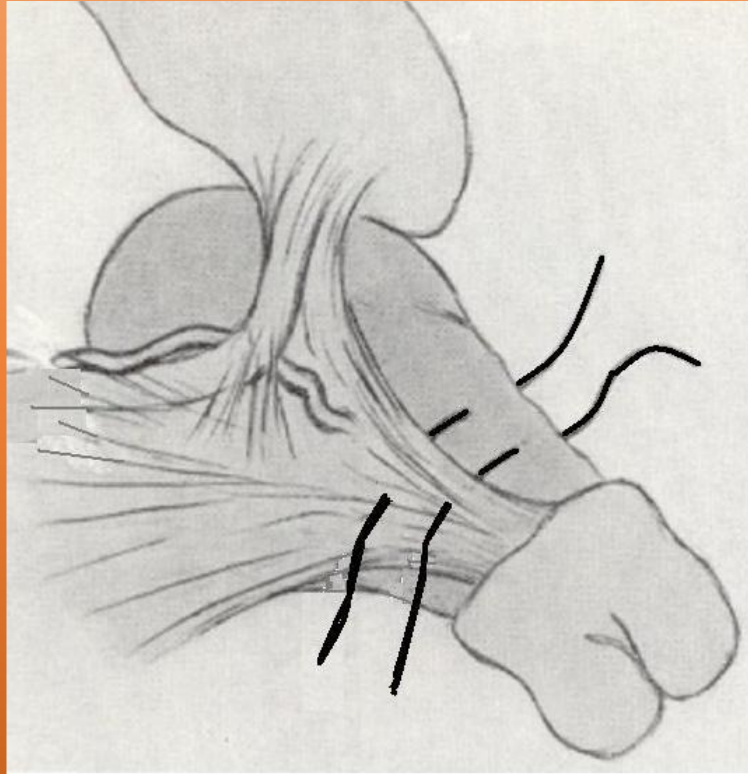
- menghapuskan operasi
- Pemusnahan lengkap (Lefort)
- Pemusnahan parsial (Labhardt)
-

