Prolapse-Using POP-Q and Understanding Pelvic Anatomy
Workshop 4
Monday 23 August 2010, 09:00 – 12:00

Time	Time	Topic	Speaker
09:00	09:05	Welcome	Wolfgang Umek
09:05	09:20	Lecture: Landsmarks in Pelvic Floor Surgery	Paul Riss Wolfgang Umek
09:20	10:30	Hands-on practice: Pelvic model	All
10:30	10:45	Coffee-break	
10:45	11:00	Lecture: Understanding the POP-Q-System	Andrea Dungl Thomas Aigmueller
11:00	12:00	Hands-on practice: Putting POP-Q into practise	
12:00		End of workshop	

Aims and Objectives:

The workshop has 2 objectives:
Aim 1: To understand the POP-Q system and how to apply it in clinical practise
Aim 2: To gain and review knowledge of anatomic landmarks in the small pelvis and how they relate to prolapse- and reconstructive pelvic surgery

Objective: At the end of the workshops delegates will be able to:

1. Identify and reproduce all points of the POPQ system
2. Reconstruct a specific prolapse type on a model according to given points of the POPQ system
3. Apply the POPQ system to a specific prolapse
4. Identify the most important anatomical-surgical landmarks on a pelvic model
5. Describe the effect of the most common surgical procedures for anatomical structures in the small pelvis

Educational Objectives

In order to allow group interaction and hands-on training with models the number of delegates per table will be limited to 6 and the number of tables to 5. This allows for a total number of delegates to the workshop of 30.

The workshop is designed for trainees (residents, fellows) but urogynecologists are also welcome as long as they are willing to participate in the interactive sessions.

Workshop Tutors:

Johann Coetzee, South Africa
Linsey Hayward, New Zealand
Julia Kargl, Austria

Anatomical Landmarks in the Small Pelvis

Paul Riss
paul.riss@gmx.net

Wolfgang Umek
wolfgang.umek@gmail.com

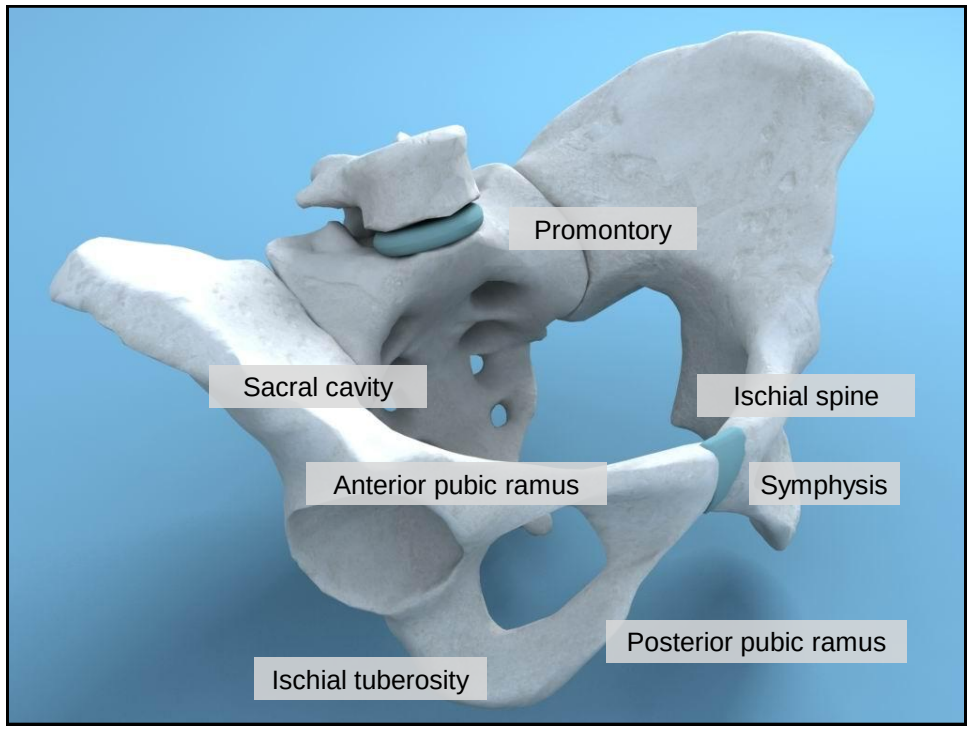
Workshop
Annual Meeting ICS / IUGA Toronto, August 23, 2010

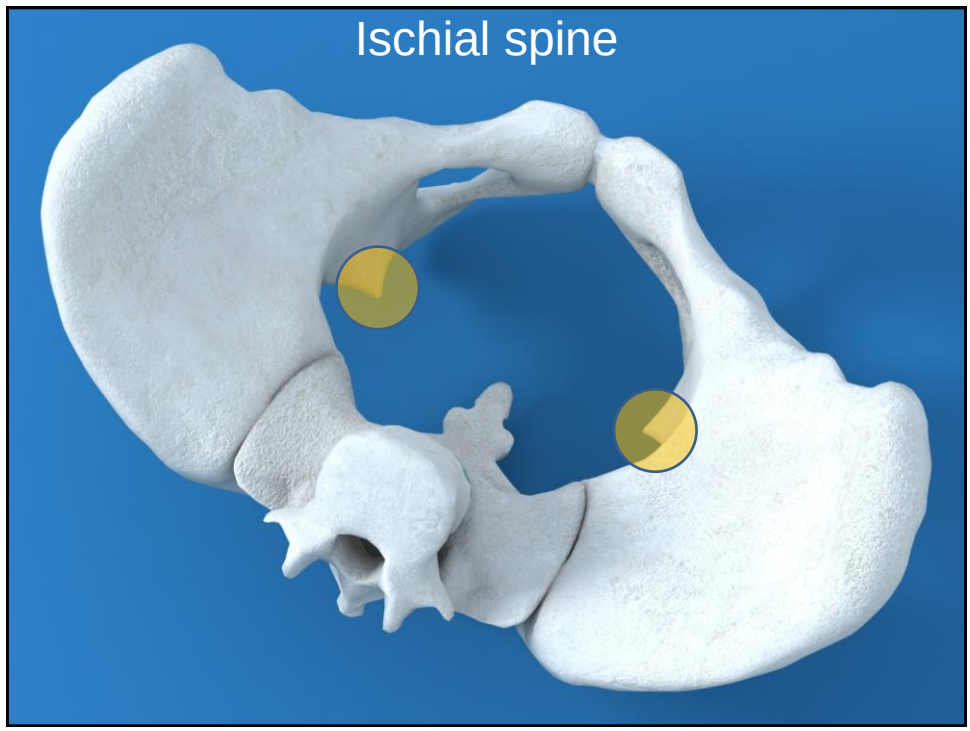
Landmarks

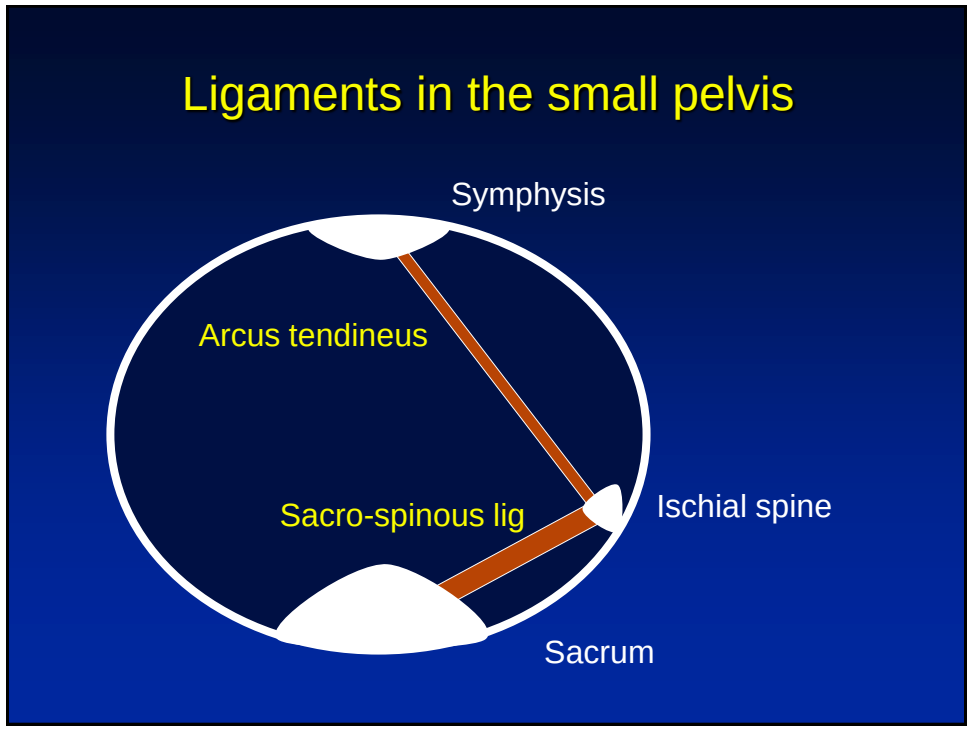
- Ischial spine
- Sacro-spinous lig.
- Sacro-tuberal lig.
- Arcus tendineus

