In The Name Of God

Dr.bastani

PELVIC ORGAN PROLAPSE

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2011

INTRODUCTION:

- ***Pelvic organ prolapse (POP), the***

  herniation of the pelvic organs to or

  beyond the vaginal walls

PREVALENCE:

- ***The exact prevalence of POP is difficult to ascertain, for several reasons:***
- ***A study reported that 11 percent of women underwent surgery for prolapse or incontinence by age 80 years***

CLINICAL MANIFESTATIONS:

- **Bulge or pressure symptoms: Women with POP often present with the complaint of vaginal or pelvic pressure and/or the sensation of a vaginal bulge or something falling out of the vagina.**
- **Urinary symptoms: Symptoms of stress urinary incontinence, symptoms of obstructed voiding, such as a slow urine stream, the need to change position or manually reduce (splint) the prolapse to urinate, a sensation of incomplete emptying and, in rare cases, complete urinary retention**

overactive bladder symptoms (urgency, urge urinary incontinence, frequency)

enuresis or incontinence with sexual intercourse

CLINICAL MANIFESTATIONS :

- ***Defecatory symptoms:*** ***The most common bowel symptom associated with prolapse is constipation***

Other defecatory symptoms include fecal urgency and fecal incontinence and obstructive symptoms

fecal incontinence during sexual intercourse

- ***Effects on sexual function:*** ***avoid sexual activity***

- ***low back or pelvic pain:***

RISK FACTORS:

- ***Parity :***

The risk of POP increases with

increasing parity

- ***Advancing age :***

Older women are at an increased risk for POP

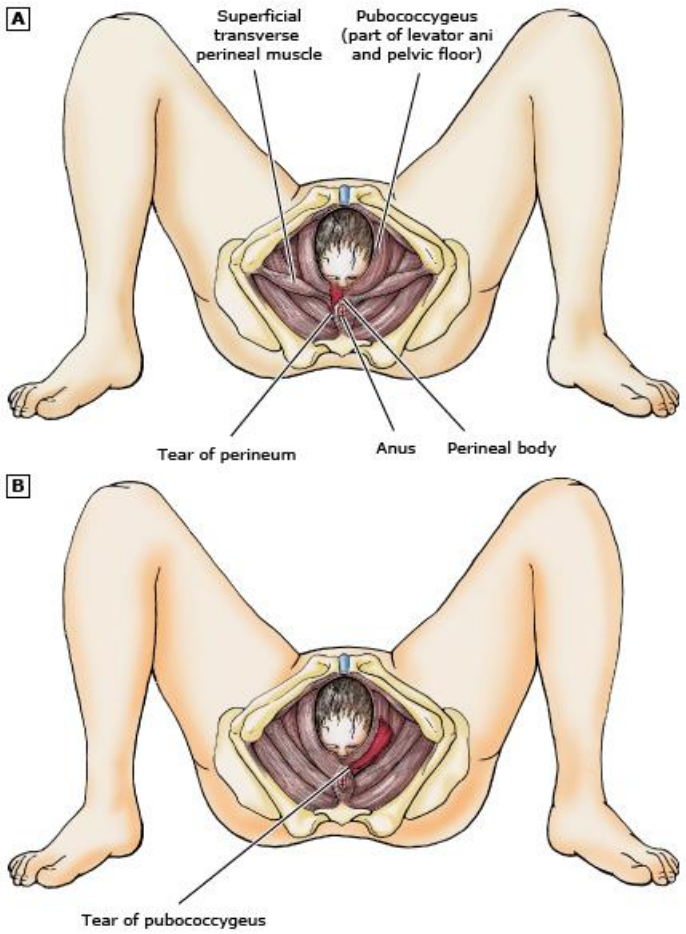
- ***Obesity :***

Overweight and obese women have a two-fold

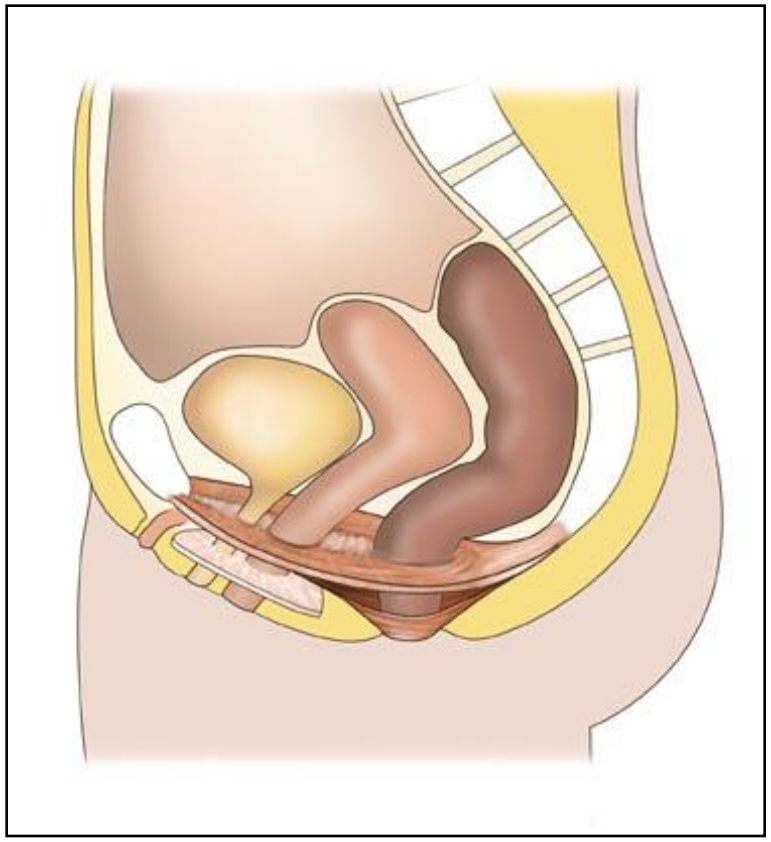
- ***Hysterectomy :***

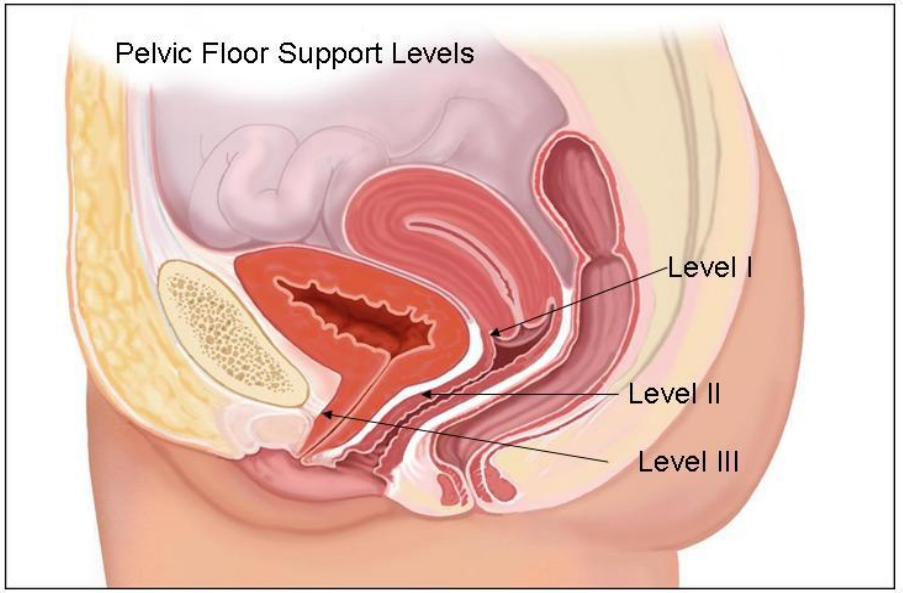
- ***Race and ethnicity :***

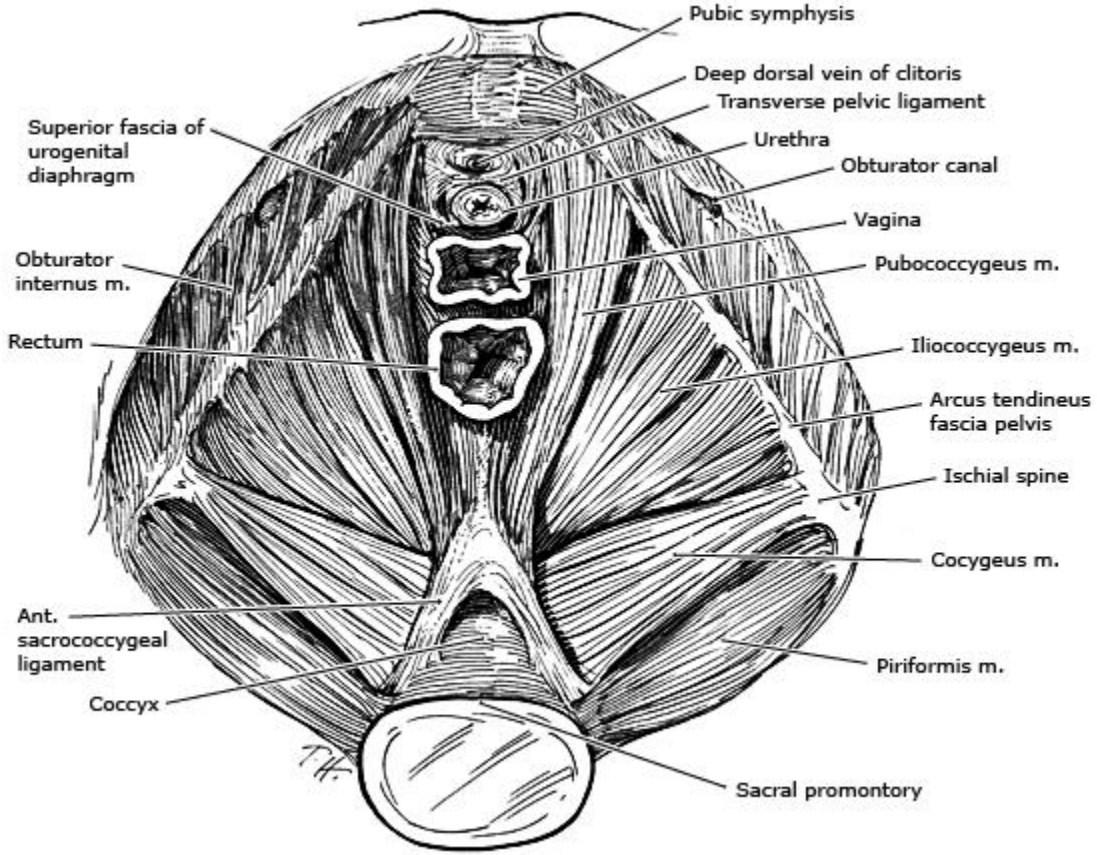
- ***Other risk factors:***

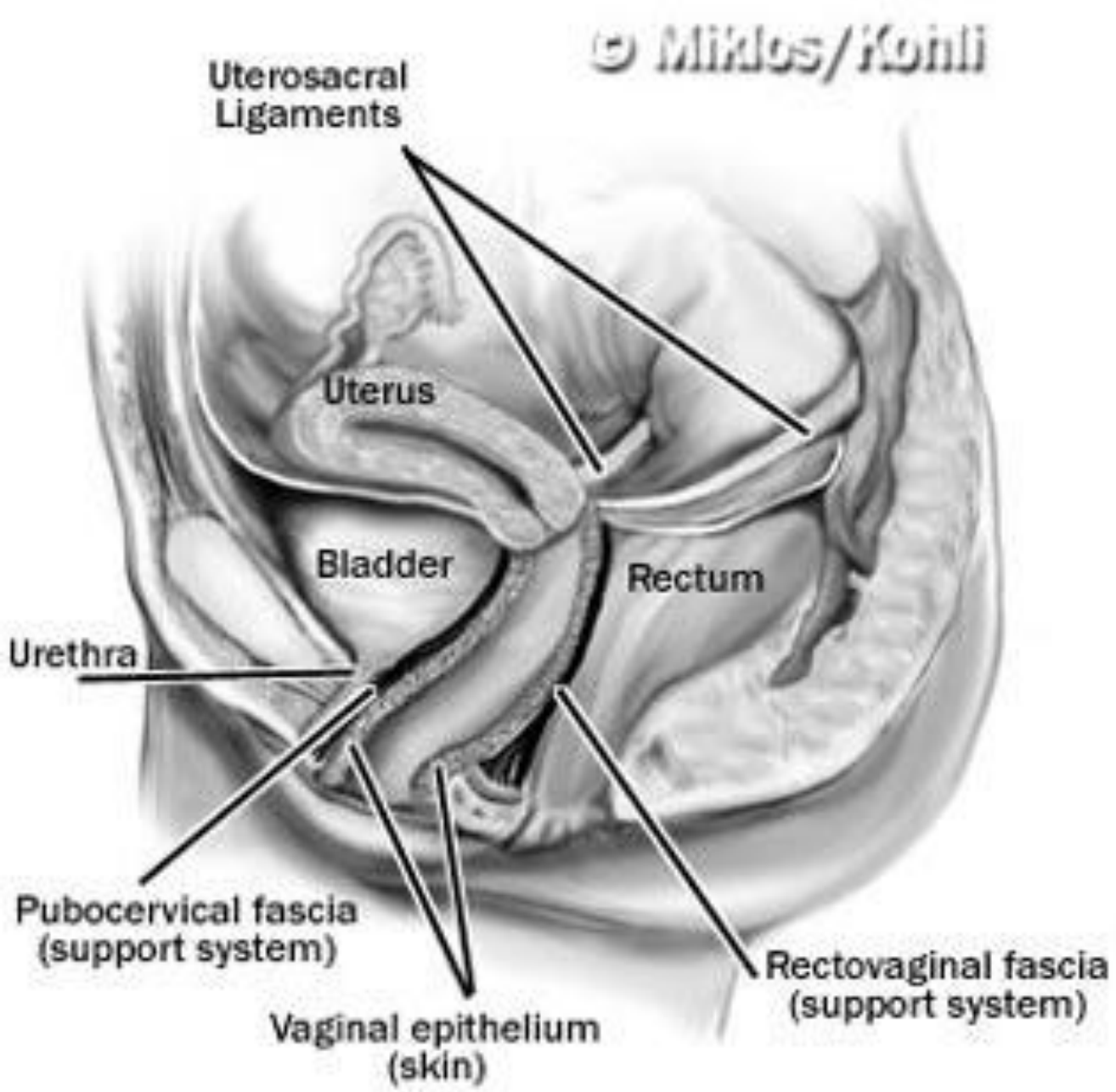


ANATOMY OF PELVIC SUPPORT

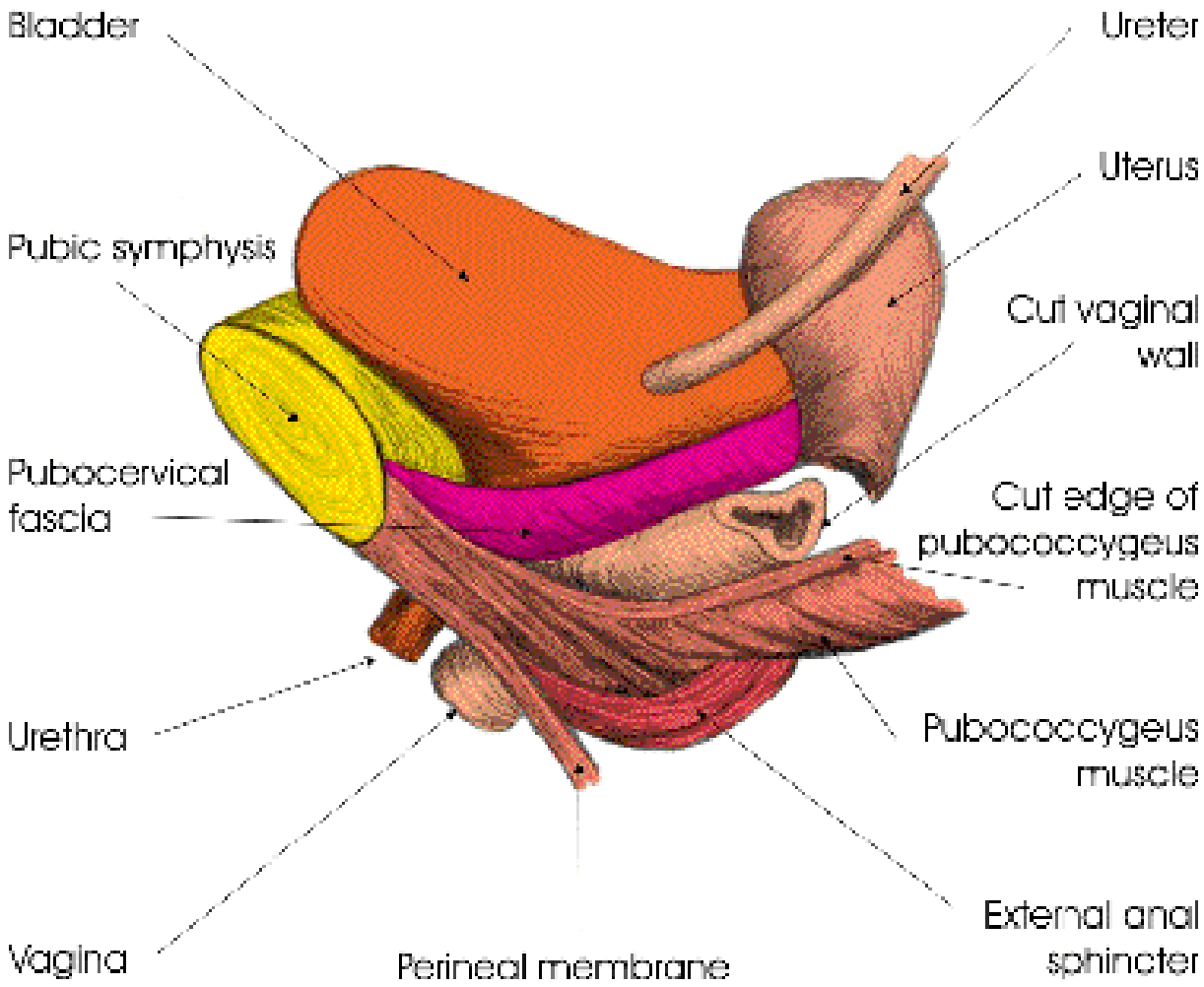


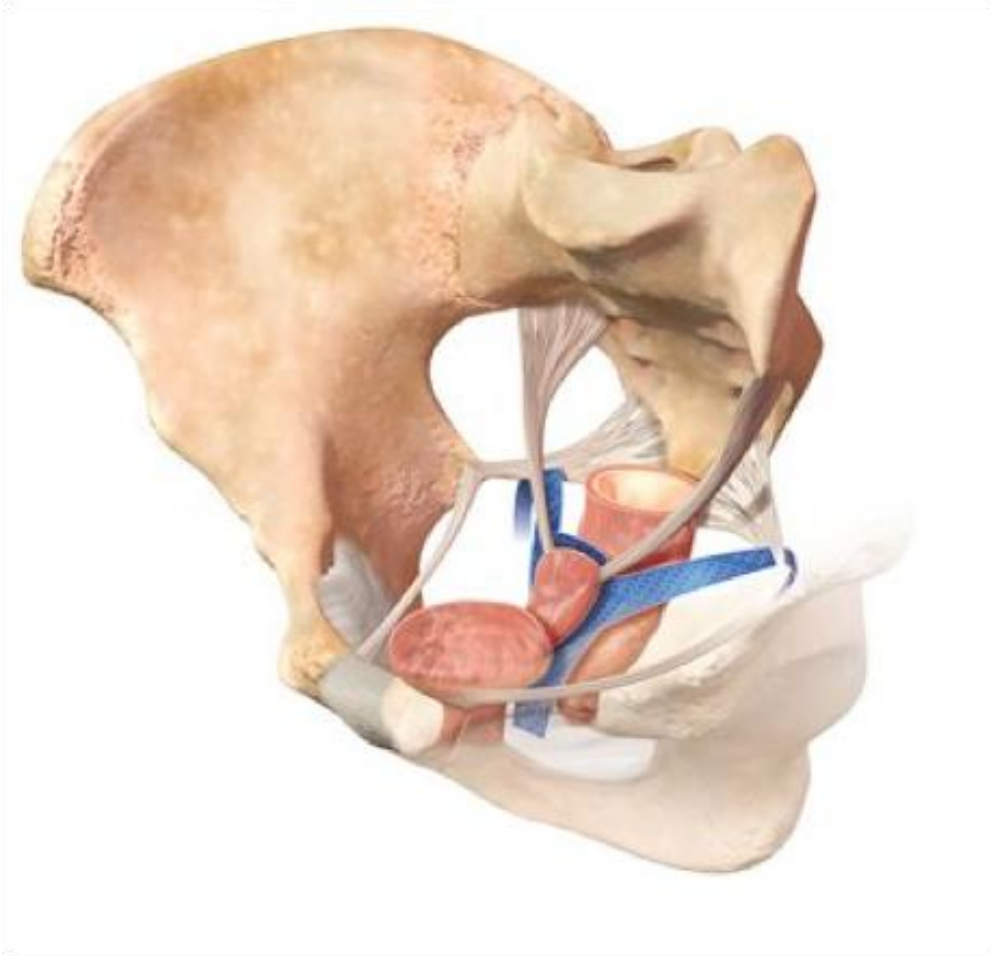


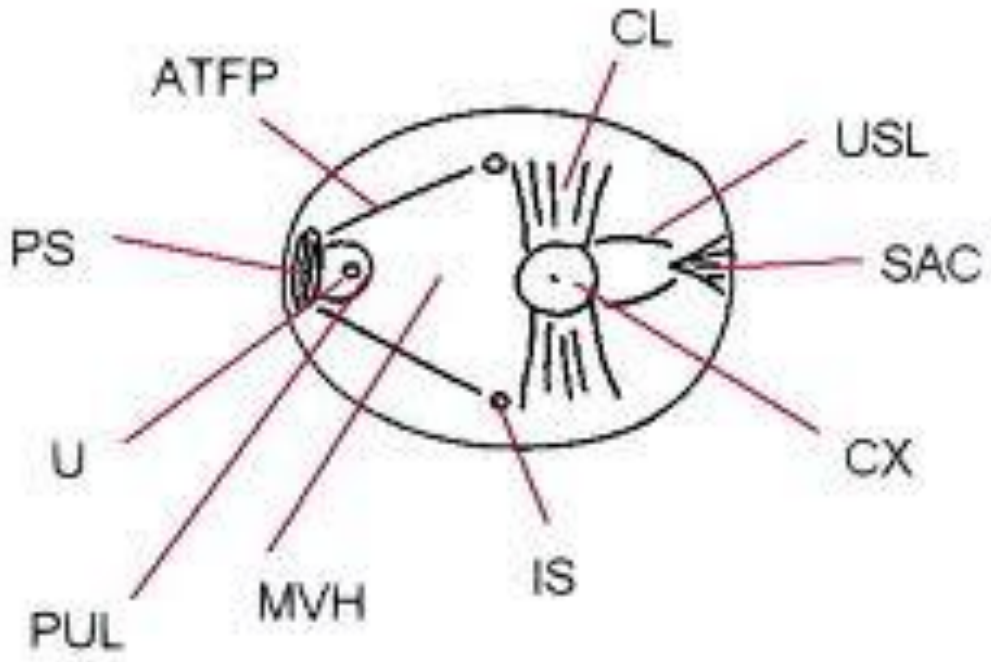

Pubic symphysis
Deep dorsal vein of clitoris
Transverse pelvic ligament
Superior fascia of urogenital diaphragm
Urethra
Obturator canal
Vagina
Obturator internus m.
Pubococcygeus m.
Rectum
Iliococcygeus m.
Arcus tendineus fascia pelvis
Ischial spine
Cocygeus m.
