



**FACULTY  
OF MEDICINE**  
Masaryk University

**Masaryk University School of Medicine  
and Brno University Hospital**

**Department of Obstetrics and Gynecology**

**Head: Prof. Pavel Ventruba, DrSc.,MBA**



# UROGYNECOLOGY



**General Medicine Obstetrics and Gynecology  
Seminary 2017 – 2018 – Autumn Semester**

# UROGYNECOLOGY

**as. MUDr. A. Ivan Belkov  
2018 – 2019**

**General medicine - autumn semester**

# UROGYNECOLOGY ?



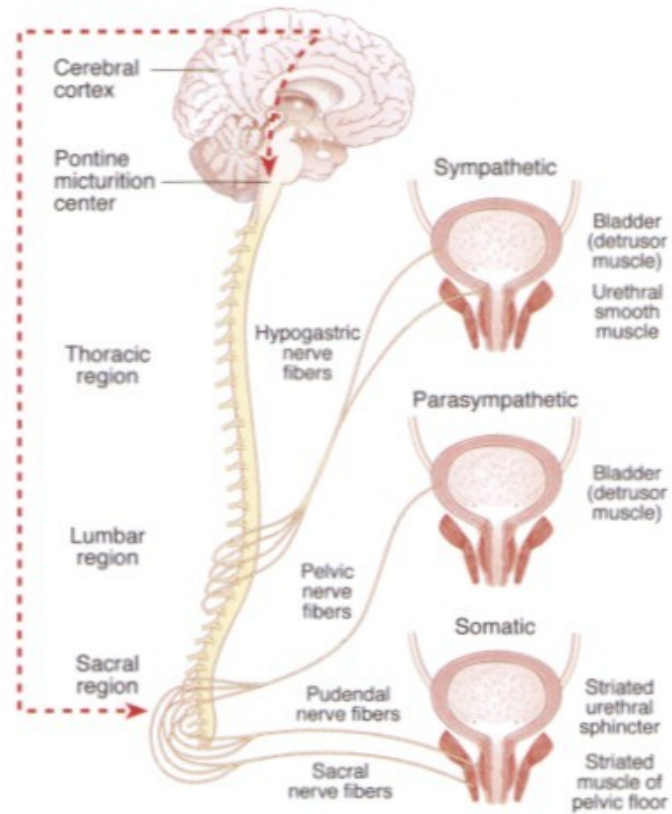
# UROGYNECOLOGY :