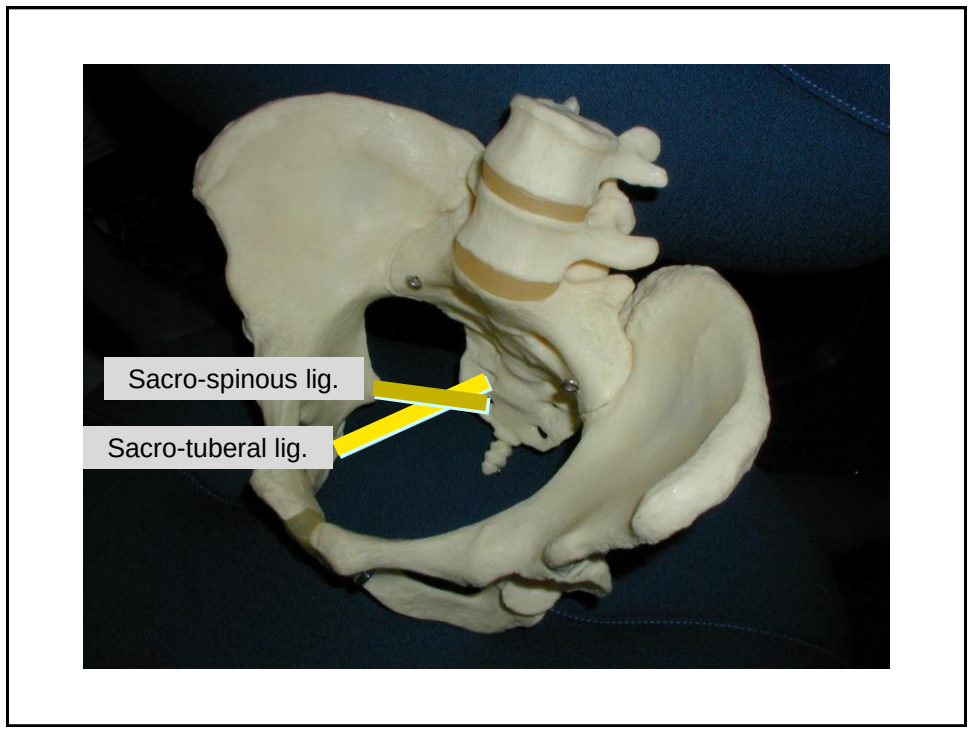
- Levator ani muscle
- Endopelvic fascia
- Utero-sacral lig.
- Pubo-urethral lig.

- Recto-vaginal septum
- Vesico-vaginal septum
- Perineal body
- Ischio-rectal fossa

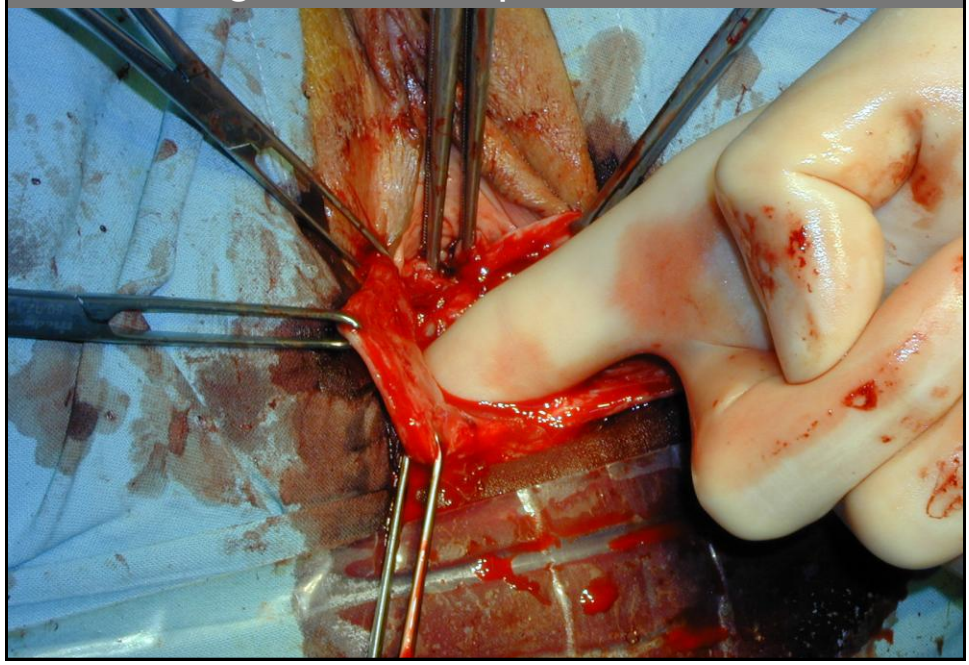

Promontory
Sacral cavity
Ischial spine
Anterior pubic ramus
Symphysis
Posterior pubic ramus
Ischial tuberosity


Ischial spine

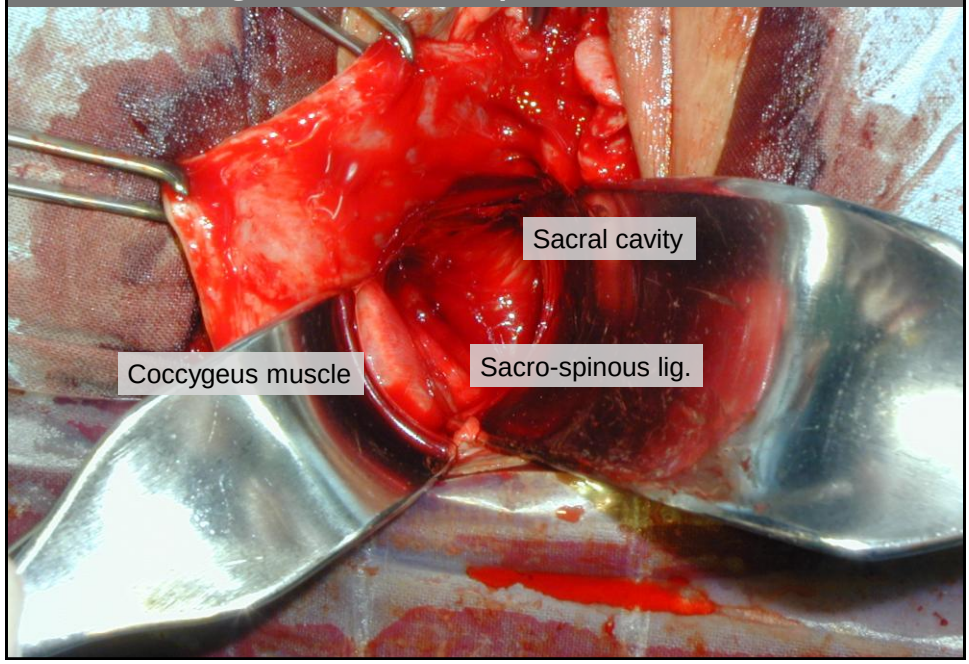

Ligaments in the small pelvis
Symphysis
Arcus tendineus
Sacro-spinous lig
Ischial spine
Sacrum


Sacro-spinous lig.
Sacro-tuberal lig.