Ant. sacrococcygeal ligament
Piriformis m.
Coccyx
Sacral promontory


© Mikos/Kohli
Uterosacral Ligaments
Uterus
Bladder
Rectum
Urethra
Pubocervical fascia (support system)
Vaginal epithelium (skin)
Rectovaginal fascia (support system)

Anatomy of Female pelvis






CL
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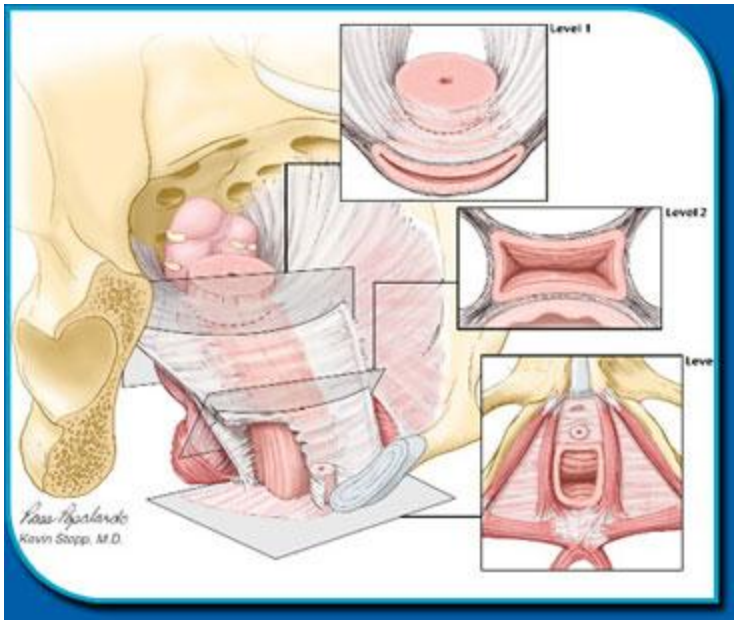
Levels of pelvic organ support:

- ***Level 1*** – Uterosacral/cardinal ligament complex, which suspends the uterus and upper vagina to the sacrum and lateral pelvic side wall.

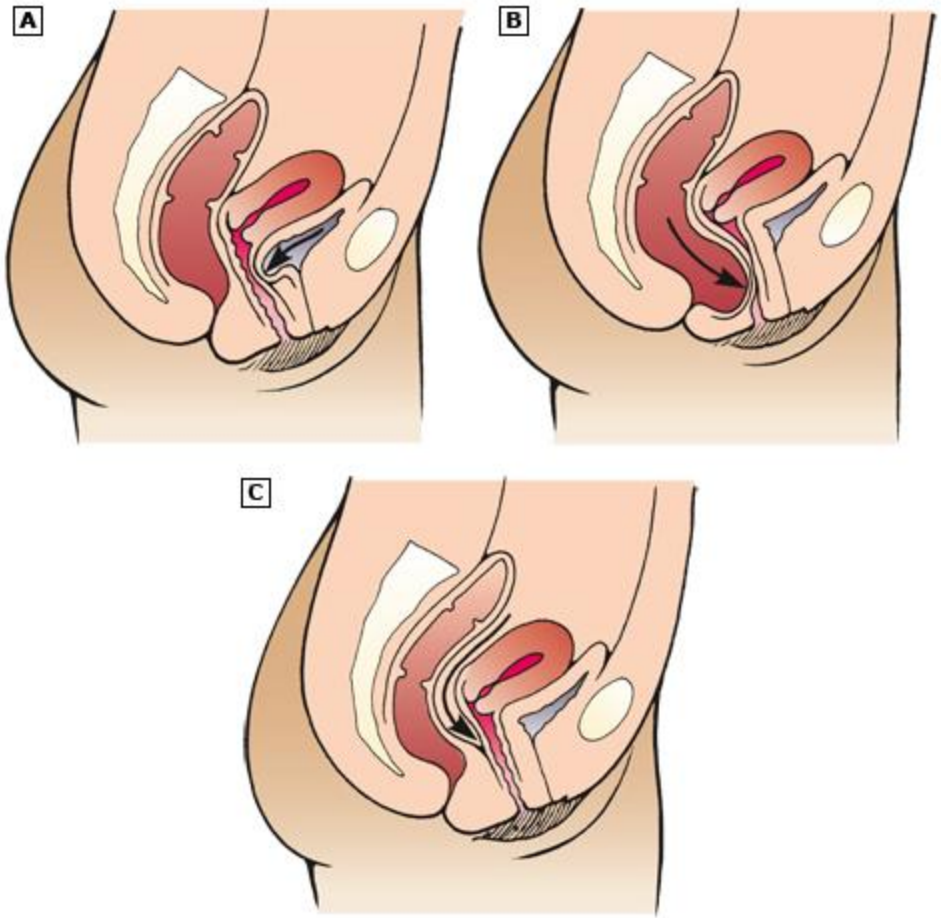
- ***Level 2*** **–** Paravaginal attachments along the length of the vagina to the superior fascia of the levator ani muscle and the arcus tendineus fascia pelvis (also referred to as the “white line”).

- ***Level 3*** – Perineal body, perineal membrane, and superficial and deep perineal muscles, which support the distal one third of the vagina.