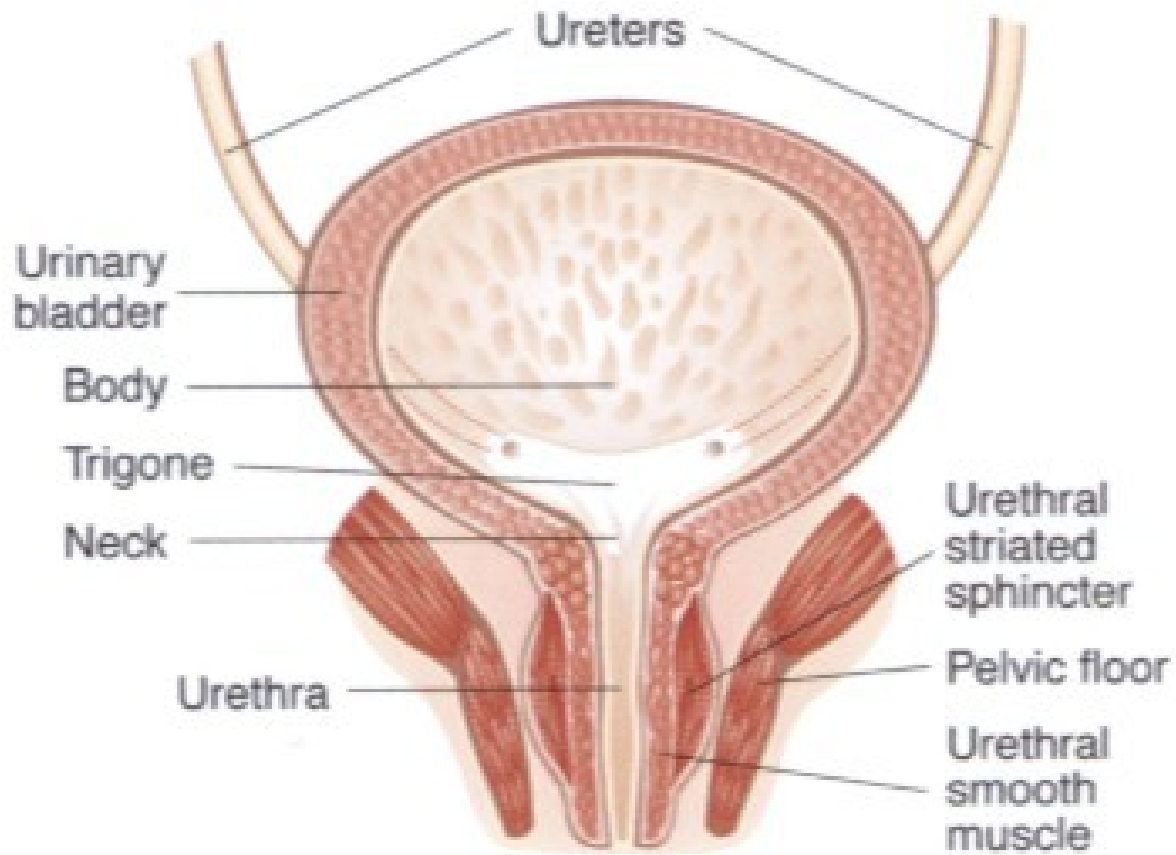
- **Management of urine incontinence**
- **Main topic:**
  - \* **Diagnosis and therapy of urine incontinence**
  - \* **Inflammation of lower urinary tract**
  - \* **Reconstruction of pelvic floor**

# URINE INCONTINENCE

## Definition:

- Uncontrolled leakage of urine
- Not disease, but a complex of pathological and functional disturbances





## Incidence of urine incontinence :

- about **14 %** women above age 30.
- In postmenopausal age increased urine incontinence by more than **50 %** in women population