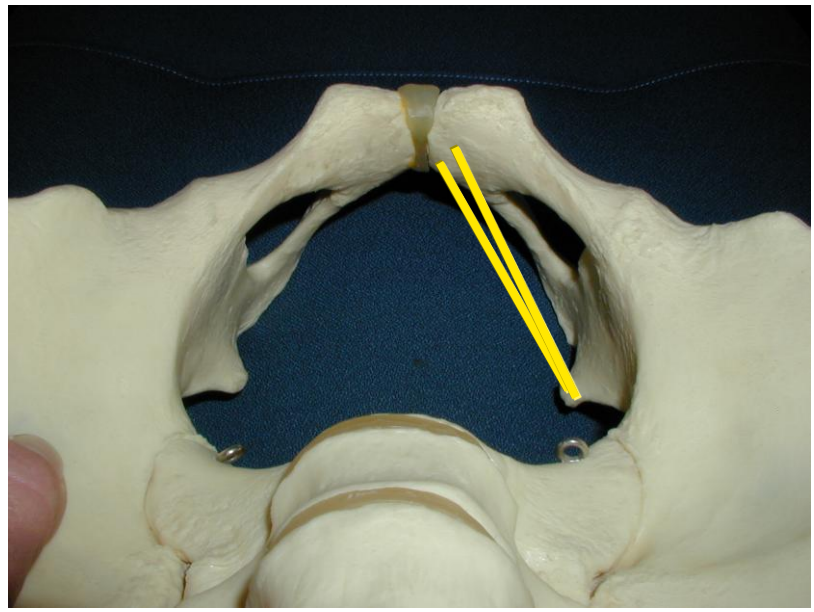
Vaginal sacro-spinous fixation



Vaginal sacro-spinous fixation



Arcus tendineus



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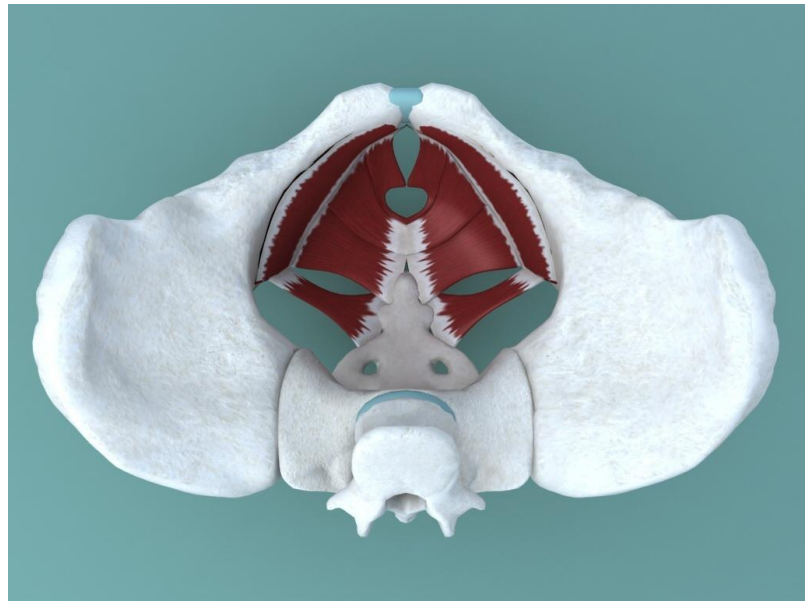
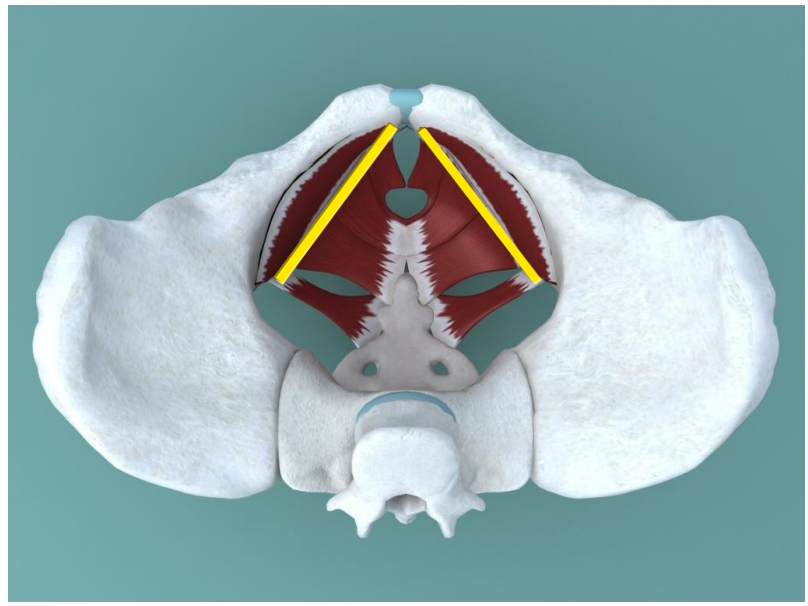
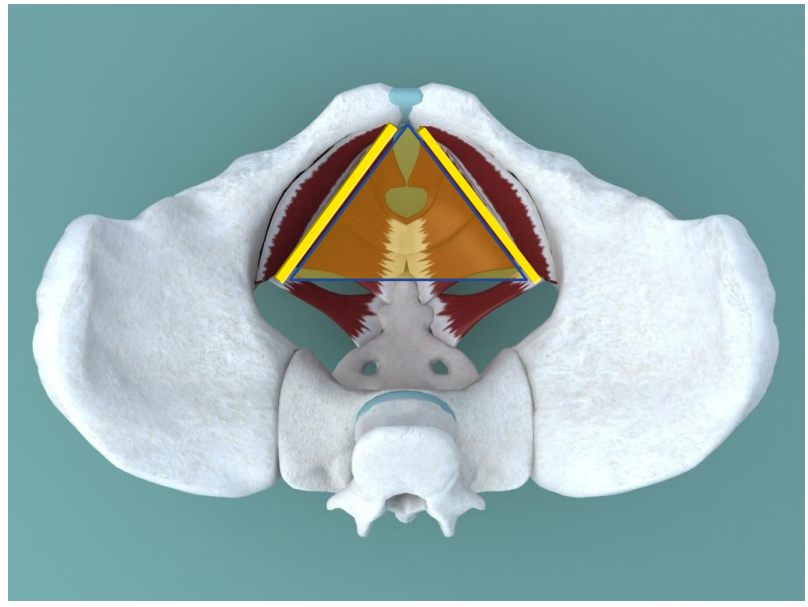
Levator ani muscle