Anterior compartment prolapse –

Hernia of anterior vaginal wall often associated with descent of the bladder

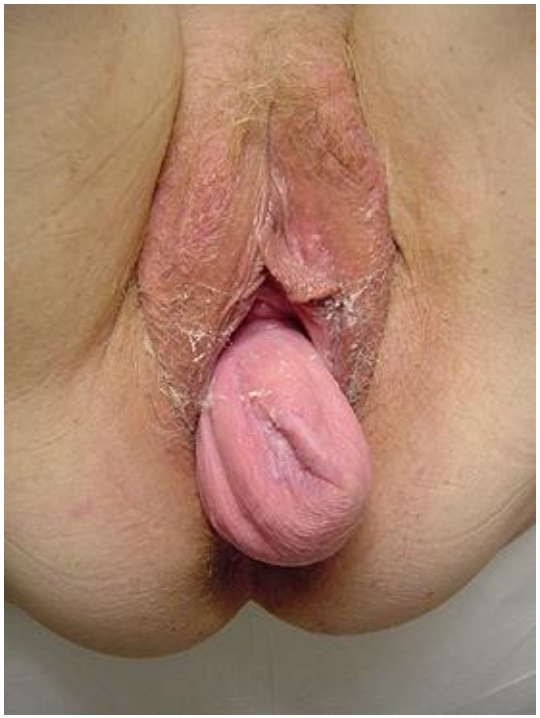


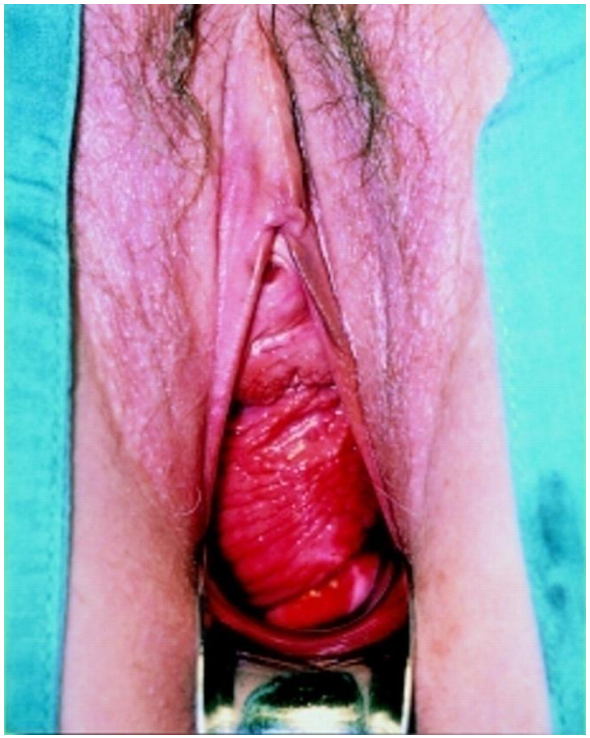
Posterior compartment prolapse –

Hernia of the posterior vaginal segment often associated with descent of the rectum, intestines

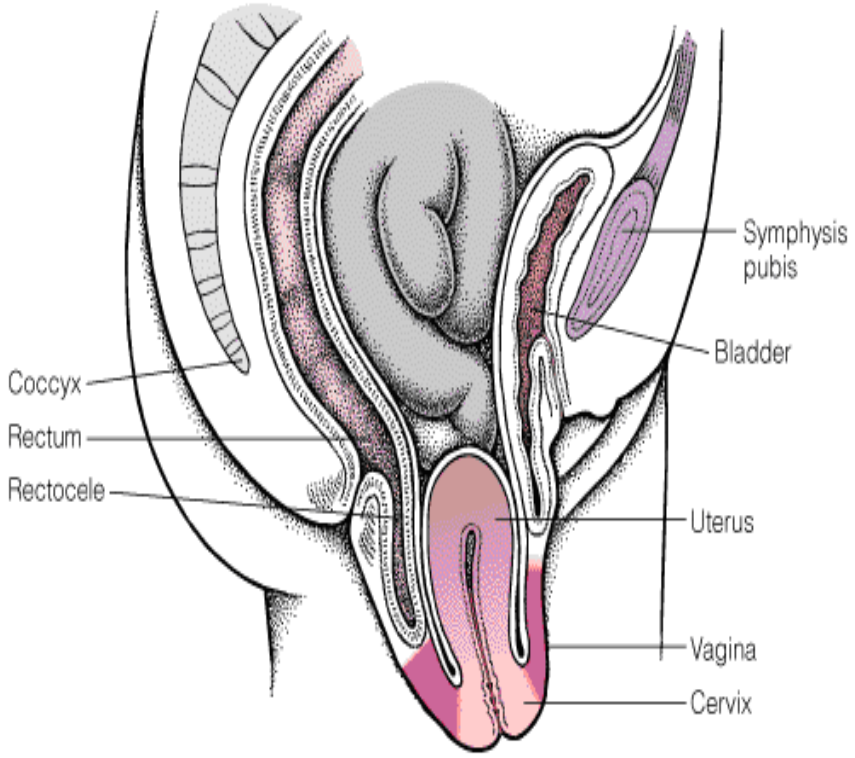
–

Descent of the apex of the vagina into the lower vagina, to the hymen, or beyond the vaginal introitus .The apex can be either the uterus and cervix, cervix alone, or vaginal vault.

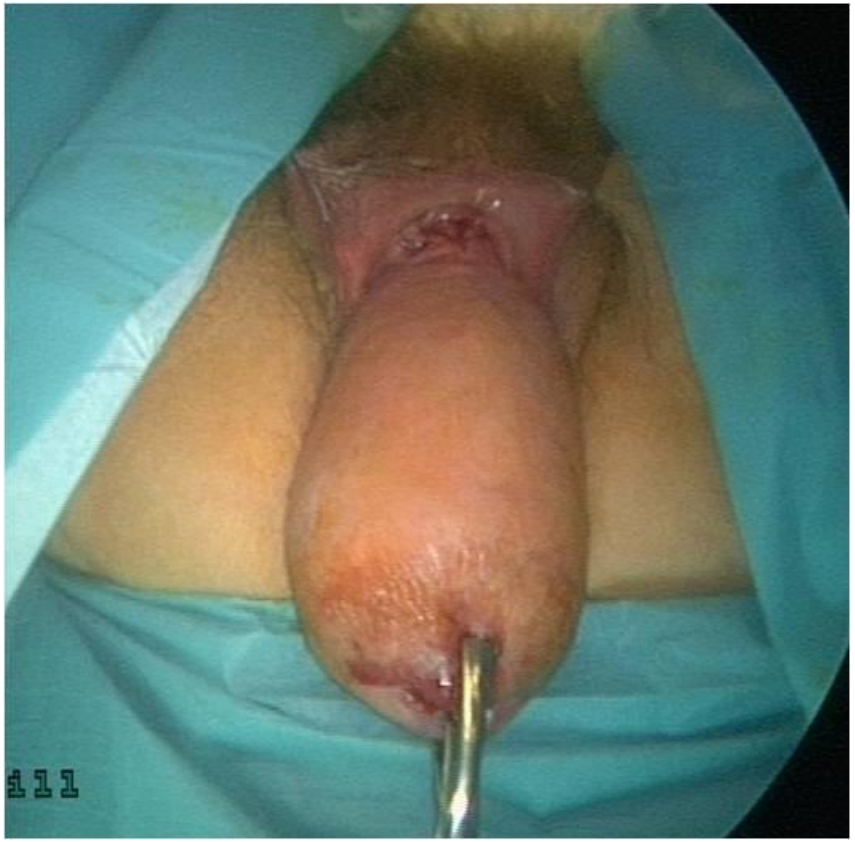




Hernia of all three compartments through the vaginal introitus.



Procidentia of the uterus and vagina.



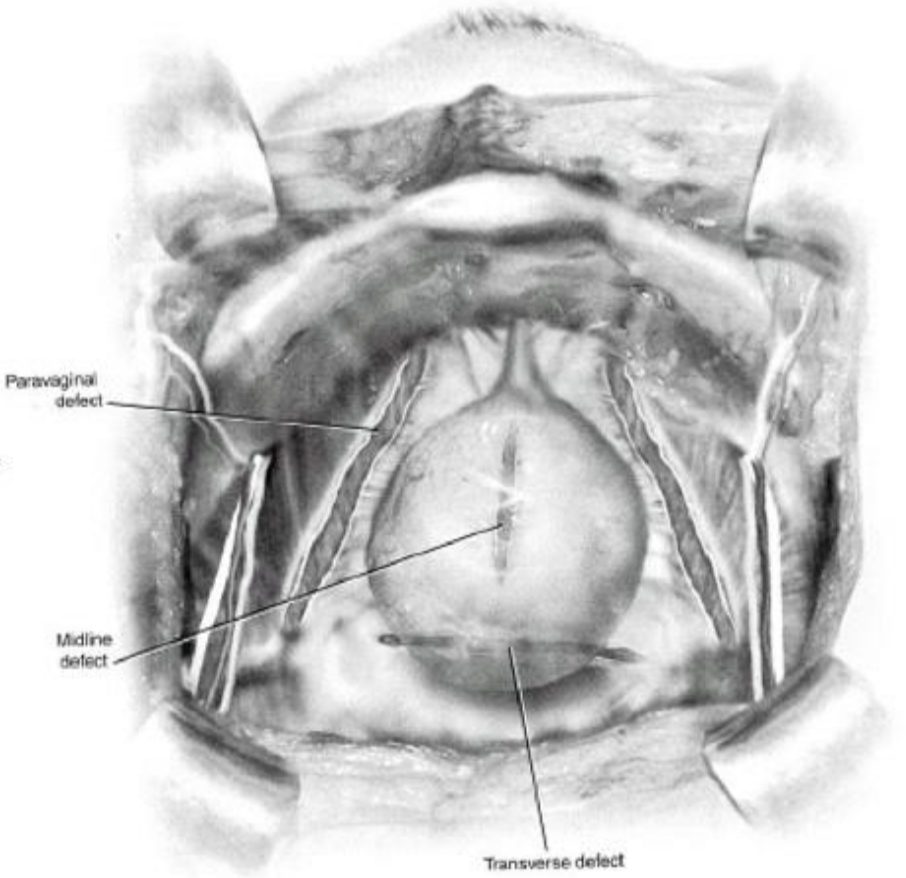
TYPES OF DEFECTS:

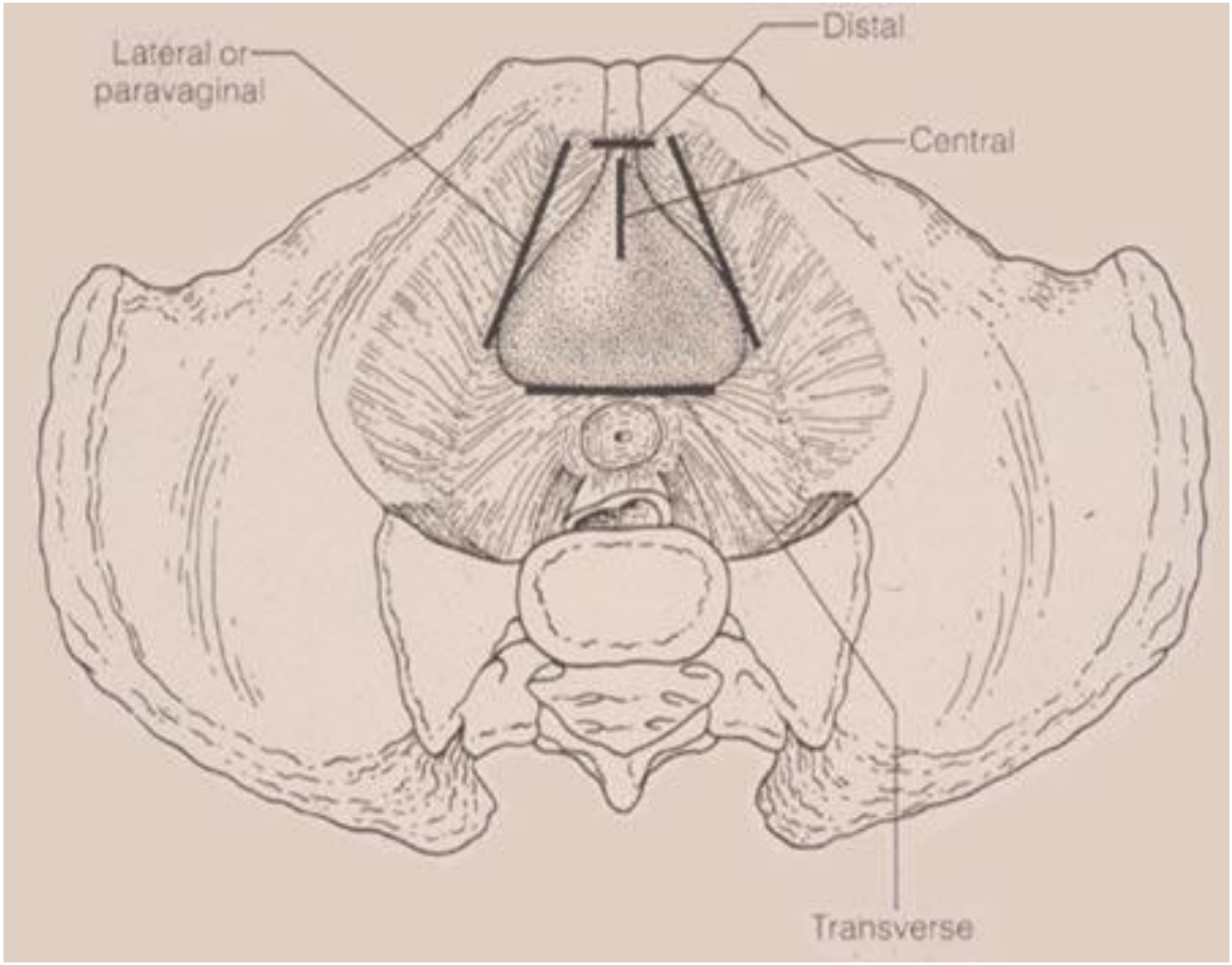
Lateral or paravaginal defects – Lateral or paravaginal defects result from detachment the lateral vaginal wall from the arcus tendineus fascia pelvis

Transverse defects – Transverse defects occ when the pubocervical fascia separates from insertion into the ring of connective tissue around the cervix and uterosacral ligamen

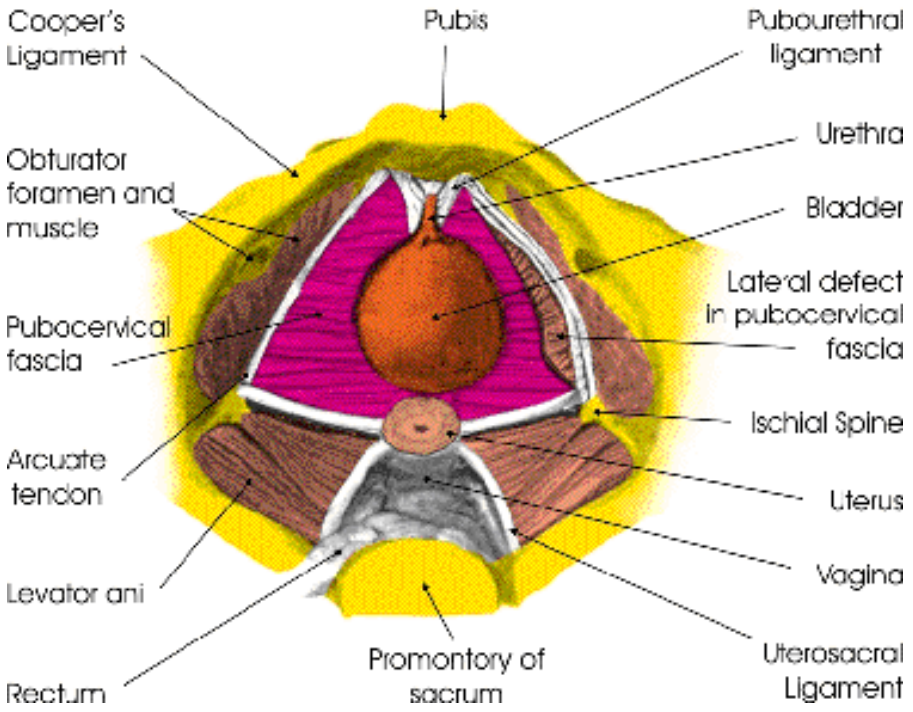
Central or midline defects — Central or midline defects arise from vertical defects in the endopelvic fascia extending anteriorly to posteriorlyts

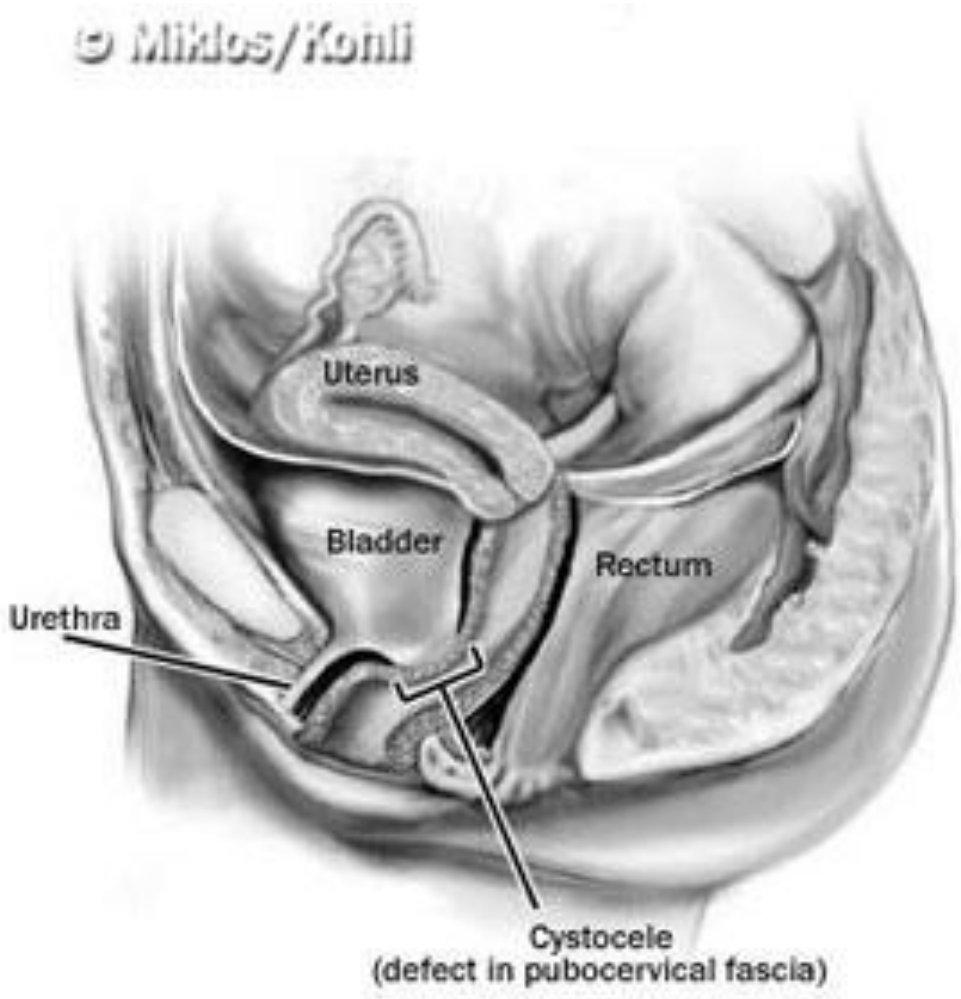
Distal defects – Distal defects are the least common forms of anterior vaginal wall defec They are due to a break in the fibromuscular support of the anterior vaginal wall, just before the insertion into the pubic symphysis