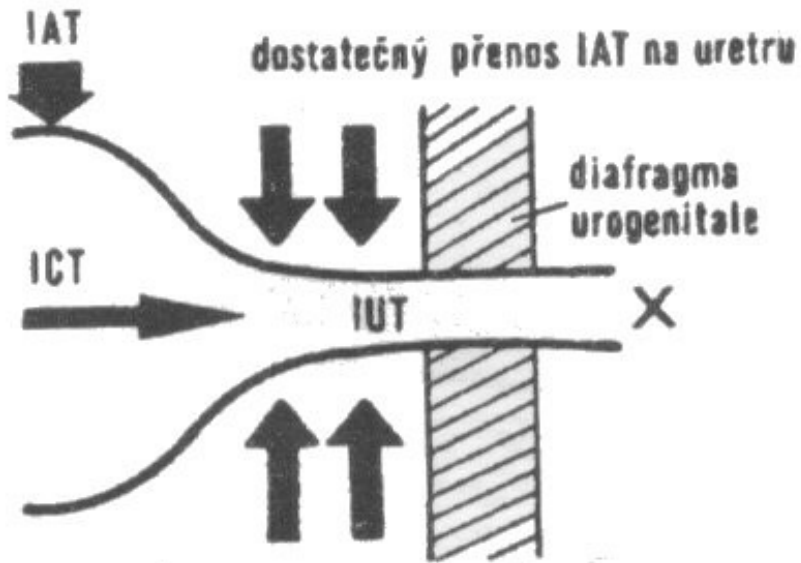


# Factors leads to UI

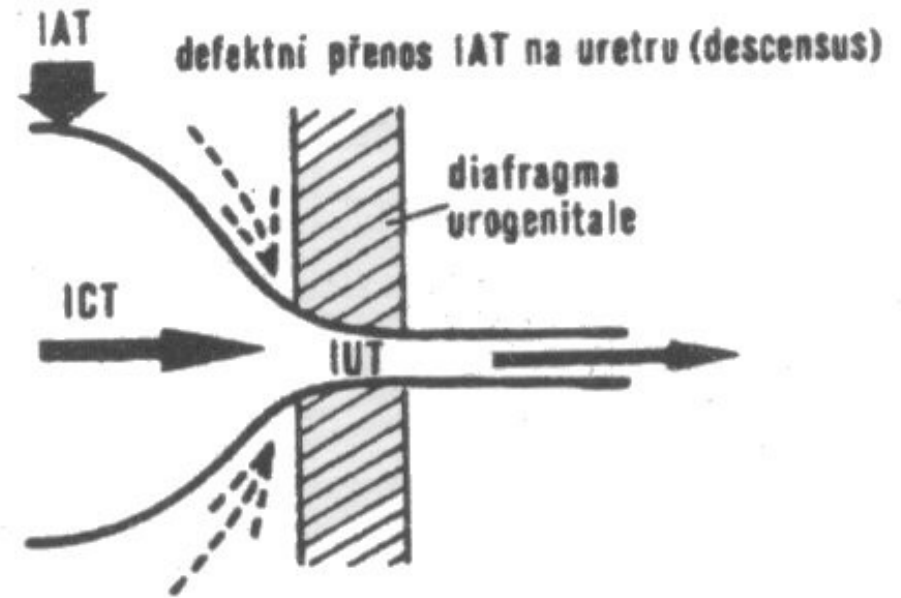
- **Childbearing ( 4000g)**
- **Chronic intraabdominal pressure**
- **Obstetric operations**  
( vakuumentractor, forceps )
- **Recidive inflammation of urine**
- **Loss of the ligamenta elasticity**

# Theory of incontinence

## KONTINENCE



## INKONTINENCE



# Risk factors of incontinence:

- **Restricted mobility**
- **Drugs with diuretic effect**
- **Smoking**