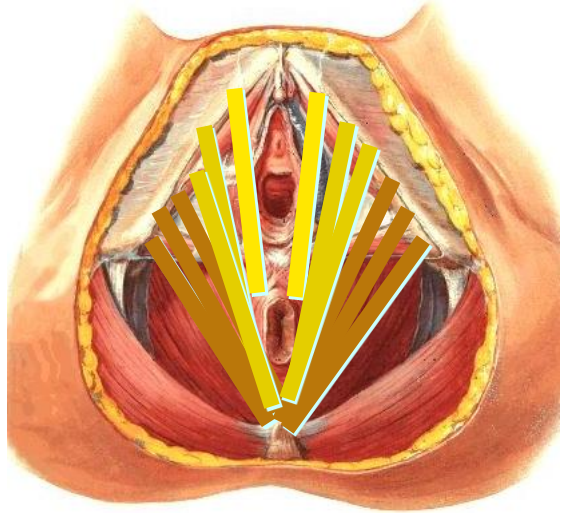
Arcus tendineus



Levator ani muscle



Levator ani muscle

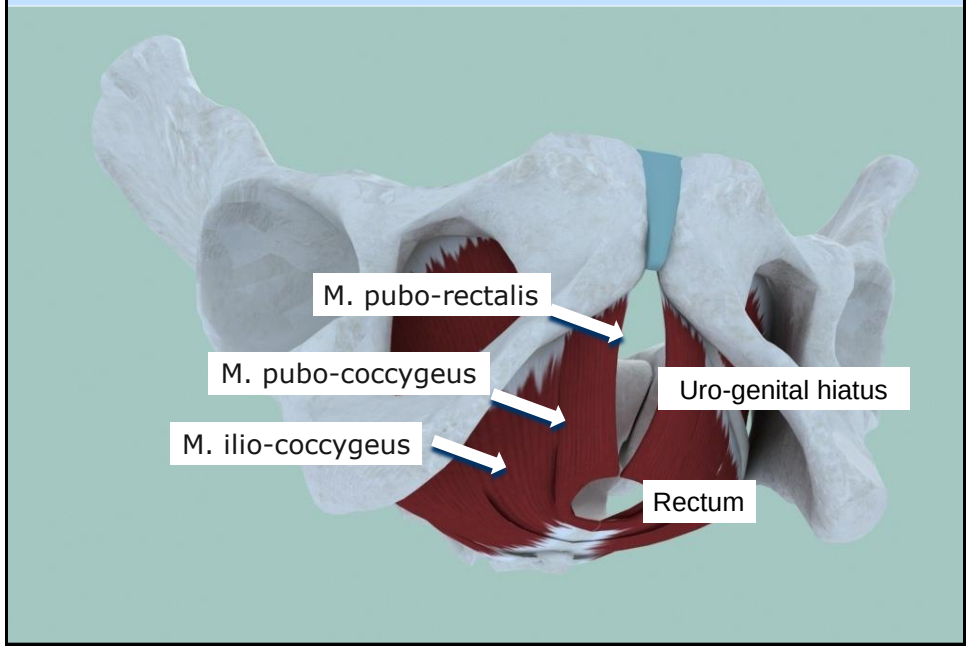


M. pubo-rectalis

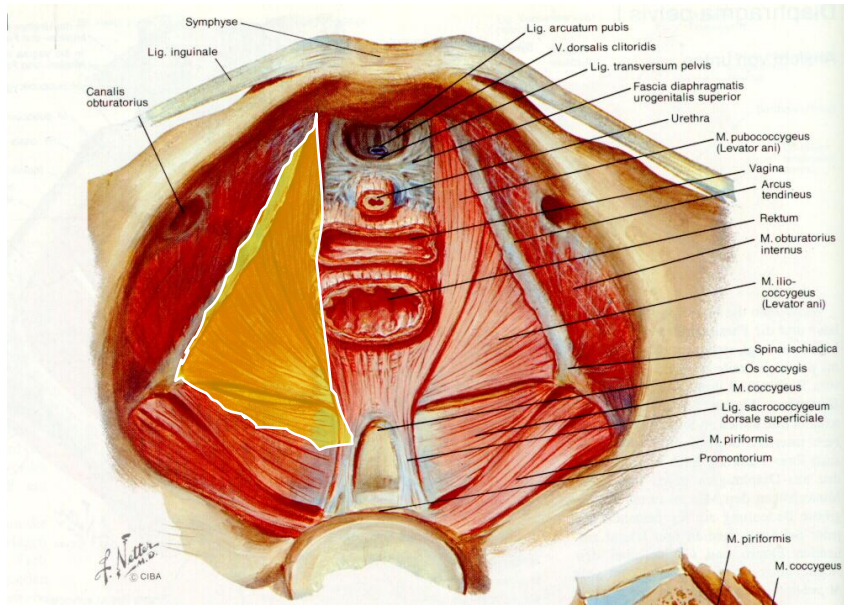
M. pubo-coccygeus

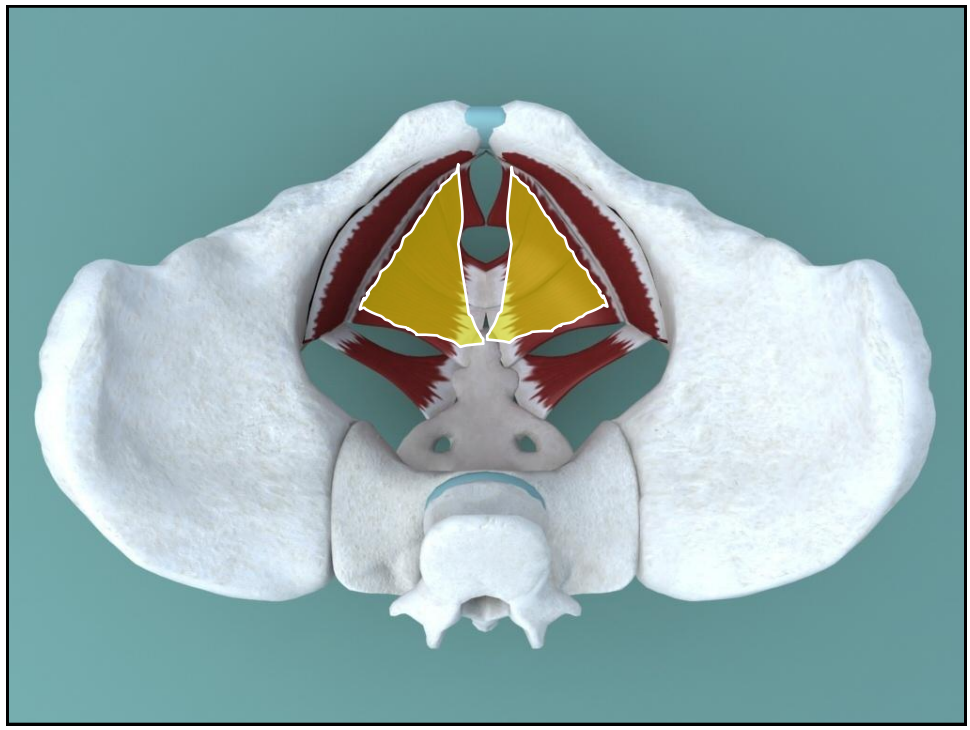
M. ilio-coccygeus

Levator ani muscle

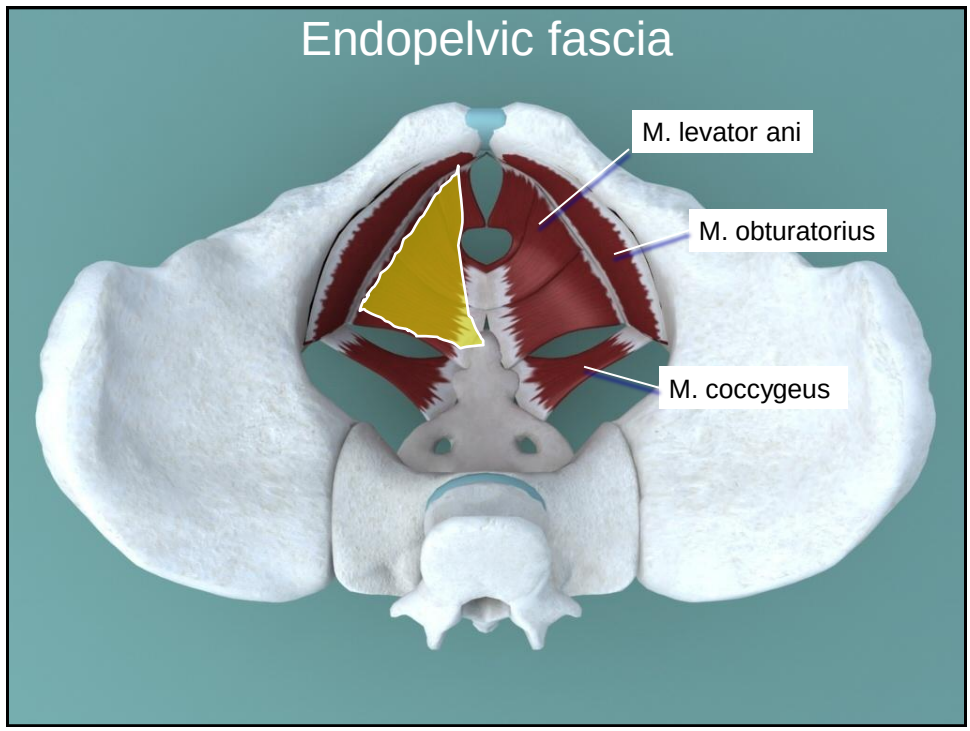


Endopelvic fascia