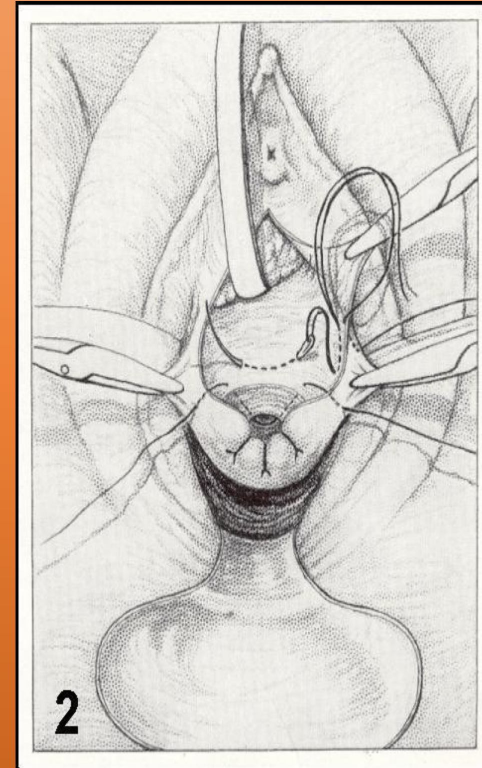
Manchester Fothergill



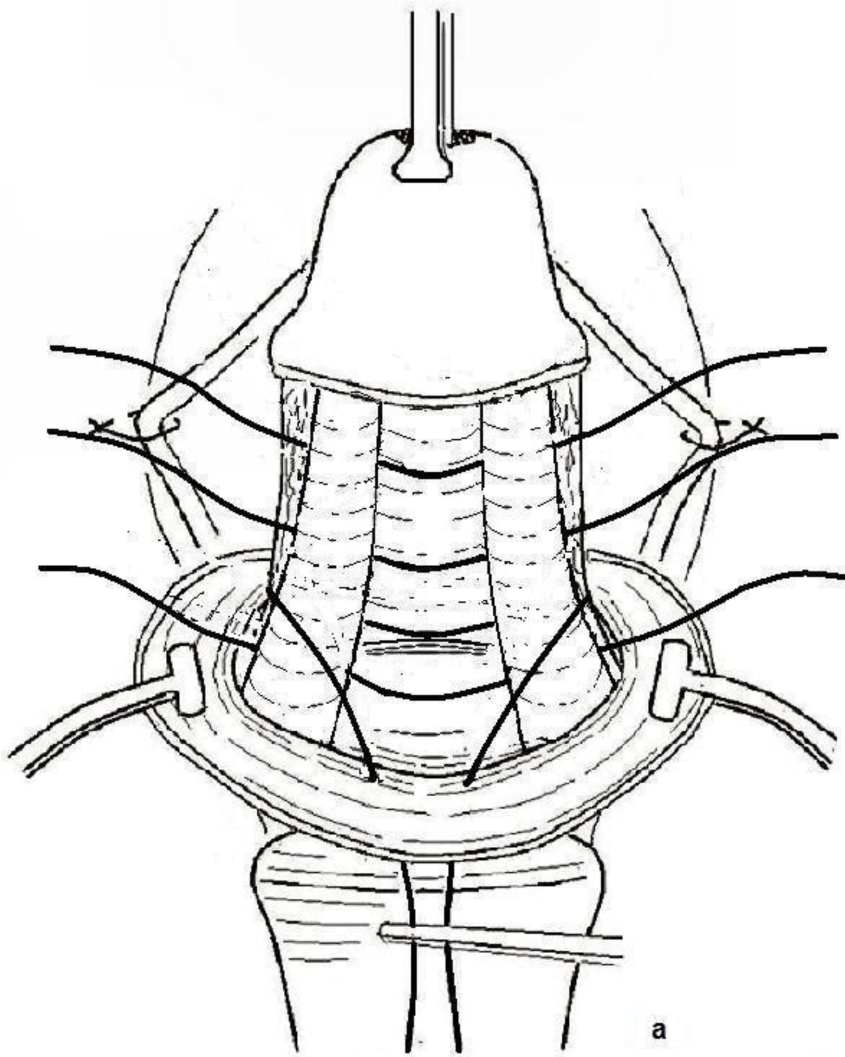
1915

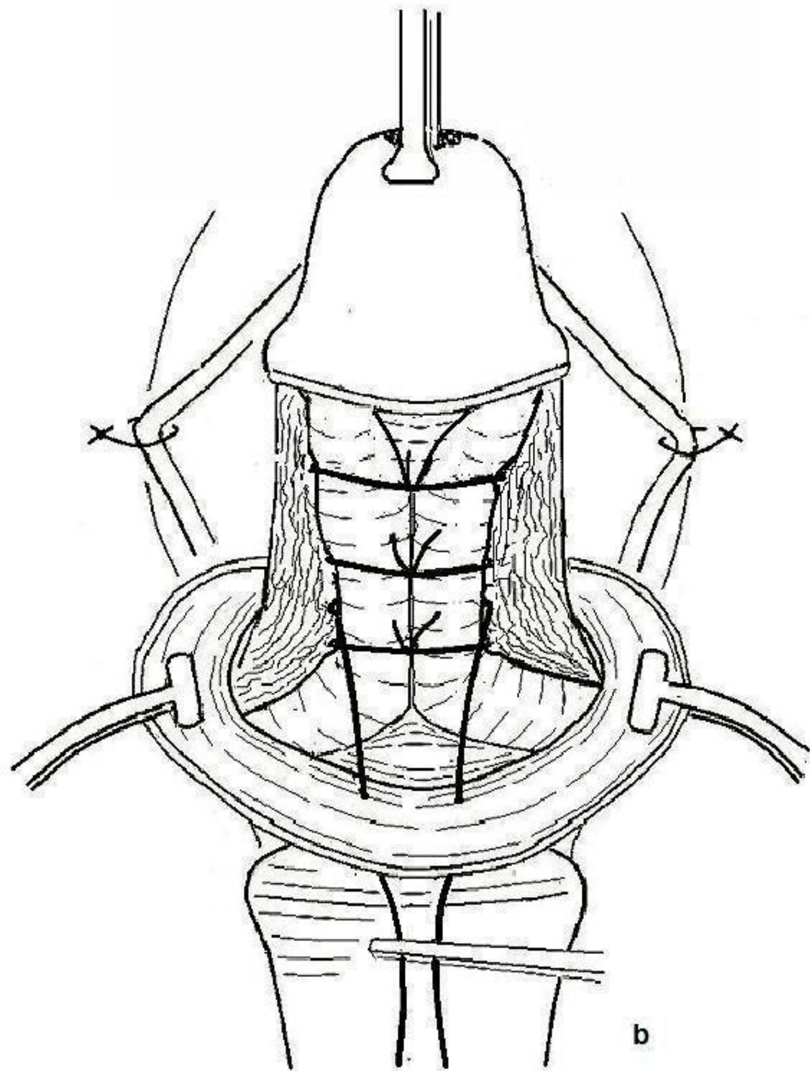
Manchester Fothergill