- **Increased number of childbirth**
- **Babies weight more than 4000g**
- **High BMI**
- **Diabetes mellitus**
- **Stroke**
- **Enuresis nocturna in childhood**

# Clasificación of incontinence

- **stress incontinence**
- **urgent incontinence**
  - **motoric**
  - **sensoric**
- **mixed incontinence**
- **neurological incontinence**
- **extrauretral incontinence**

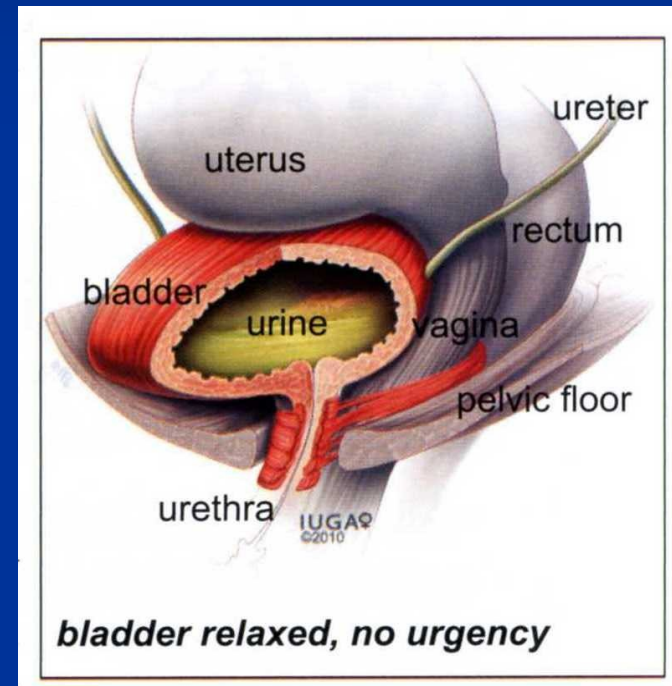
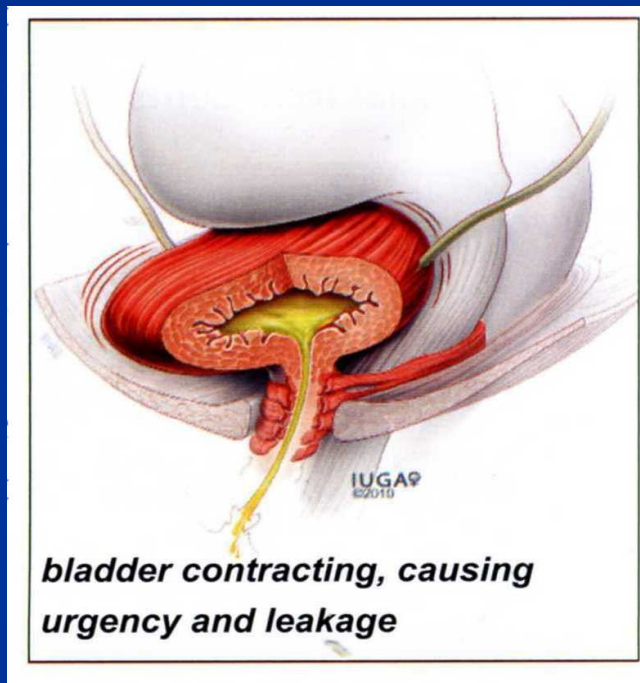
# Stress incontinence:

- Leak by increased intraabdominal pressure (cough, sneezing, running e.c.)
- by hypermobility of uretra
- by hypotonia of uretra
- **ICS definition ( International Continence Society)**  
leak by increased vesical pressure over uretral pressure without contraction of detrusor

# Urge incontinence :

- Leakage connectit with strong desire (functional disturbance)
- **Cause-** incrised irritation of bladder wall
- **Patofyziology-** caused by incriesed senzoric impulzy from receptors located in bladder wall or less inhibition of micturition reflex

# Overactiv Bladder(OAB)



# Symptoms of Urge incontinence:

**polakisuria (8x)**

**nocturia (2x)**

**imperativ desire to void**

**psychologic disposition**

- **cause:** neurological, idiopathic, stenotic uretra



# Mixed incontinence :

- **Leakage caused by increased irritation of bladder wall and anatomic changes of bladder and uretra**

# Incontinence caused by neurological diseases :

- **Leakage of urine by degenerative diseases of CNS :**
  - **Morbus Parkinson**
  - **Sclerosis multiplex**
- **Or after injury of spine and spinal cord**

# Extrauretral incontinence

- **Hypospadia**

(hereditary defect)

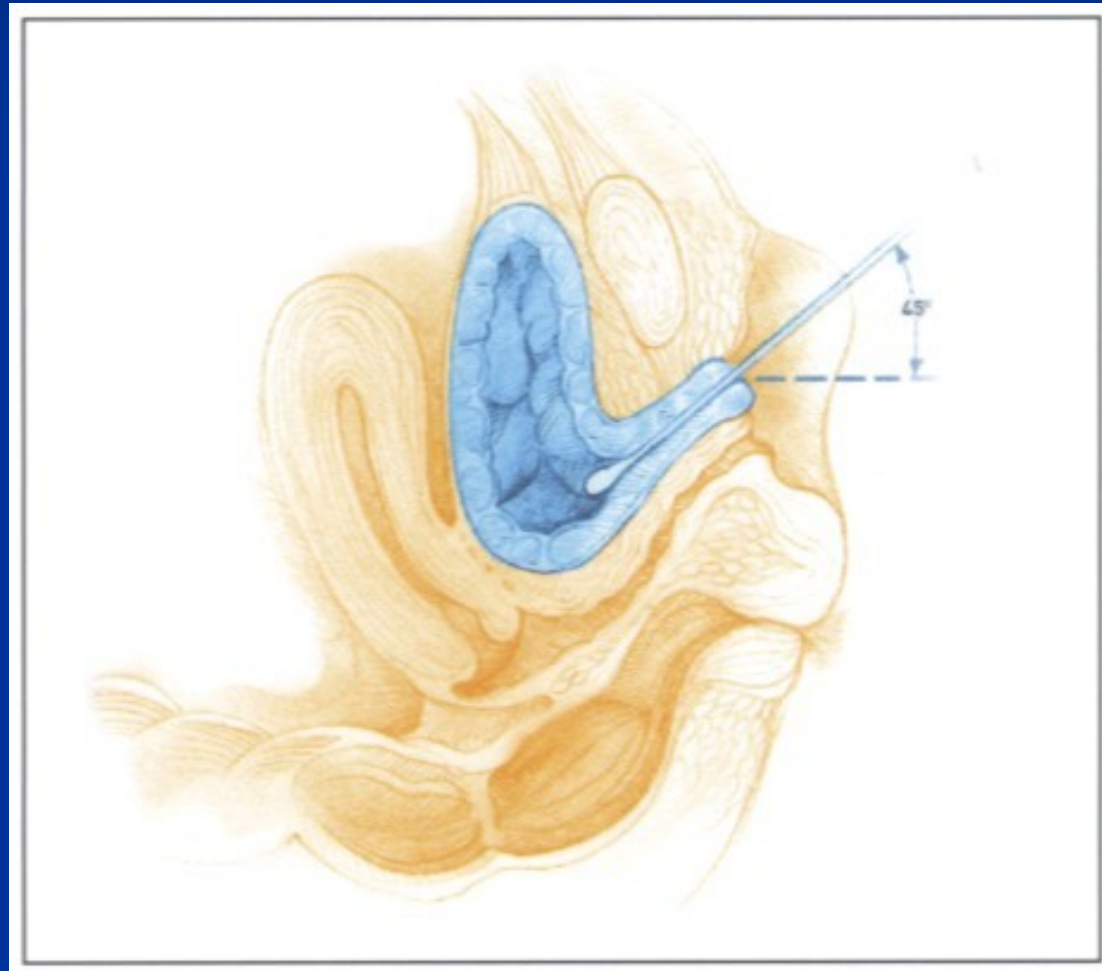
- **Fistula**

(vesicovaginalis, uretrovaginalis)

# Diagnosis of incontinence:

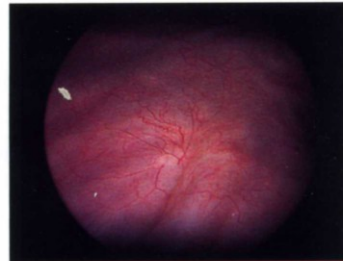
- **history**
- **gynecologic examination**
- **diagnostic test's**
- **ultrasound**
- **cystoscopie**
- **urodynamic examination**

# Q - typ test :

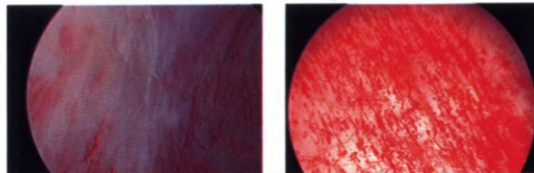


# Cystoscopic pictures

*Normal bladder at cystoscopy*



*Bladder mucosa (lining) of patients with interstitial cystitis*



# Urodynamic unite :



# 1. Cystometrie :

- **measurements of relation between volume of bladder and intravesical pressure**
- **we do:**
  - **intravesical pressure (Pves)**
  - **abdominal pressure (Pabd)**
  - **detrusor pressure (Pdet) = Pves – Pabd**
  - **first sensation, normal desire and strong desire to void**
  - **maximal cystometric volume**