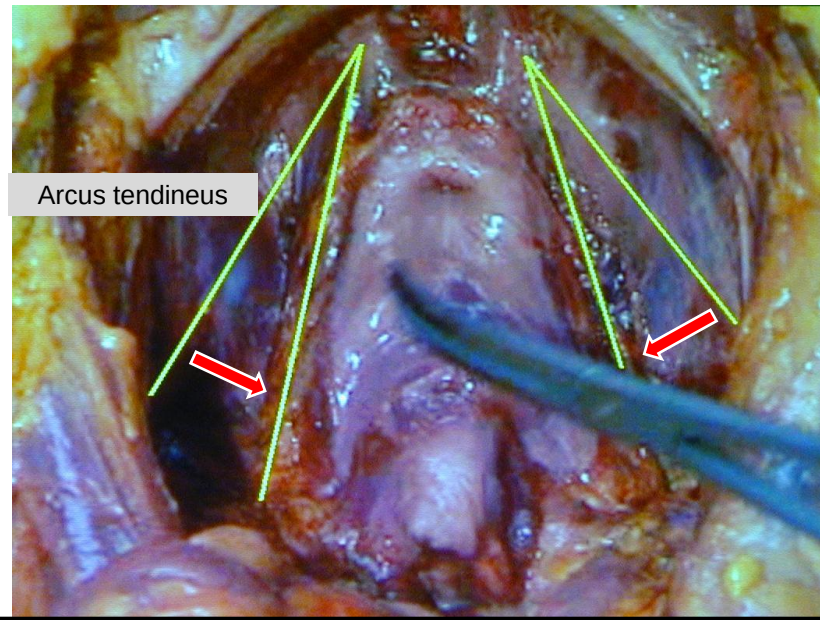




Endopelvic fascia



Paravaginal defect



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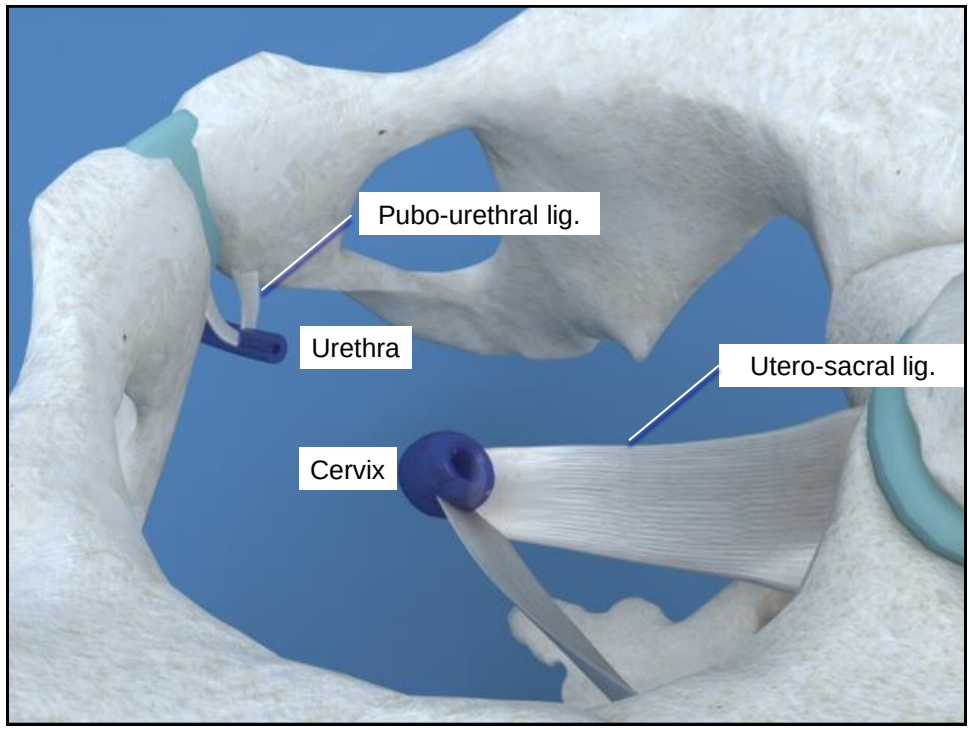
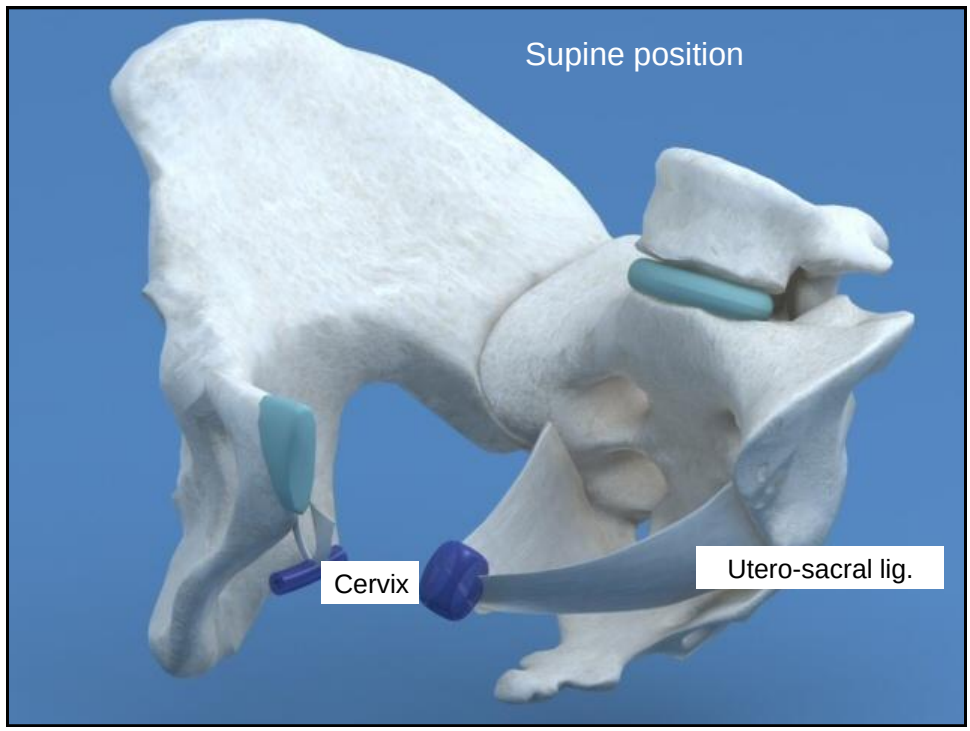
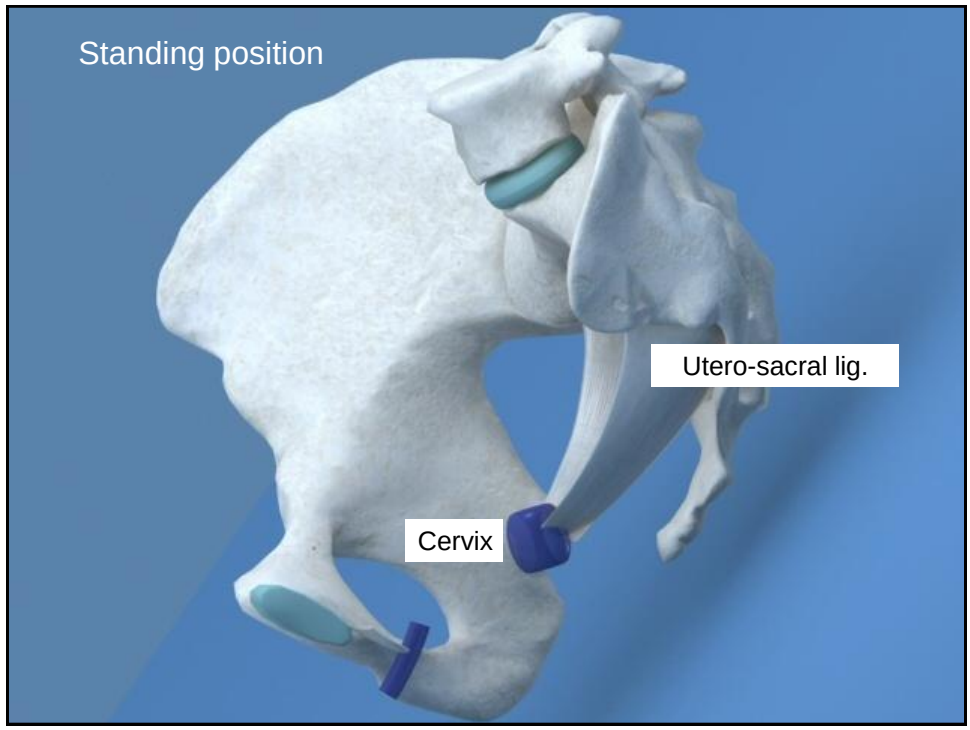
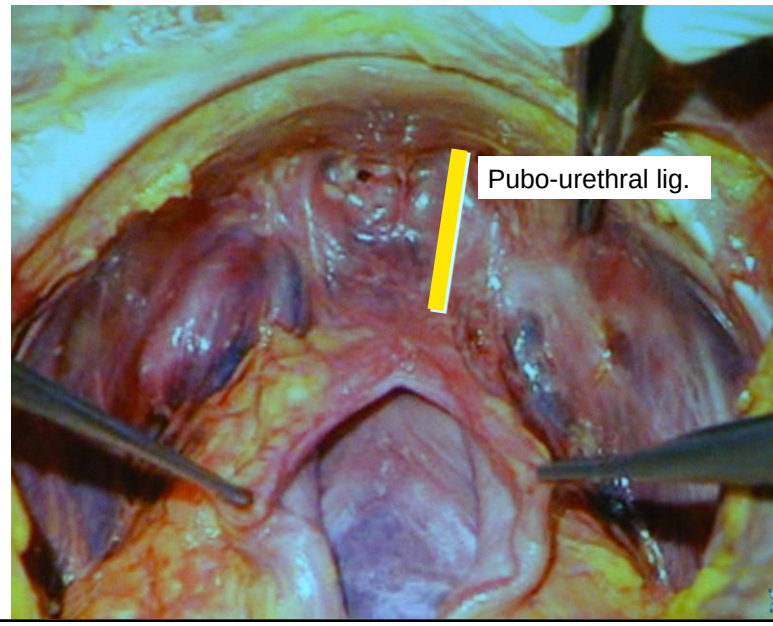

Pubo-urethral lig.
Urethra
Utero-sacral lig.
Cervix


Supine position
Cervix
Utero-sacral lig.