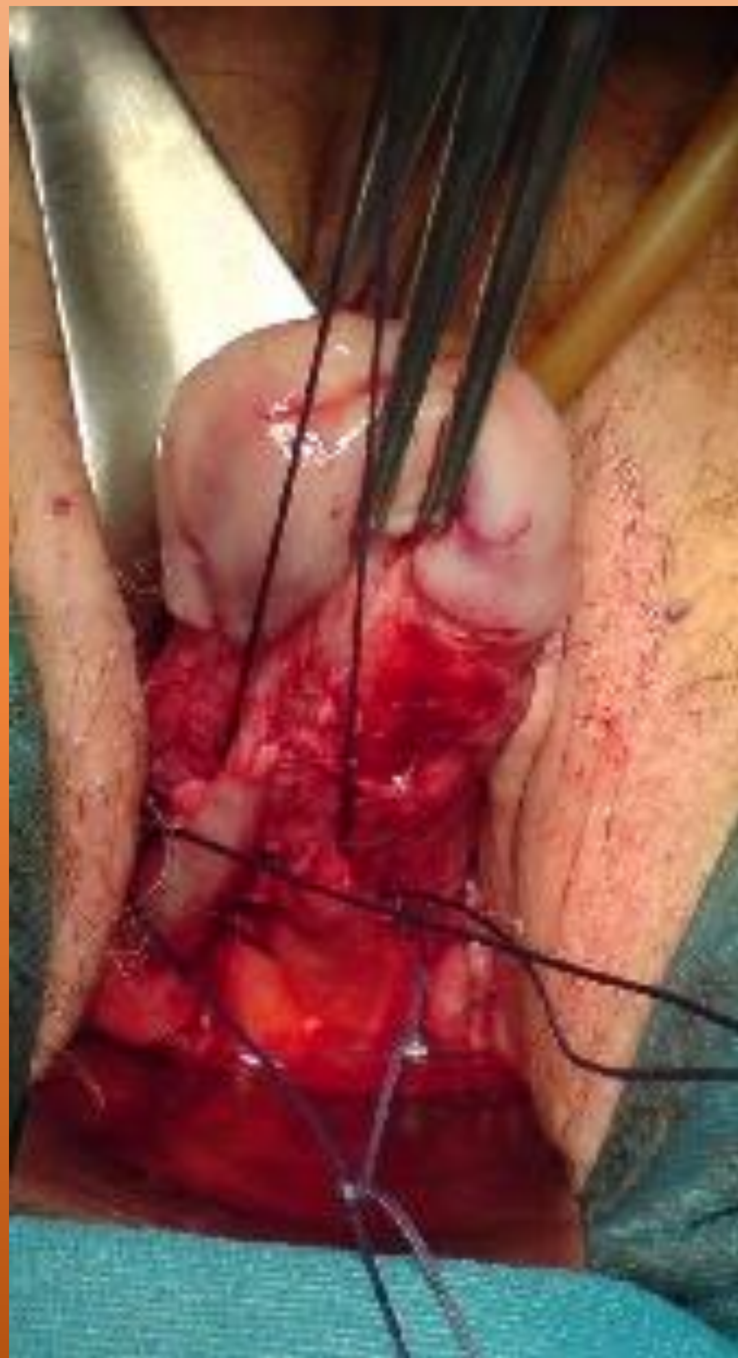




ligamenta cardinalia


a


b



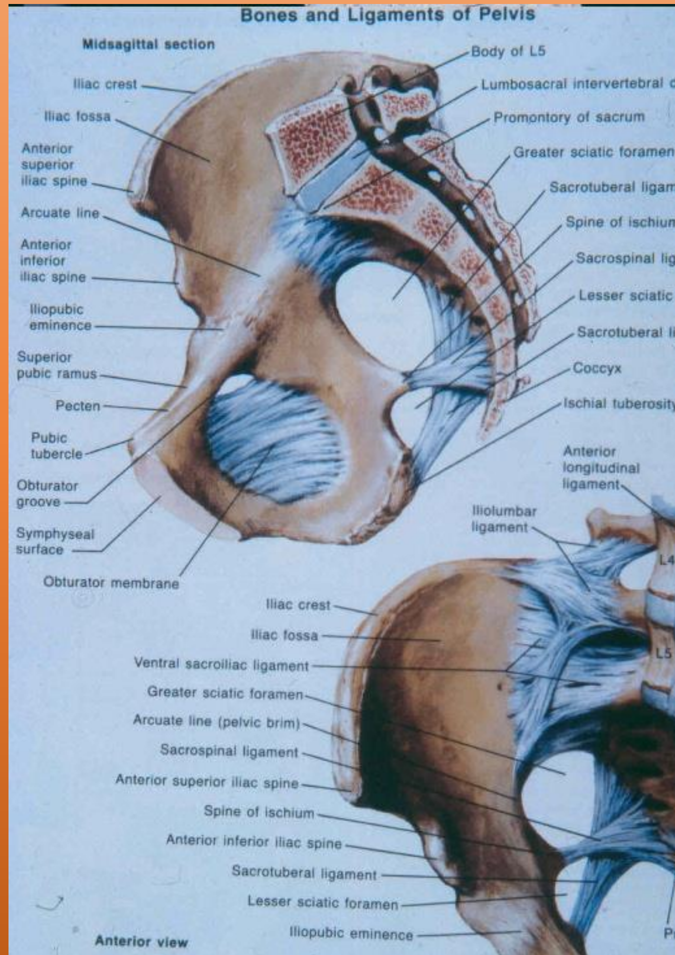
Modified Manchester

portioamputatie
Sturmdorf hechtingen

Richter

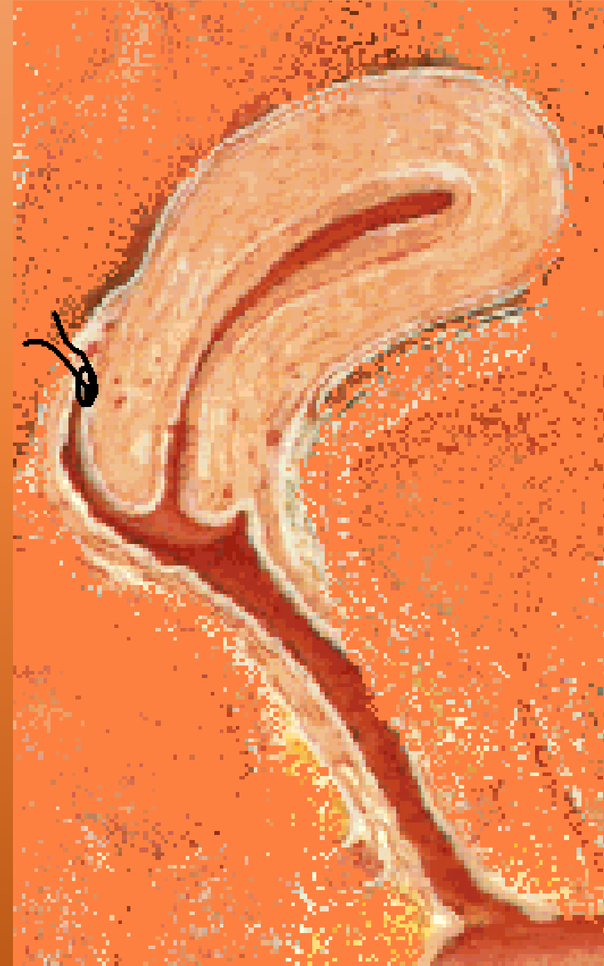