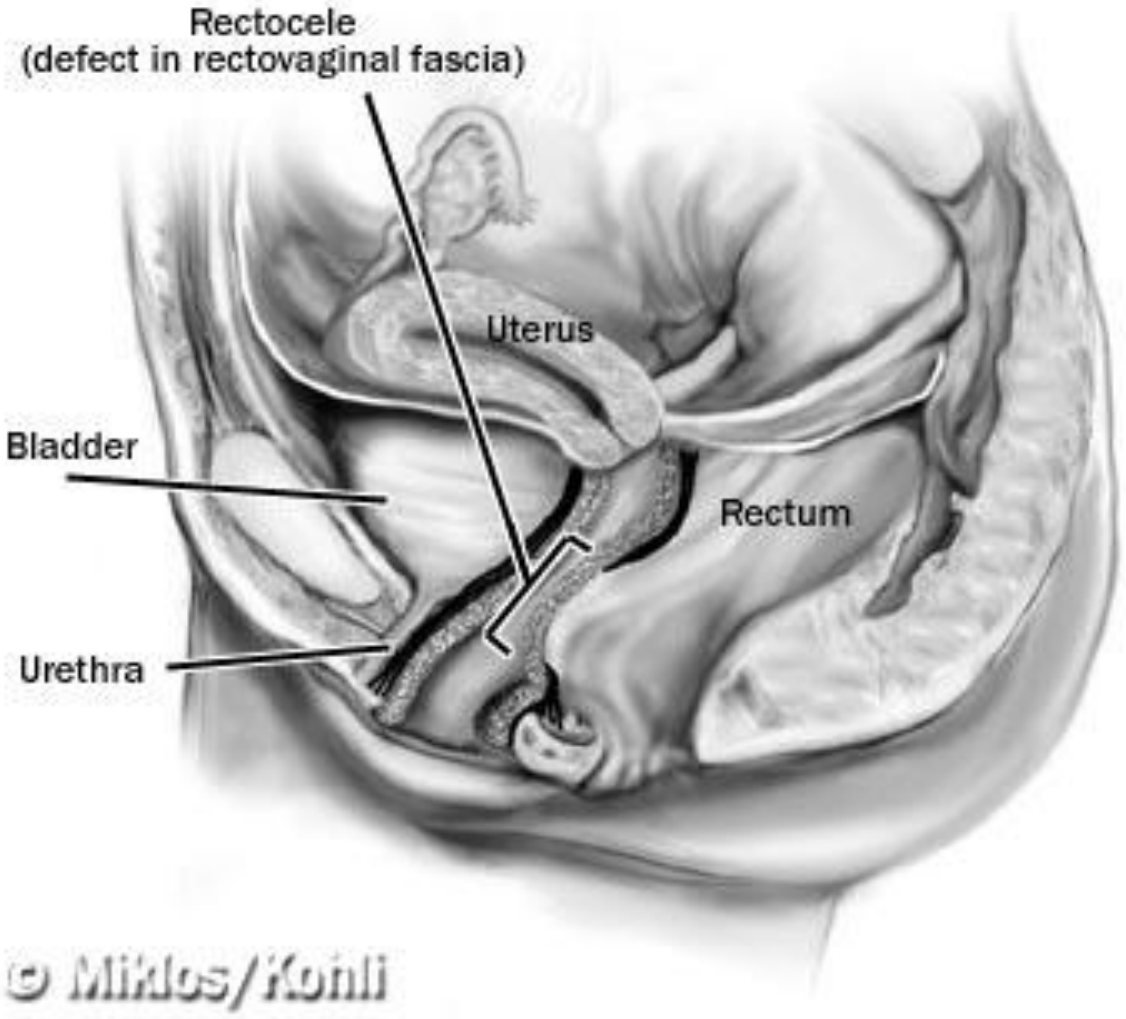



Lateral or
paravaginal
Distal
Central
Transverse

Anatomy of Female pelvis with right lateral defect in the pubocervical fascia




© Mikos/Konli
Uterus
Bladder
Rectum
Urethra
Cystocele
(defect in pubocervical fascia)


Rectocele
(defect in rectovaginal fascia)
Uterus
Bladder
Rectum
Urethra
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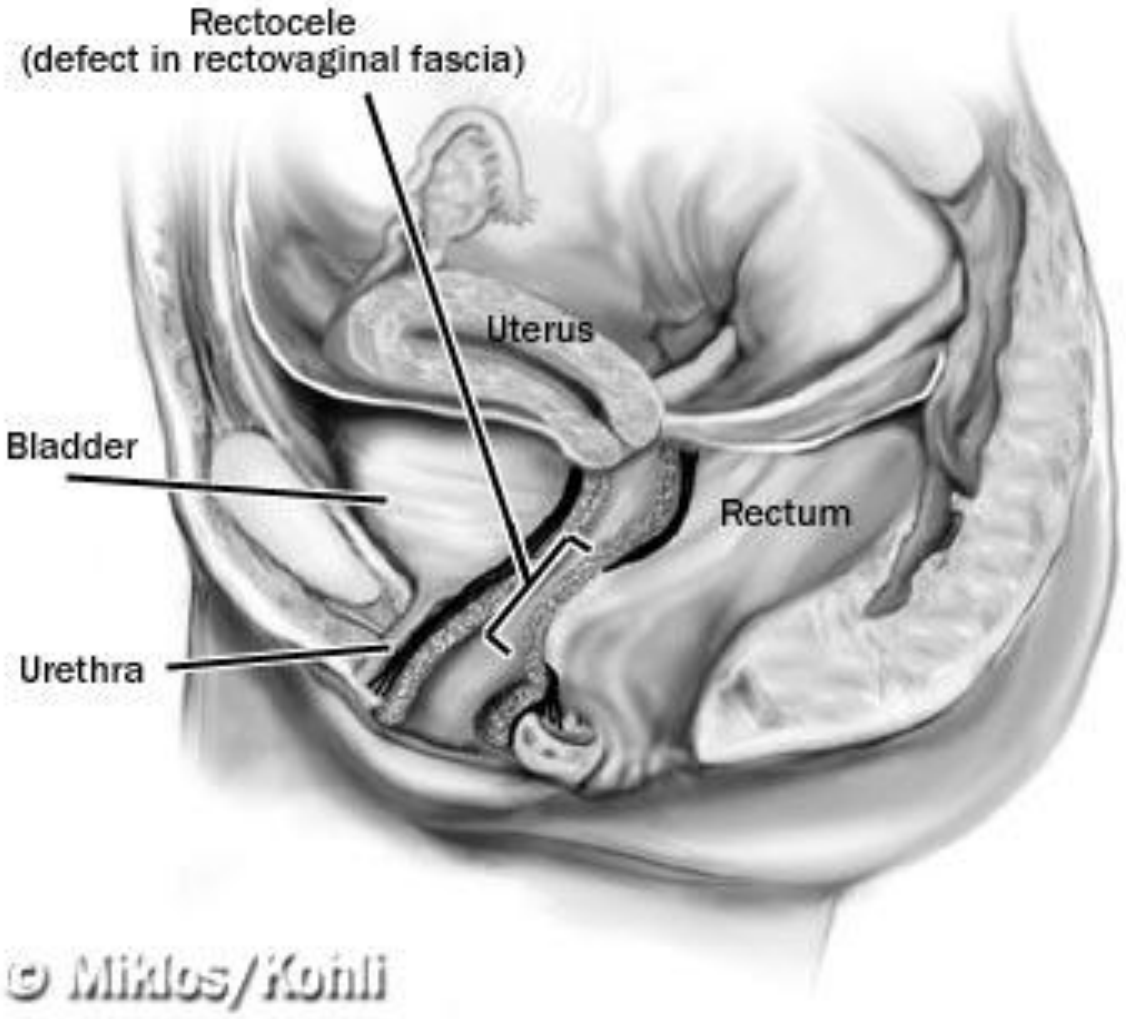
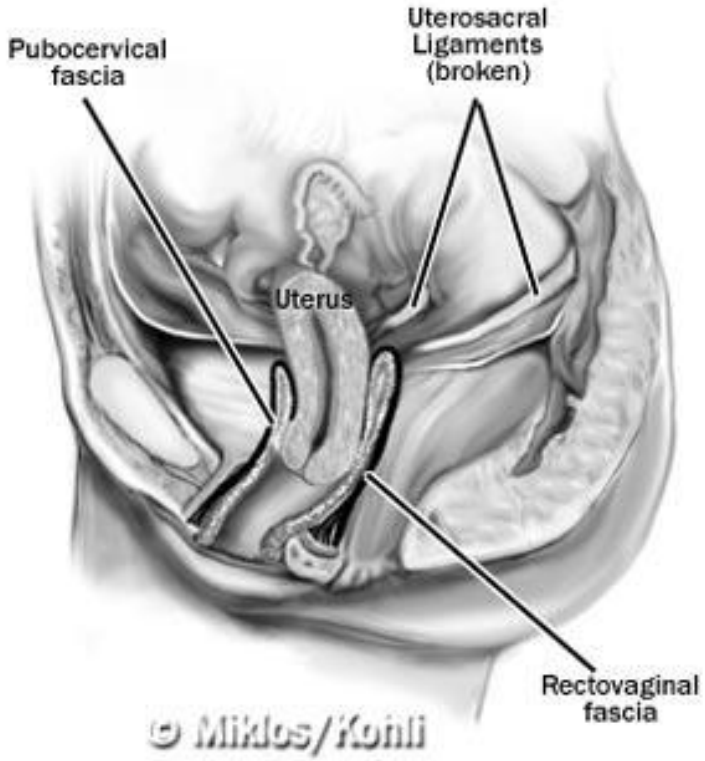

Rectocele
(defect in rectovaginal fascia)
Uterus
Bladder
Rectum
Urethra
© Mikos/Konli


Pubocervical fascia
Uterosacral Ligaments (broken)
Uterus
Rectovaginal fascia
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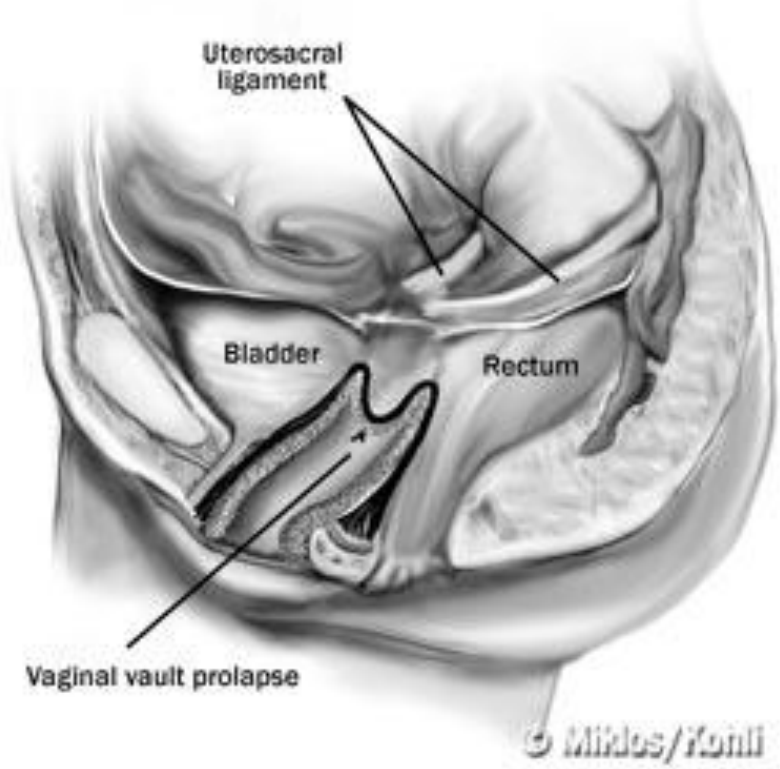
Uterosacral ligament
Bladder
Rectum
Vaginal vault prolapse
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DIAGNOSIS AND CLASSIFICATION:

- ***Medical history:***

symptoms specific to prolaps

urinary, defecatory, and sexual complaints

- ***Using pelvic xamination:***

POP is diagnosed with a pelvic examination

Examination components:

- *Visual inspection*
- *Speculum examination*
- *Bimanual pelvic examination*
- *Rectovaginal examination*
- *Neuromuscular examination*

Equipment:

Sims retractor

Graves speculom

ruler or a large cotton swab or sponge forceps

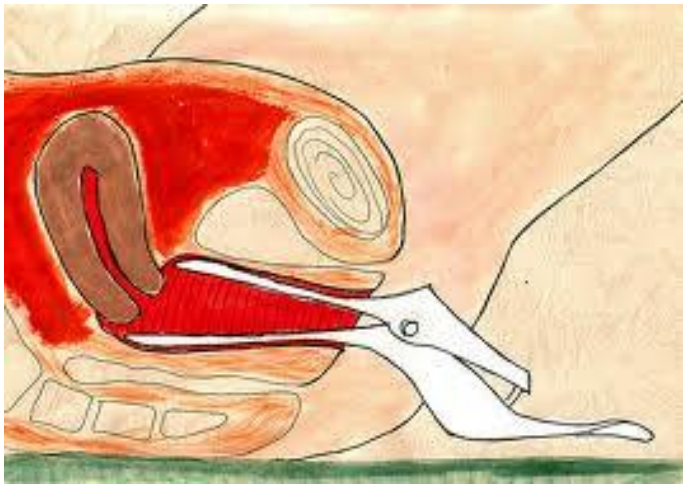
Patient positioning:

VISUAL INSPECTION:

- *Transverse diameter of the genital hiatus (eg, the space between the labia majora)*
- *Protrusion of the vaginal walls or cervix to or beyond the introitus (procidentia)*
- *Length and condition of the perineum*
- *Rectal prolapse*

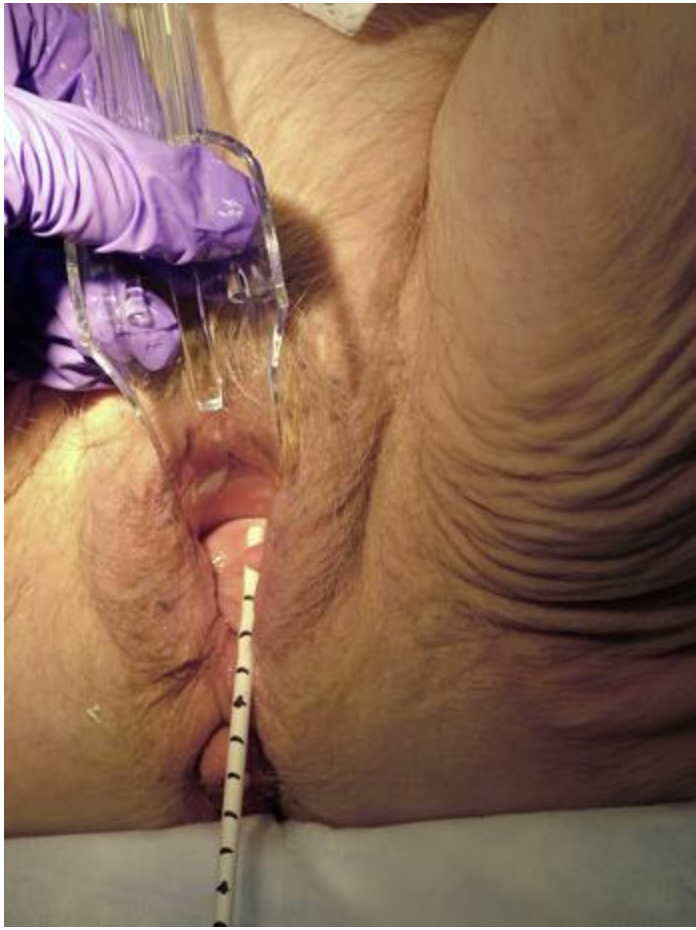
SPECULUM AND BIMANUAL EXAMINATION:

- *Apical prolapse*



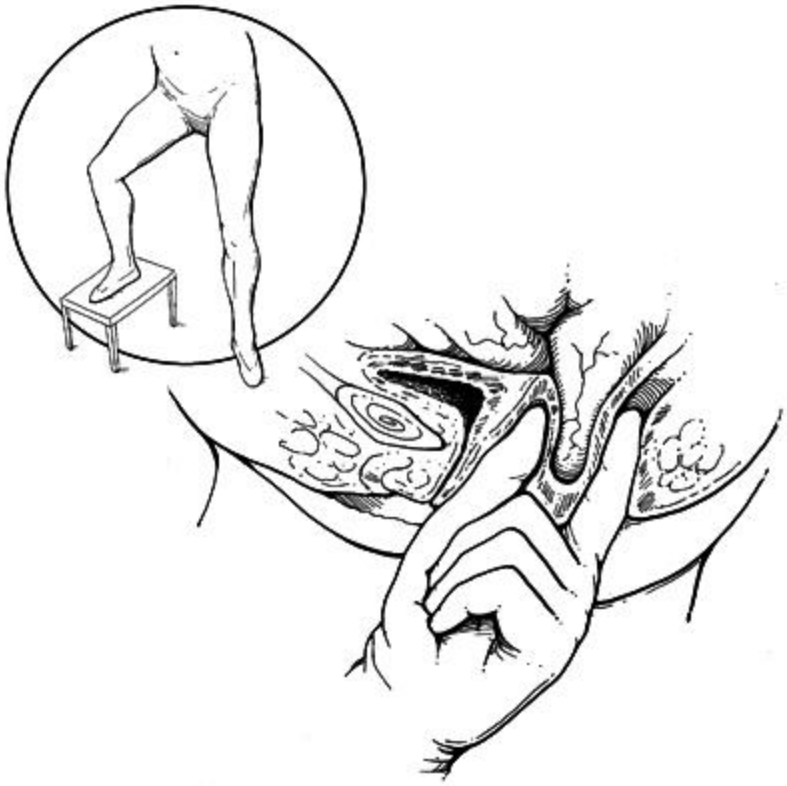
Anterior vaginal wall

- ***Posterior vaginal wall***
- ***bimanual examination***



RECTOVAGINAL EXAMINATION:

- ***Diagnose an enterocele***
- ***Differentiate between a high rectocele and an enterocele***
- ***Assess the integrity of the perineal body***
- ***Detect rectal prolapse***



NEUROMUSCULAR EXAMINATION:

- ***evaluation of the sensory function** of the lumbosacral dermatomes for light touch and sharp touch using a small cotton swab and a sharp point*
- ***bulbocavernosus reflex** is elicited by gently tapping or squeezing the clitoris*
- ***The anocutaneous reflex** (anal wink sign) is triggered by stroking the skin immediately surrounding the anus and observing a reflexive contraction of the external anal sphincter*
- ***Pelvic floor muscle testing**: Palpation through the vagina or rectum helps in assessing pelvic floor squeeze strength and levator muscle thickness. The tone and strength of the pelvic floor muscles can be assessed by asking the patient to contract the pelvic floor muscles around the examining fingers*

ANCILLARY STUDIES:

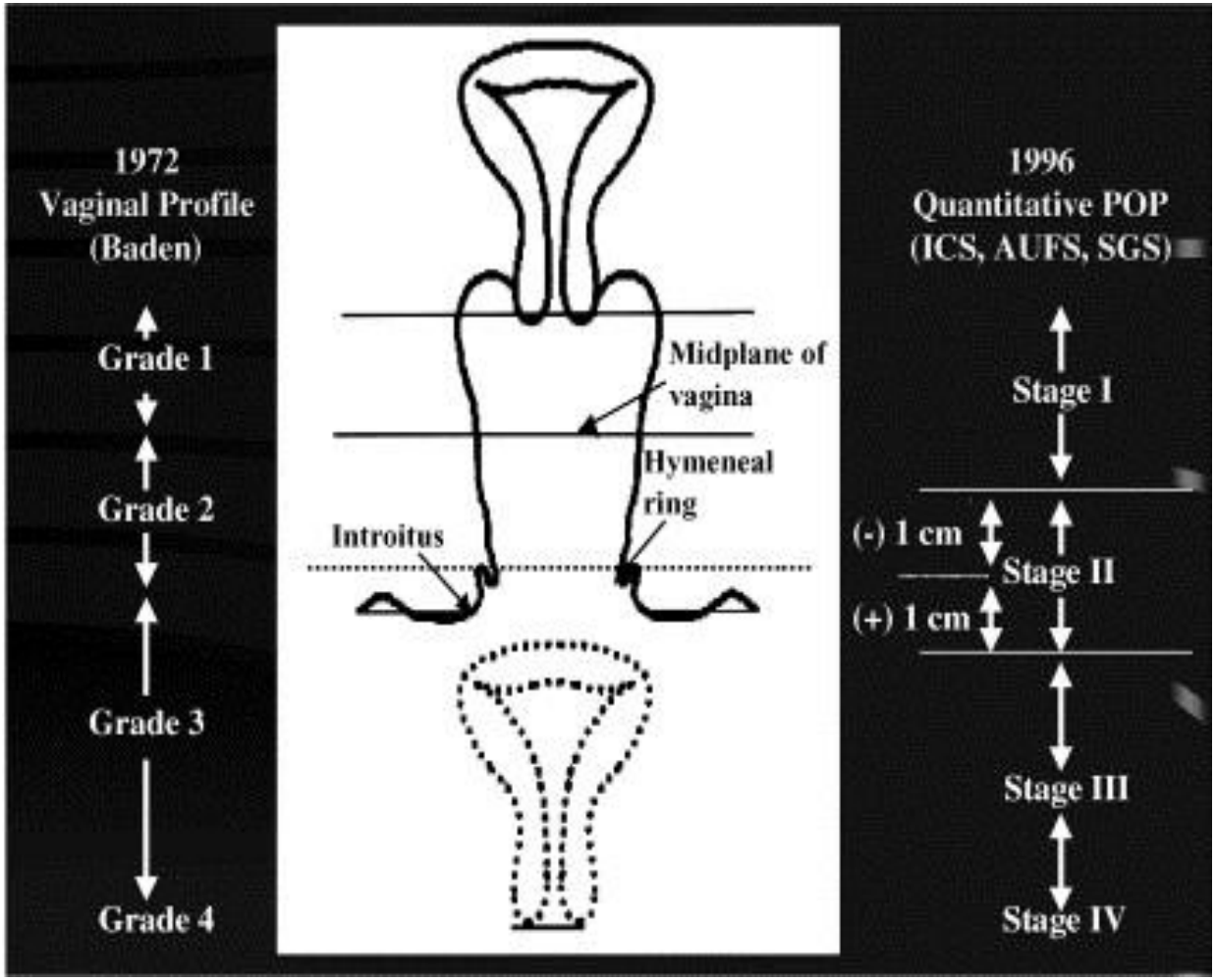
- ***Imaging:***

- ***Urinary tract evaluation:*** ***urinary tract infection***

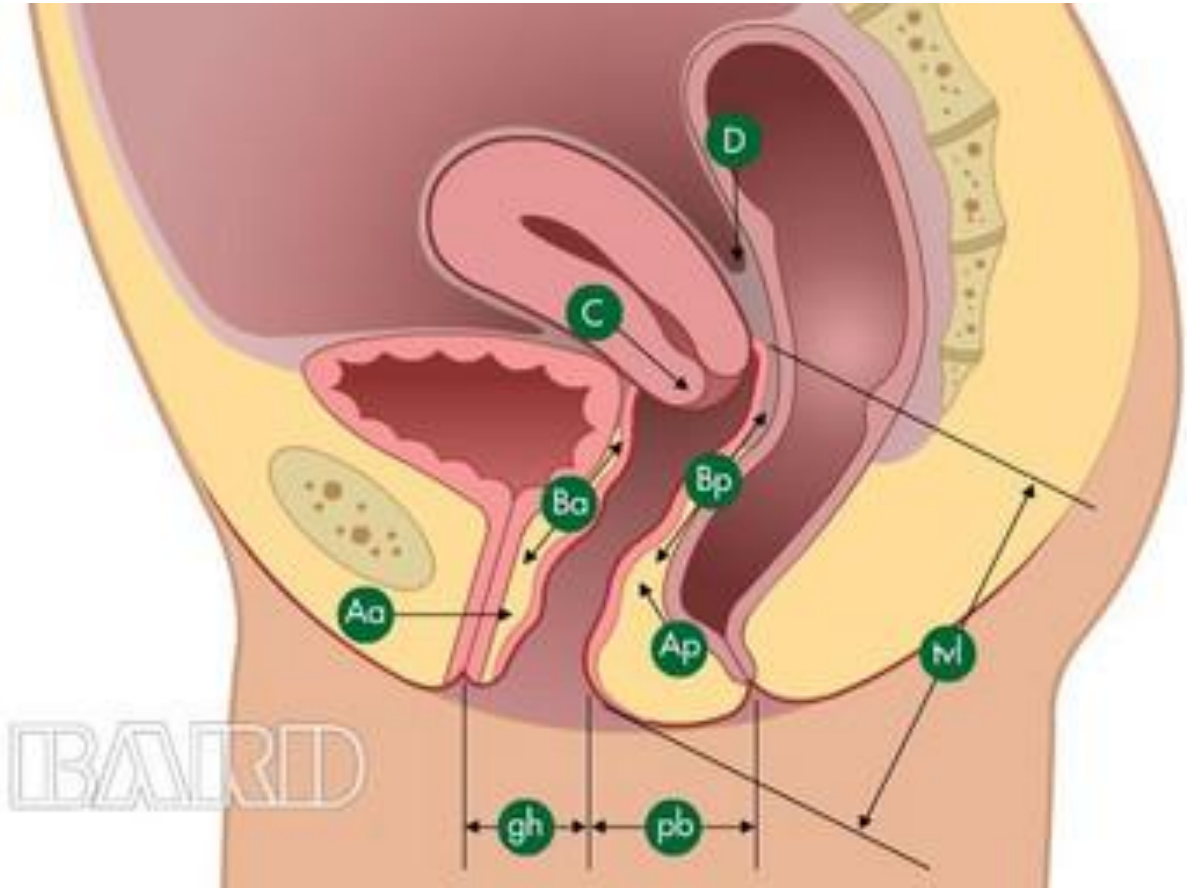
  urinary incontinence

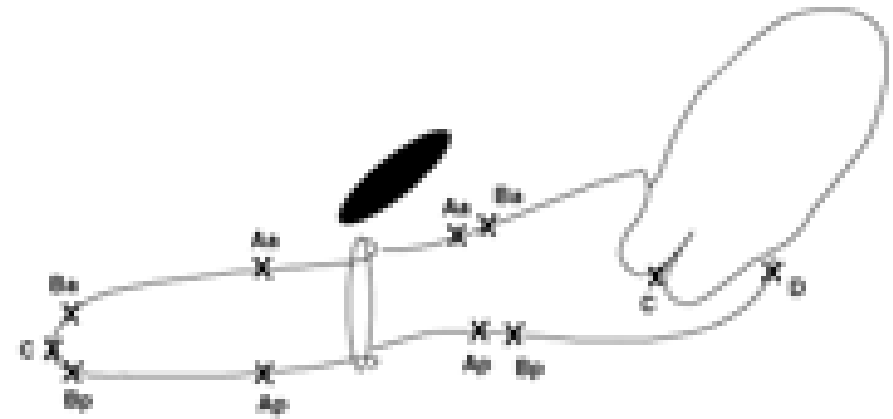
  urinary retention

- ***Bowel function evaluation:***


1972
Vaginal Profile
(Baden)
Grade 1
Grade 2
Grade 3
Grade 4
Midplane of
vagina
Hymeneal
ring
Introitus
1996
Quantitative POP
(ICS, AUFS, SGS)
Stage I
(-) 1 cm
Stage II
(+) 1 cm
Stage III
Stage IV

POPQ measurements:





+3 Aa	+8 Ba	+8 C
4.5 gh	1.5 pb	8 tvl
+3 Ap	+8 Bp	—

A

-3 Aa	-3 Ba	-8 C
2 gh	3 pb	10 tvl
-3 Ap	-3 Bp	-10 D

B

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

Pelvic organ prolapse staging:

- ***Stage 0***

  No prolapse Aa, Ba, Ap, Bp are -3 cm and C or D≤ -(tvl - 2) cm

- ***Stage 1***

  Most distal portion of the prolapse -1 cm (above the level of hymen)

- ***Stage 2***

  Most distal portion of the prolapse ≥ -1 cm but ≤ +1 cm (≤1 cm above or below the hymen)

- ***Stage 3***

  Most distal portion of the prolapse > +1 cm but < +(tvl - 2) cm (beyond the hymen; protrudes no farther than 2 cm less than the total vaginal length)

- ***Stage 4***

  Complete eversion; most distal portion of the prolapse ≥ + (tvl - 2) cm

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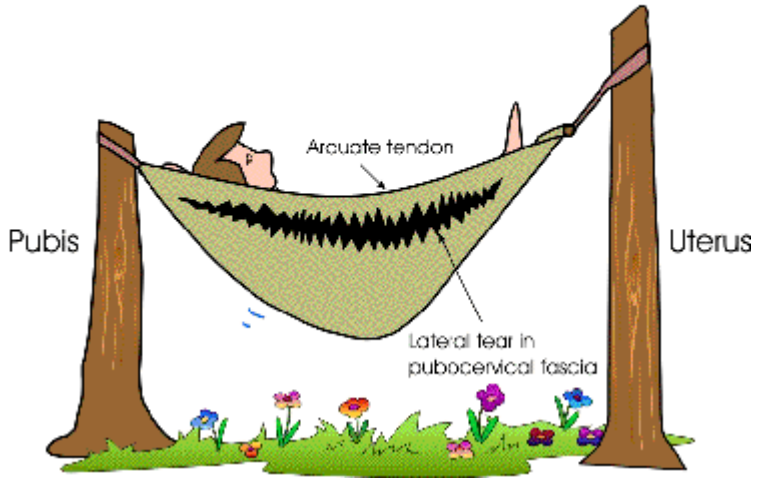
THANK

Cystocele, (anterior vaginal wall prolapse) due to lateral defects in the pubocervical fascia



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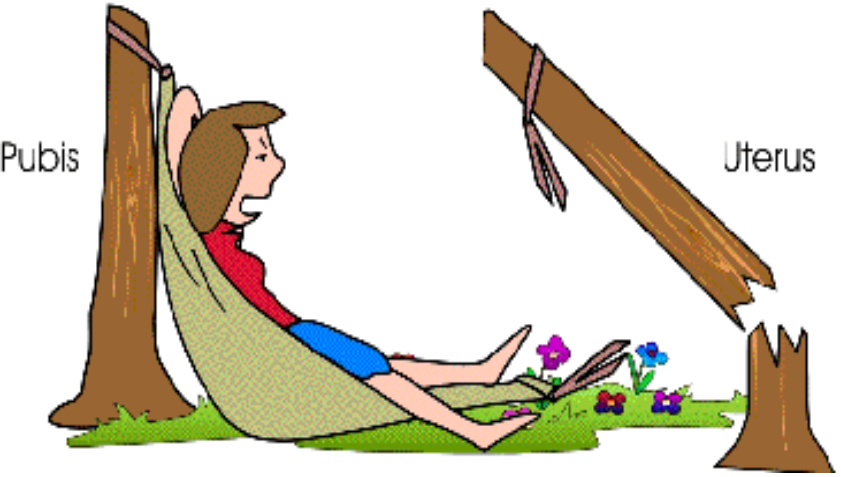
Pubocervical fascia acts like a hammock

Uterine or Vault Prolapse
Posterior (back) end of hammock is damaged



Bladder Neck Prolapse
Anterior (front) end of hammock is damaged

Both front and back ends of the hammock support are damaged