Pubo-urethral ligament



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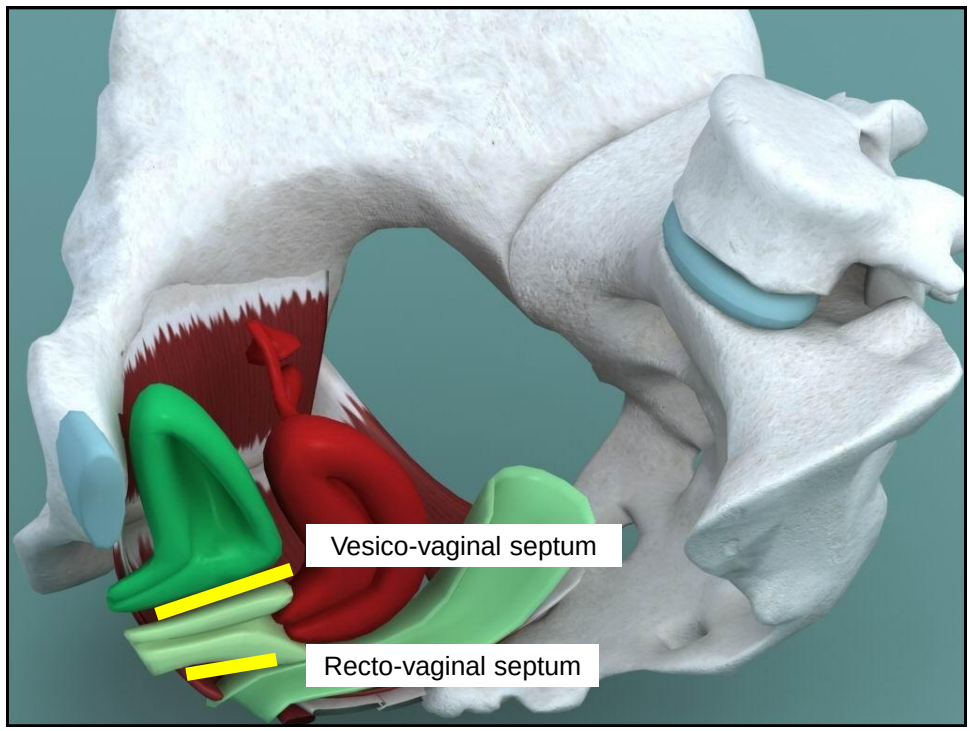
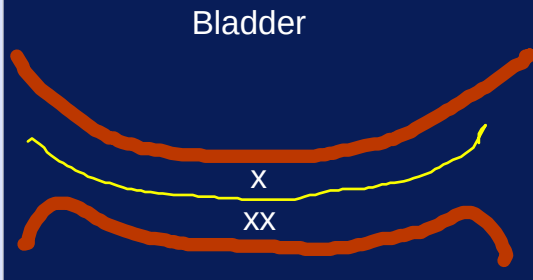