1967

sacrospinale fixatie



lig. sacrospinale

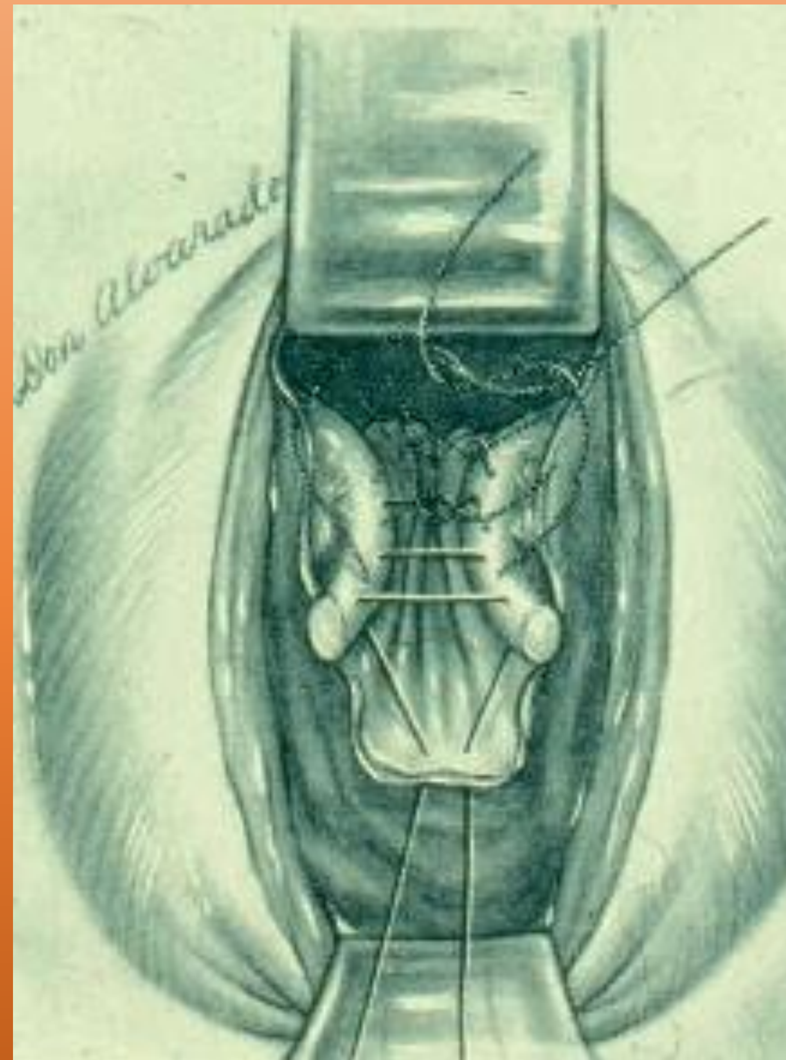
sacrospinale hysteropexie



McCall

1957

McCall



reven ligamenta sacrouterina

uterus ?