Septum between bladder and vagina

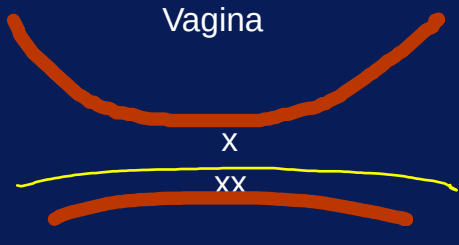


x) *Septo-vesical space*

Vesico-vaginal septum

xx) Septo-vaginal space

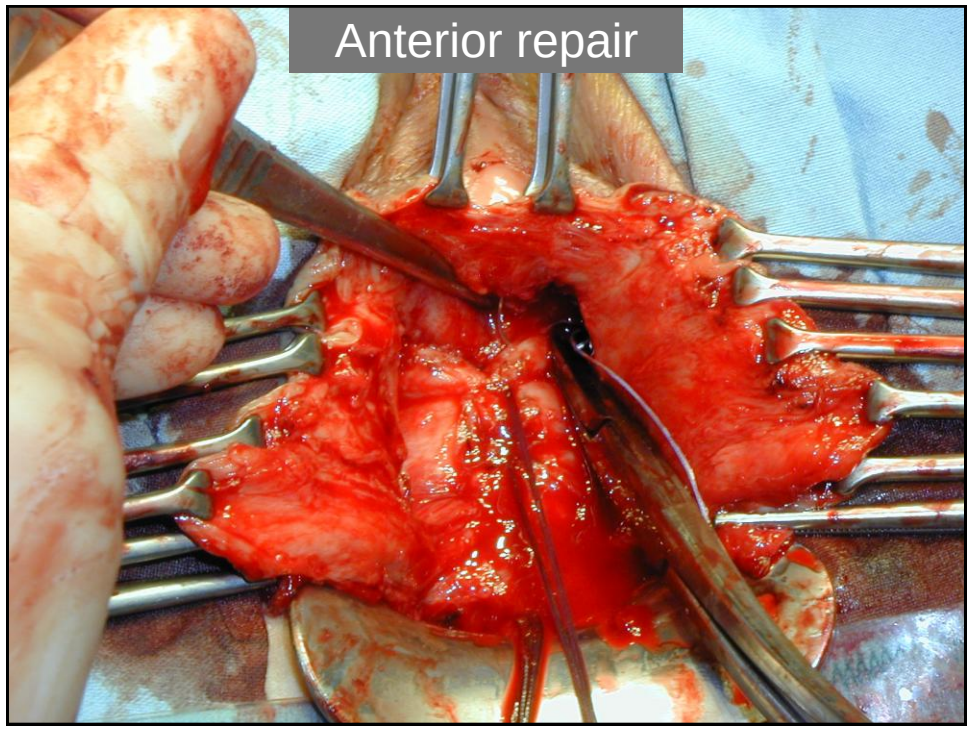
Septum between vagina and rectum

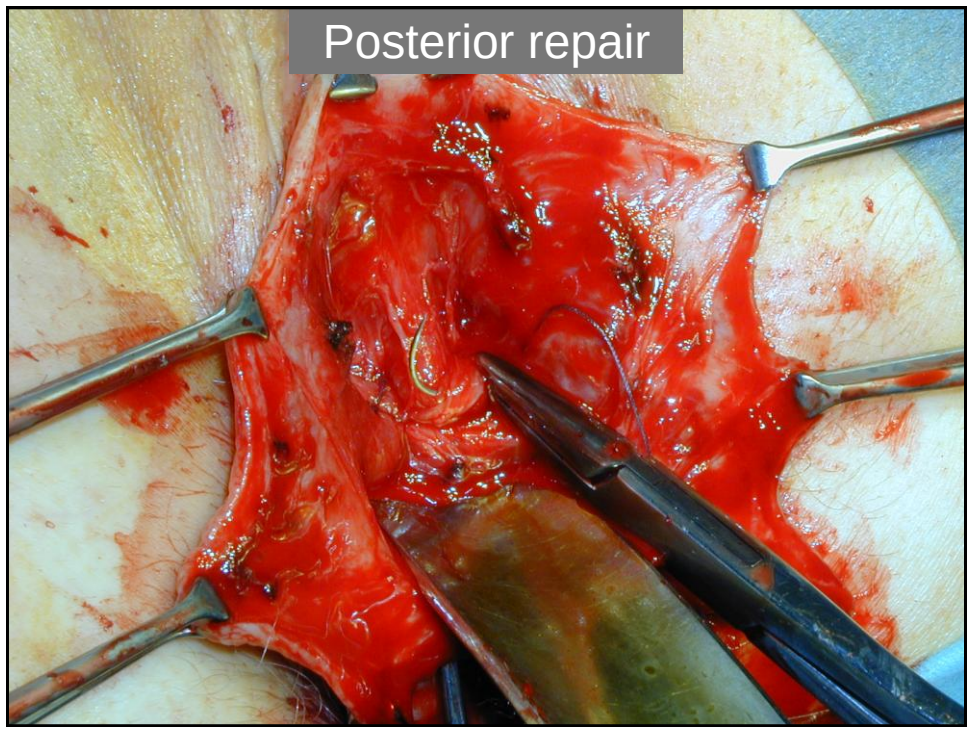


x) *Septo-vaginal space*

Recto-vaginal septum

xx) *Septo-rectal space*


Anterior repair


Posterior repair

Landmarks

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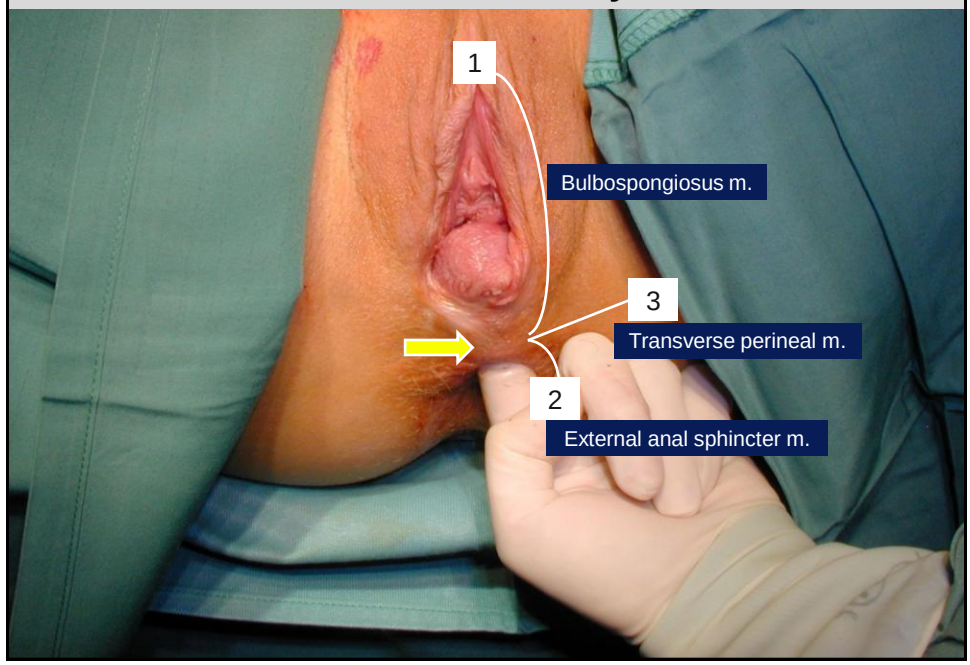
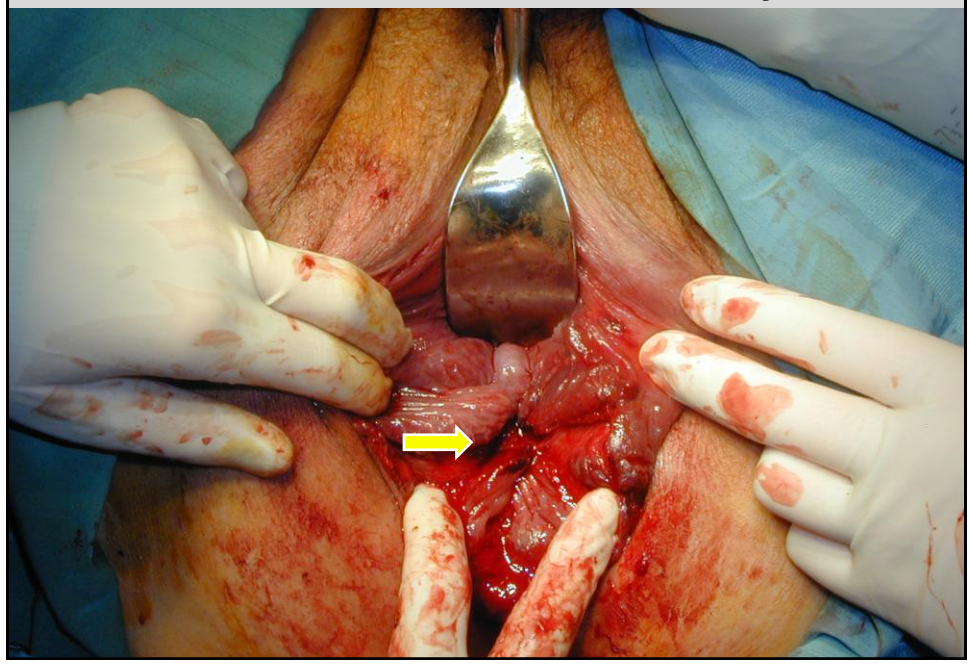
Perineal body

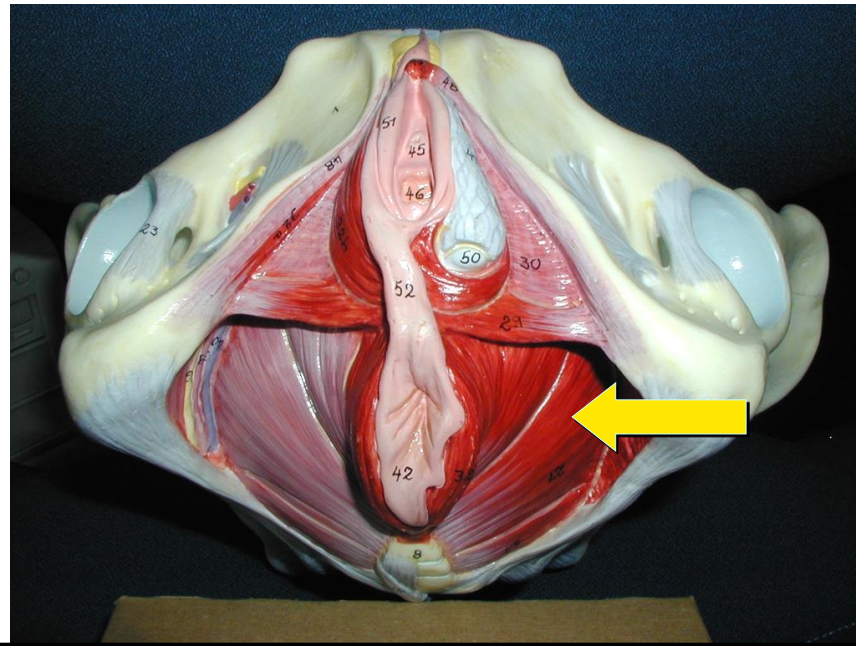
Perineal body



IV° Tear – No Perineal Body



Ischio-rectal fossa



P O P – Q

Pelvic Organ Prolapse - Quantification

Andrea Dungl | Thomas Aigmueller
workshop ICS / IUGA Toronto 2010

Standardisation of terminology

- ICS (International Continence Society)
- AUGS (American Urogynecologic Society)
- SGS (Society of Gynecologic Surgeons)

- Bump et al. Am J Obstet Gynecol. 1996

Why?

- Quantification of prolapse
- Compare outcome of surgical repair
- Interindividual reliability
- Standards in written publications and scientific presentations

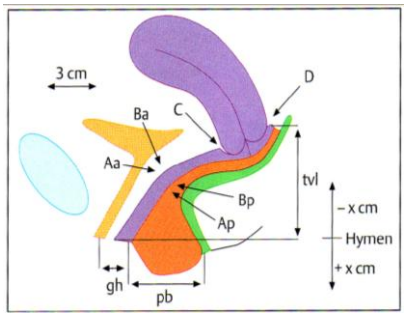
Different

- Measurements: centimeters
- Hymen fixed point of reference
  - Plane of hymen defined as „zero"
  - above = negative number
  - below = positive number

P O P – Q

6 points

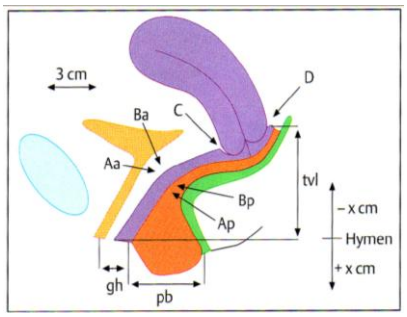
- anterior: Aa, Ba
- Apex: C, D
- posterior: Ap, Bp



P O P – Q

3 measurements

- gh - genital hiatus
- pb - perineal body
- tvl - total vaginal length

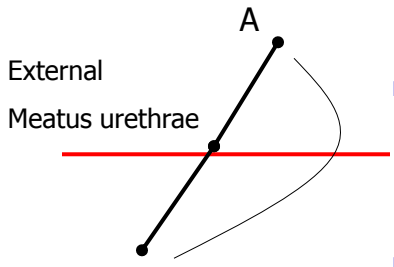


POINT A

- Anatomical defined
- Midline of anterior/posterior vaginal wall
- 3 cm proximal to external urethral meatus urethrae or hymen
- Range of position = -3 to +3

POINT A

Hypomochlion Meatus urethrae ext.



- - 3

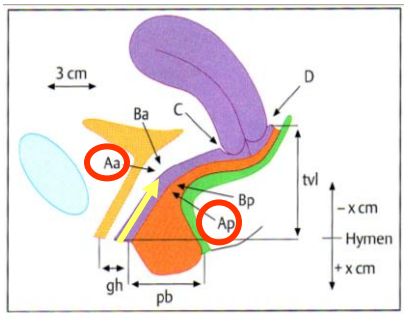
Hymen as reference

- +3

Aa (=anterior) / Ap (=posterior)

Defined points

- Midline anterior vaginal wall, 3cm above external urethral meatus,
  approximate location of urethrovesical junction
- Midline posterior vaginal wall, 3cm proximal to the hymen

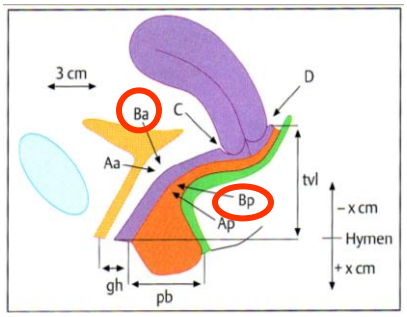


POINT B

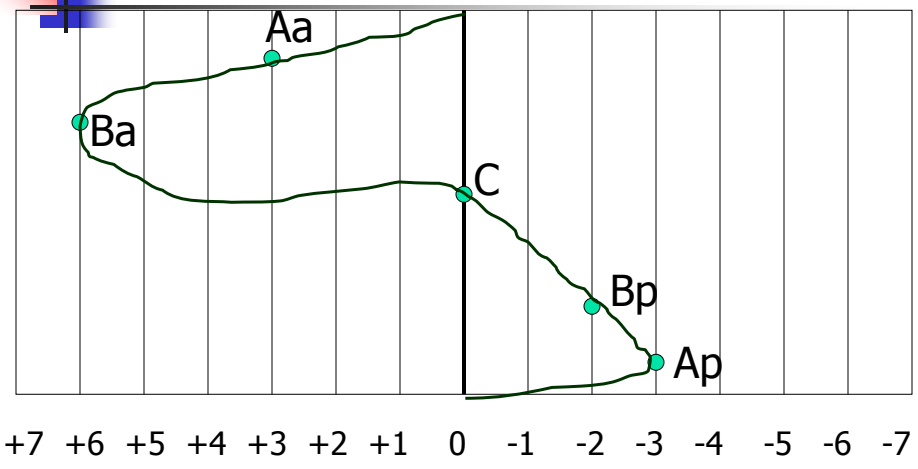
- Dynamic / variable point
- Most distal position of any upper vaginal wall between the anterior fornix or cuff and A
- Value –3 cm in absence of prolapse