ja

POPQ

= of < 2

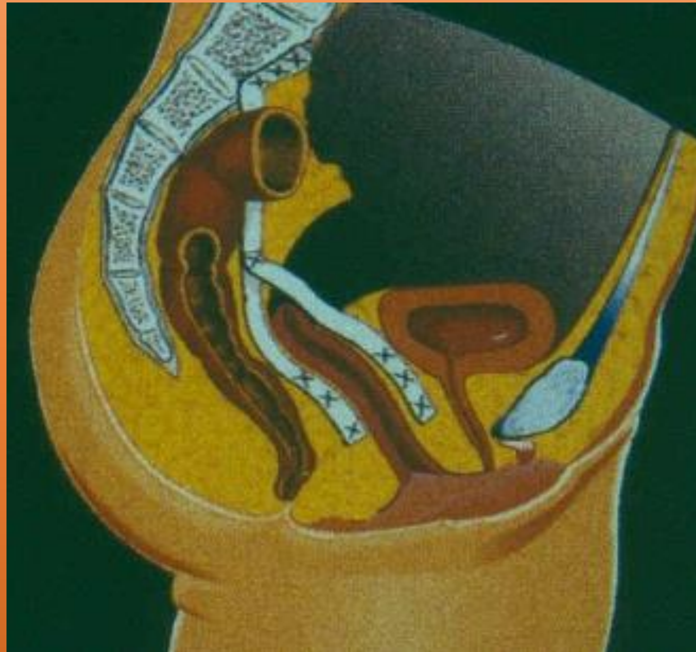
1. MM
2. SSH
3. Mc Call

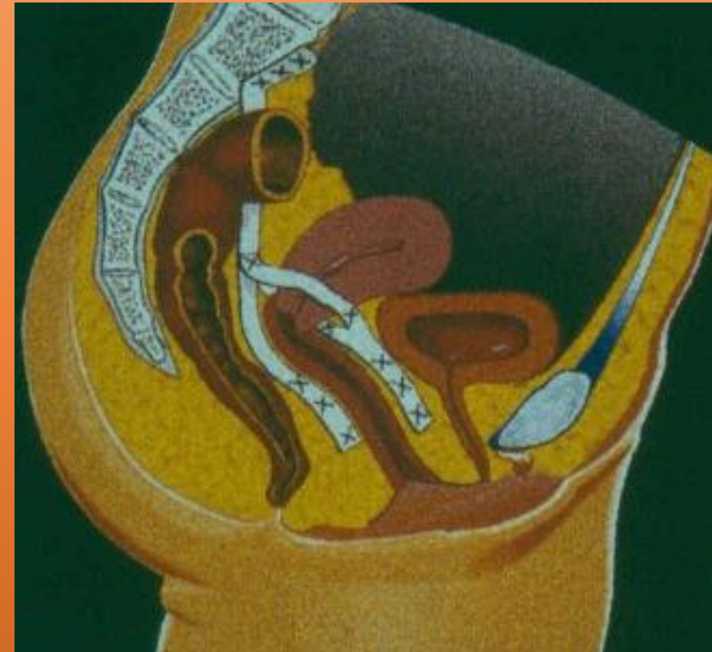
3

1. MM
2. SSH
3. SVUA/SCP

<75

sacrocolpopexie vgl Rust





zonder..

met uterus

1976

uterus ?