Ba (=anterior) / Bp (=posterior)

- Dynamic or variable points
- Most distal point of any part of anterior or posterior vaginal wall from the vaginal cuff or cervix to point A



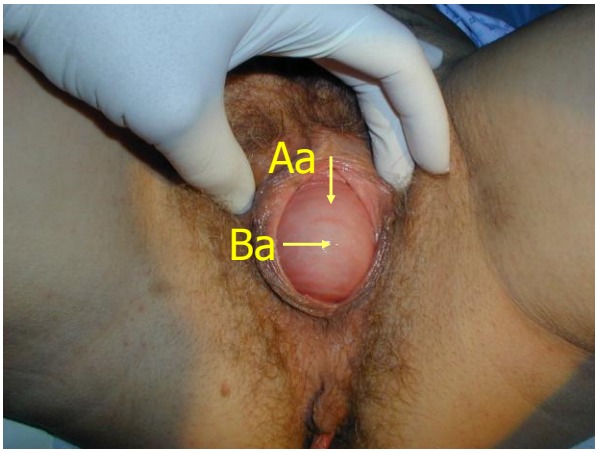
Line diagram



Why do we need A and B?

- Urethrovesical junction
- Which portion of vaginal wall is most distal?

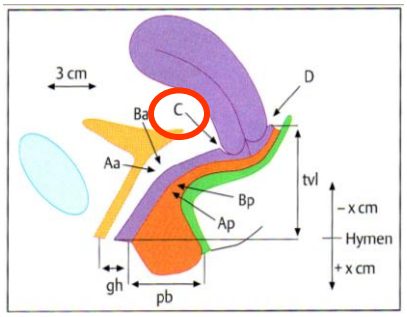
Position of A and B?



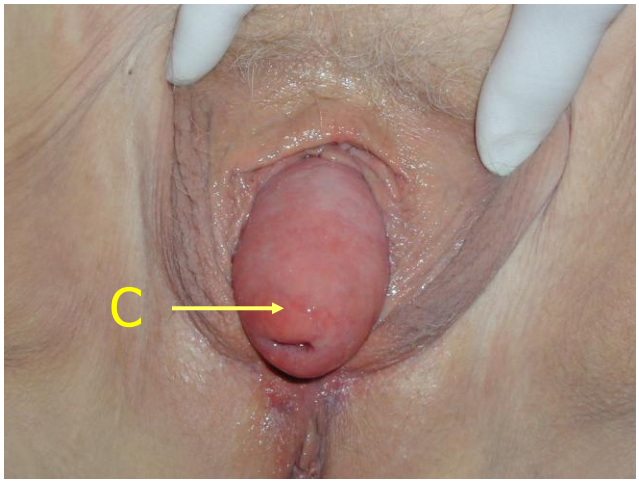
C = Cervix, Cuff

Most distal edge of the cervix or

Leading edge of the vaginal cuff (hysterectomy scar)



Point C



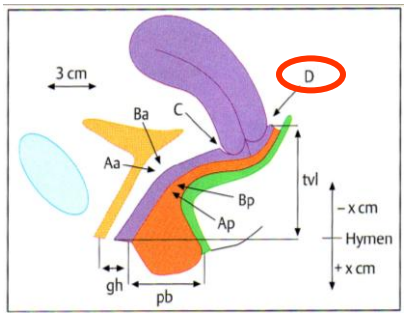
D = Douglas

Posterior fornix or Pouch of Douglas

Represents the level of uterosacral ligament attachment to the posterior cervix

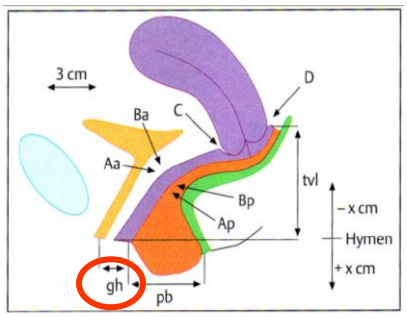
(Diff.:Suspensory failure/cervix elongation)

No cervix = no „D" !



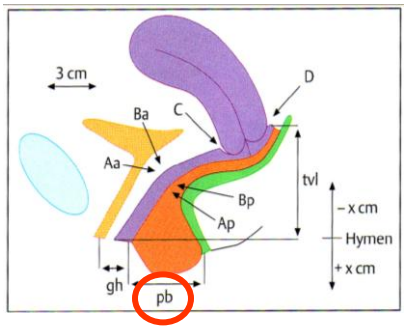
gh = genital hiatus

Middle of external urethral meatus to the posterior hymen



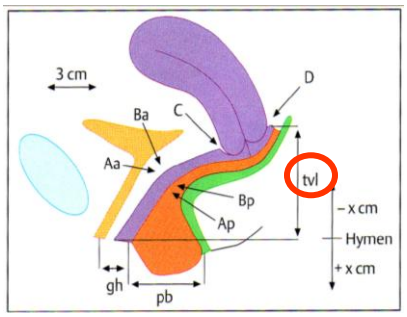
pb = perineal body

Posterior margin of genital hiatus to midanal opening



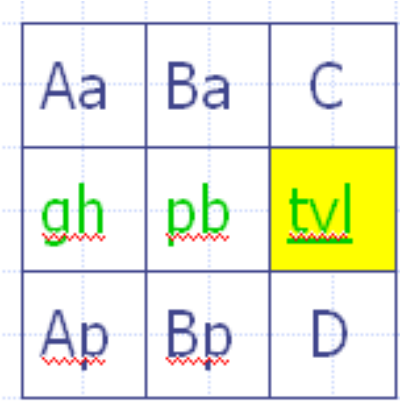
tvl = total vaginal length

- Greatest depth of the vagina in cemtimeters
- C and D in normal position



Measurement without straining !

The GRID



Stages of pelvic organ prolapse

- Stage 0 = no prolapse
  - Aa, Ba, Ap, Bp are all at –3
  - C or D between tvl and < tvl –2cm
- Stage I = most distal portion>1cm above the level of hymen
- Stage II = <1cm proximal to or distal to the plane of hymen
- Stage III = >1cm below the plane of the hymen
- Stage IV = complete eversion, distal portion at least (tvl -2 cm)

Physical examination technique

- Position of subject
- Type of vaginal specula
- Straining or coughing
- Bladder empty?
- Method of quantitative measurements

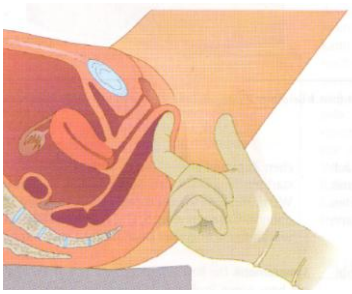
Physical examination technique

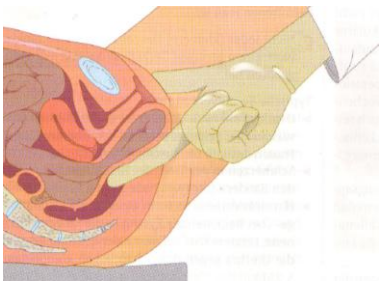
- Protrusion of vaginal wall during straining
- Tractions causes no further descent
- Subject confirms the size of prolapse
- Standing straining examination confirms full extent of prolapse

Measurement - tape

Missing

DD: Rectocele vs. Enterocele





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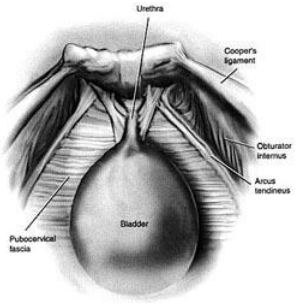
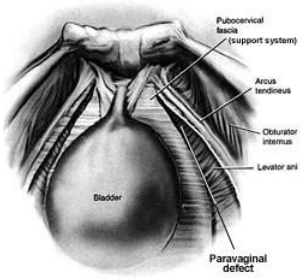
DD: lateral vs. central defect





Thank you
for your attention !