ja

POPQ

= of < 2

1. MM
2. SSH
3. Mc Call

3

1. MM
2. SVUA/SCP
3. SSH

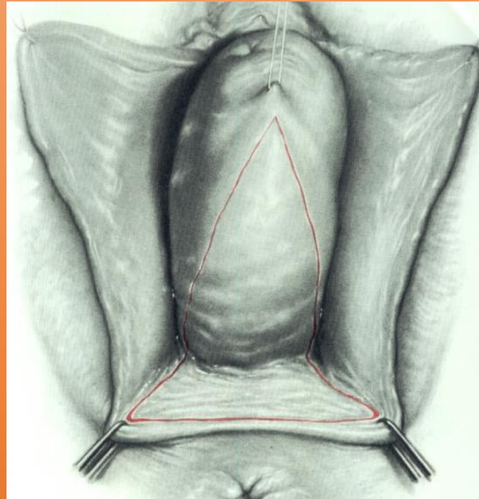
<75

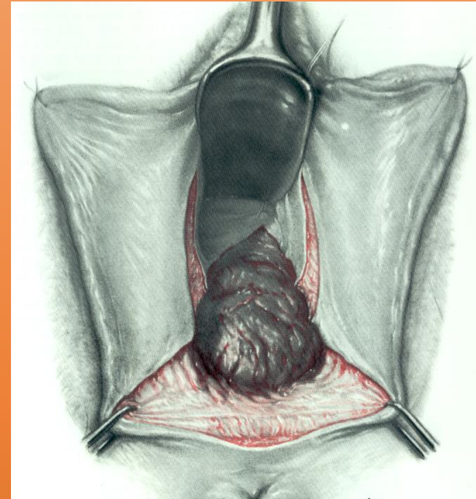
1. MM
2. SSH
3. Labhardt

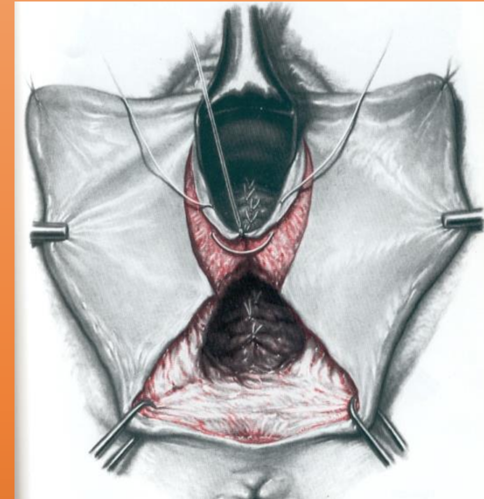
>75

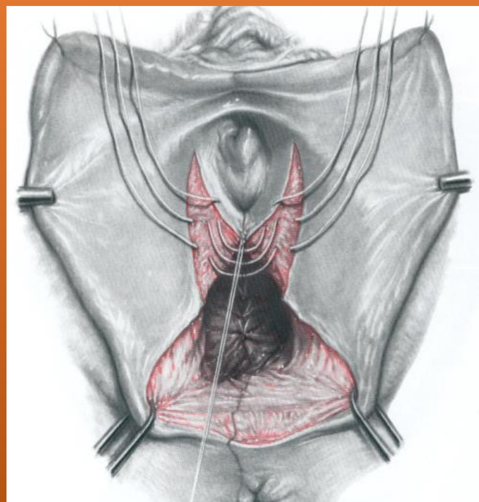
Labhardt

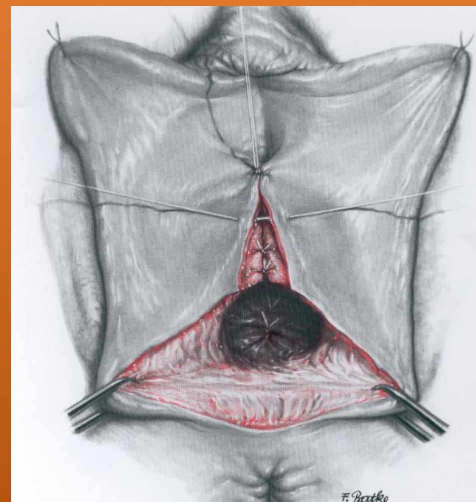
1932

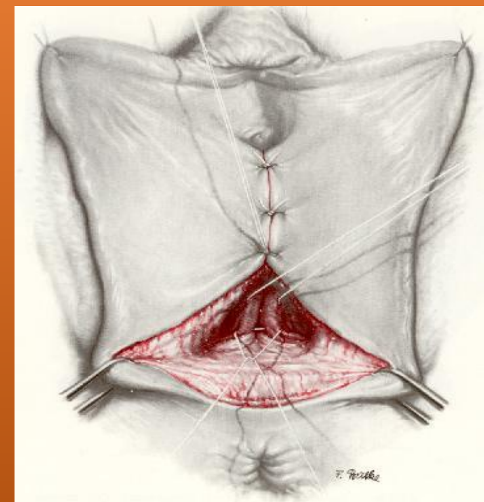












uterus ?

ja

POPQ

= of < 2

1. MM
2. SSH
3. Mc Call

3

1. MM
2. SVUA/SCP
3. SSH

<75

1. MM
2. SSH
3. Labhardt

>75

4

1. SVUA/SCP
2. SSH
3. (MM)

uterus ?

ja

POPQ

= of < 2

1. MM
2. SSH
3. Mc Call

3

1. MM
2. SVUA/SCP
3. SSH

1. MM
2. SSH
3. Labhardt

<75

>75

4

1. SVUA/SCP
2. SSH
3. (MM)

1. SSH
2. Labhardt
3. (MM)

uterus ?

ja

nee

POPQ

= of < 2

1. MF
2. SSH
3. Mc Call

3

1. MM
2. SVUA/SCP
3. SSH

<75

1. MM
2. SSH
3. Labhardt

>75

4

1. SVUA/SCP
2. SSH
3. (MM)

1. SSH
2. Labhardt
3. (MM)

individualiseren

<75

POPQ

1

uterus ?

ja

nee

POPQ

= of < 2

1. MM
2. SSH
3. Mc Call

3

1. MM
2. SVUA/SCP
3. SSH

<75

1. MM
2. SSH
3. Labhardt

>75

4

1. SVUA/SCP
2. SSH
3. (MM)

1. SSH
2. Labhardt
3. (MM)

individualiseren

<75

expectatief

>75

POPQ

1

uterus ?

ja

nee

POPQ

= of < 2

1. MM
2. SSH
3. Mc Call

3

1. MM
2. SVUA/SCP
3. SSH

1. MM
2. SSH
3. Labhardt

<75

>75

4

1. SVUA/SCP
2. SSH
3. (MM)

1. SSH
2. Labhardt
3. (MM)

individualiseren

<75

1. SCP
2. SSF
3. Post IVS

expectatief

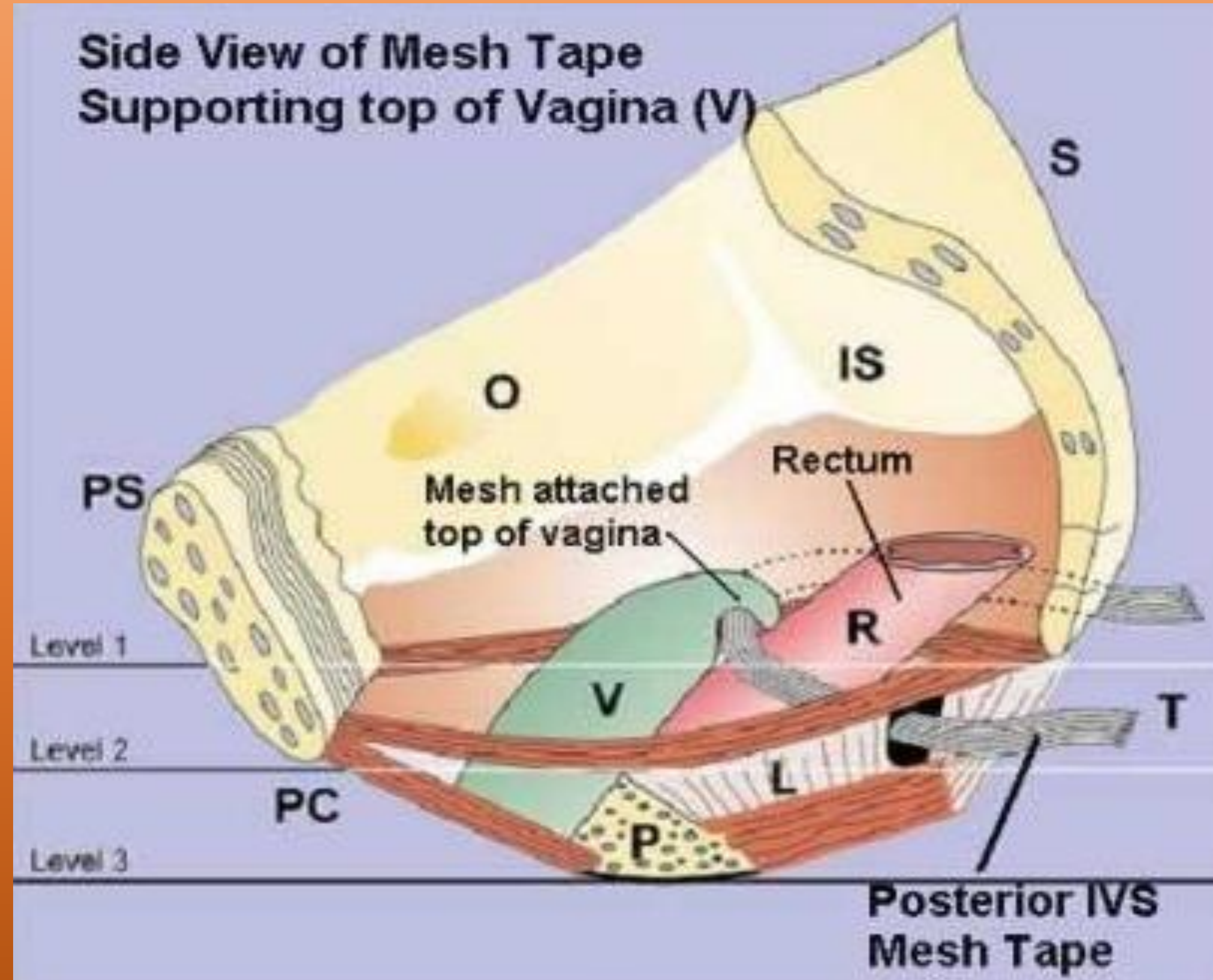
>75

POPQ

1

= of > 2

posterior IVS



uterus ?

ja

nee

POPQ

= of < 2

1. MF
2. Mc Call

3

1. MF
2. SVUA/SCP
3. SSH

<75

1. MF
2. SSH
3. Labhardt

>75

4

1. SVUA/SCP
2. SSH
3. (MM)

1. SSH
2. Labhardt
3. (MM)

individualiseren

<75

1. SCP
2. SSF
3. Post IVS

expectatief

>75

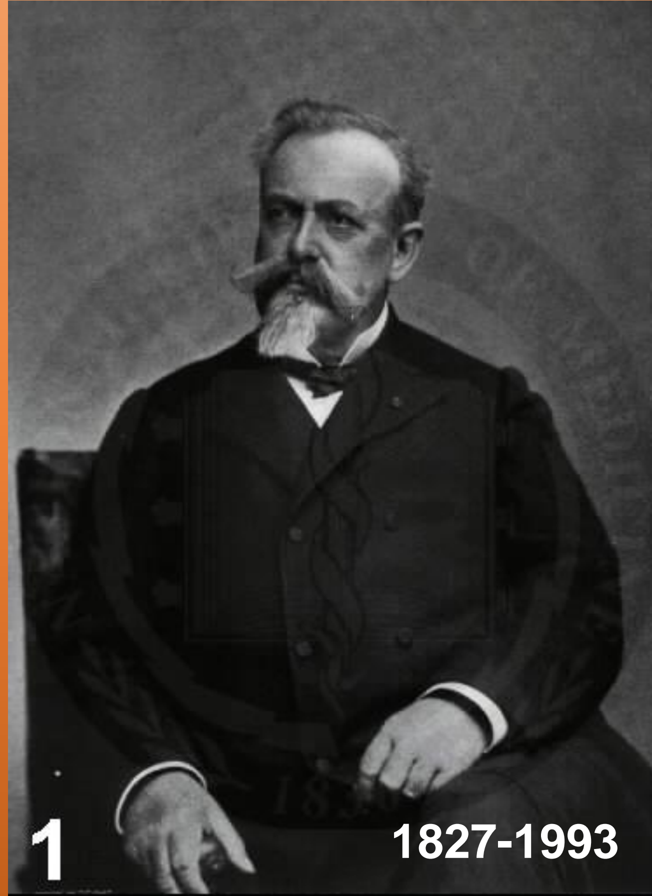
1. SSF
2. Post IVS
3. Lefort

POPQ

1

= of > 2

Lefort



1877

slot overwegingen

- 70% succes 1e procedure

slot overwegingen

- 70% succes 1e procedure
- recidief nogal eens op “ één-na-zwakste-plek”!

slot overwegingen

- 70% succes 1e procedure
- recidief nogal eens op “ één-na-zwakste-plek”!
- mogelijk betere resultaten zonder mesh te behalen, indien

slot overwegingen

- 70% succes 1e procedure
- recidief nogal eens op “ één-na-zwakste-plek”!
- mogelijk betere resultaten zonder mesh te behalen, indien
    - overcorrectie wordt vermeden

slot overwegingen

- 70% succes 1e procedure
- recidief nogal eens op " één-na-zwakste-plek"!
- mogelijk betere resultaten zonder mesh te behalen, indien
  - overcorrectie wordt vermeden
  - tijdig bekkenbodem re-educatie wordt ingevoerd

slot overwegingen

- 70% succes 1e procedure
- recidief nogal eens op “ één-na-zwakste-plek”!
- mogelijk betere resultaten zonder mesh te behalen, indien
  - overcorrectie wordt vermeden
  - tijdig bekkenbodem re-educatie wordt ingevoerd
  - de uterus meer als natuurlijke steun wordt benut

  (SSH, MM)

aanbevelingen

- bekkenbodem re-educatie : pre-peri-post operatief!

aanbevelingen

- bekkenbodem re-educatie : pre-peri-post operatief!
- streef naar fysiologisch herstel

aanbevelingen

- bekkenbodem re-educatie : pre-peri-post operatief!
- streef naar fysiologisch herstel
- overdrijf niet: tensionfree!

aanbevelingen

- bekkenbodem re-educatie : pre-peri-post operatief!
- streef naar fysiologisch herstel
- overdrijf niet: tensionfree!
- lichaamseigen materiaal als het kan…..

aanbevelingen

- bekkenbodem re-educatie : pre-peri-post operatief!
- streef naar fysiologisch herstel
- overdrijf niet: tensionfree!
- lichaamseigen materiaal als het kan.....
- ....meshes (ter suspensie) als het moet

aanbevelingen

- bekkenbodem re-educatie : pre-peri-post operatief!
- streef naar fysiologisch herstel
- overdrijf niet: tensionfree!
- lichaamseigen materiaal als het kan.....
- ....meshes (ter suspensie) als het moet
- cave liberaal gebruik van supporting meshes :

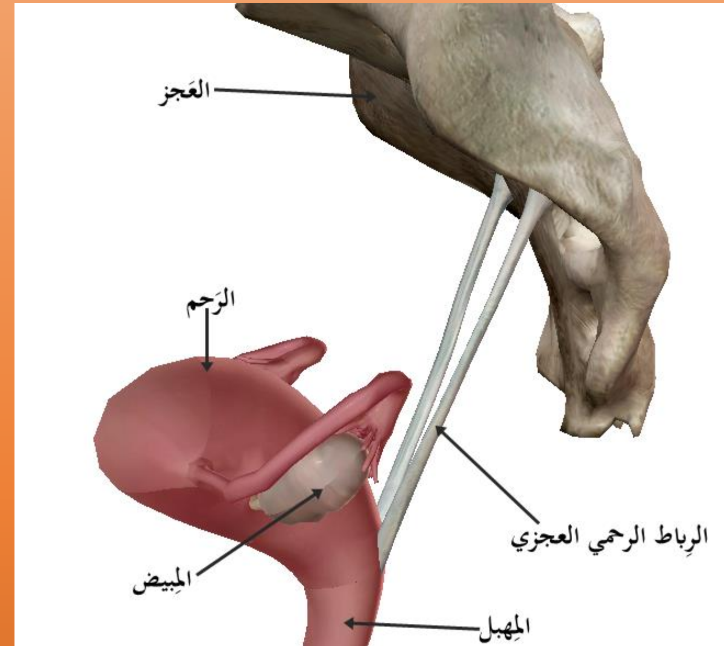
aanbevelingen

- bekkenbodem re-educatie : pre-peri-post operatief!
- streef naar fysiologisch herstel
- overdrijf niet: tensionfree!
- lichaamseigen materiaal als het kan…..
- …….meshes (ter suspensie) als het moet
- cave liberaal gebruik van supporting meshes :
  voorlopig alleen bij recidief prolaps

aanbevelingen

- bekkenbodem re-educatie : pre-peri-post operatief!
- streef naar fysiologisch herstel
- overdrijf niet: tensionfree!
- lichaamseigen materiaal als het kan.....
- ....meshes (ter suspensie) als het moet
- cave liberaal gebruik van supporting meshes :
  voorlopig alleen bij recidief prolaps
  liefst alleen in trial verband

Manchesterprocedure



- Complicatie: nabloeding, urineretentie, urine-incontinentie, letsel ureteren
- mogelijk cervixstenose
- Nazorg: tampon en catheter gedurende 1 dag, residu bepalen
- Recidiefpercentage: geen in apicale compartiment, mogelijk tot 40% (anatomisch) in alle compartimenten (cystocele)

Ayhan A, et al. The Manchester operation for uterine prolaps. Int J Gyn Obstet 2006
De Boer et al. The effectiveness of surgical correction of uterine prolapse: cervical amputation with uterosacral ligament plication (modified manchester) versus vaginal hysterectomie with high uterosacral ligament plication. Int Urogyn J Pelvic Floor dysfunct 2009