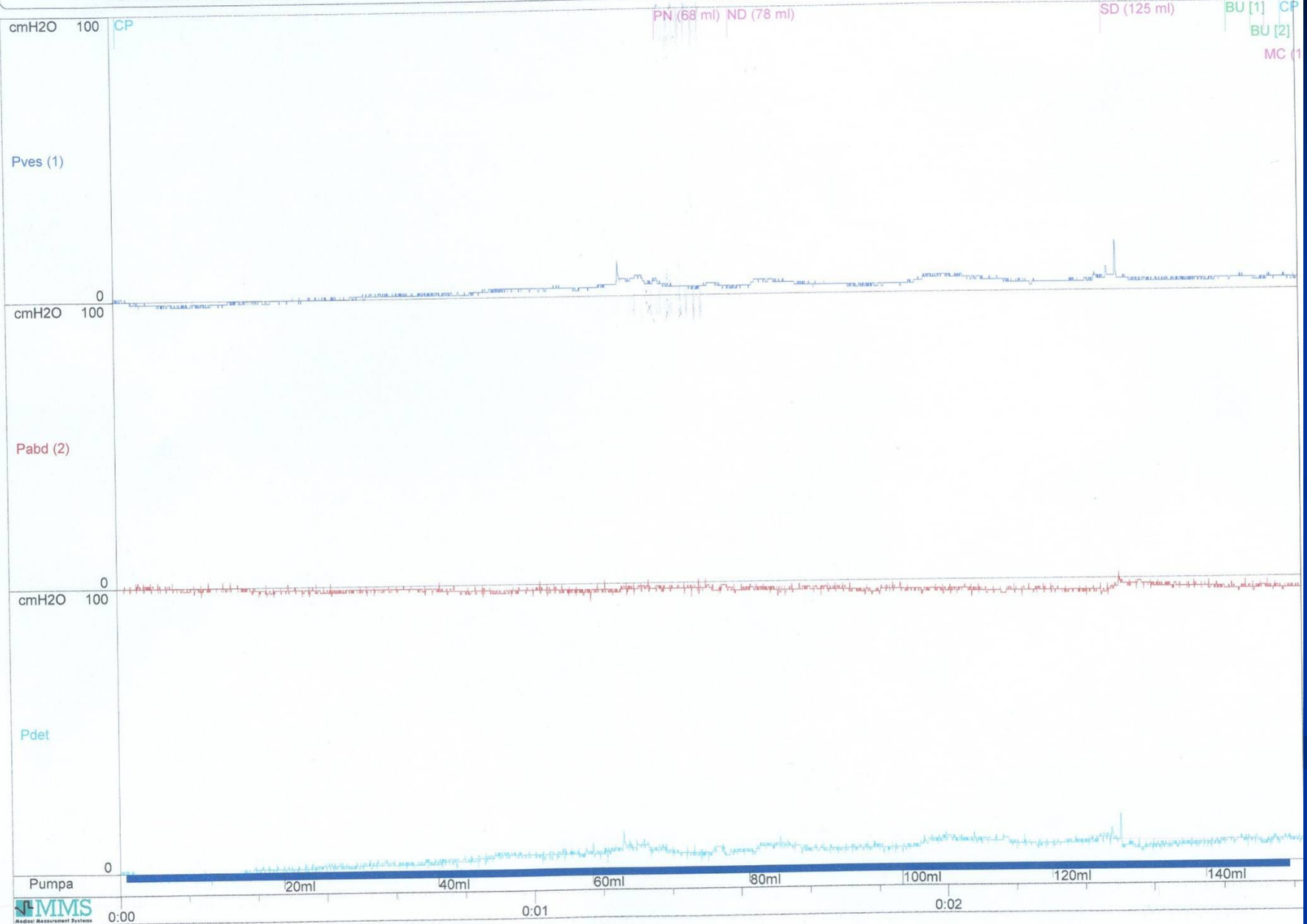


Pacient: .....  
Nemocnice: Porodnice, Obilní trh

Datum narození:  
Datum vyšetření: 27.02.2009

Kód nemocnice:  
Konzultant: Belkov

Test #: 01 Stránka: 1  
Vyšetření: Cystometrie



## 2. Uretral pressure profile :

### ■ Parameters:

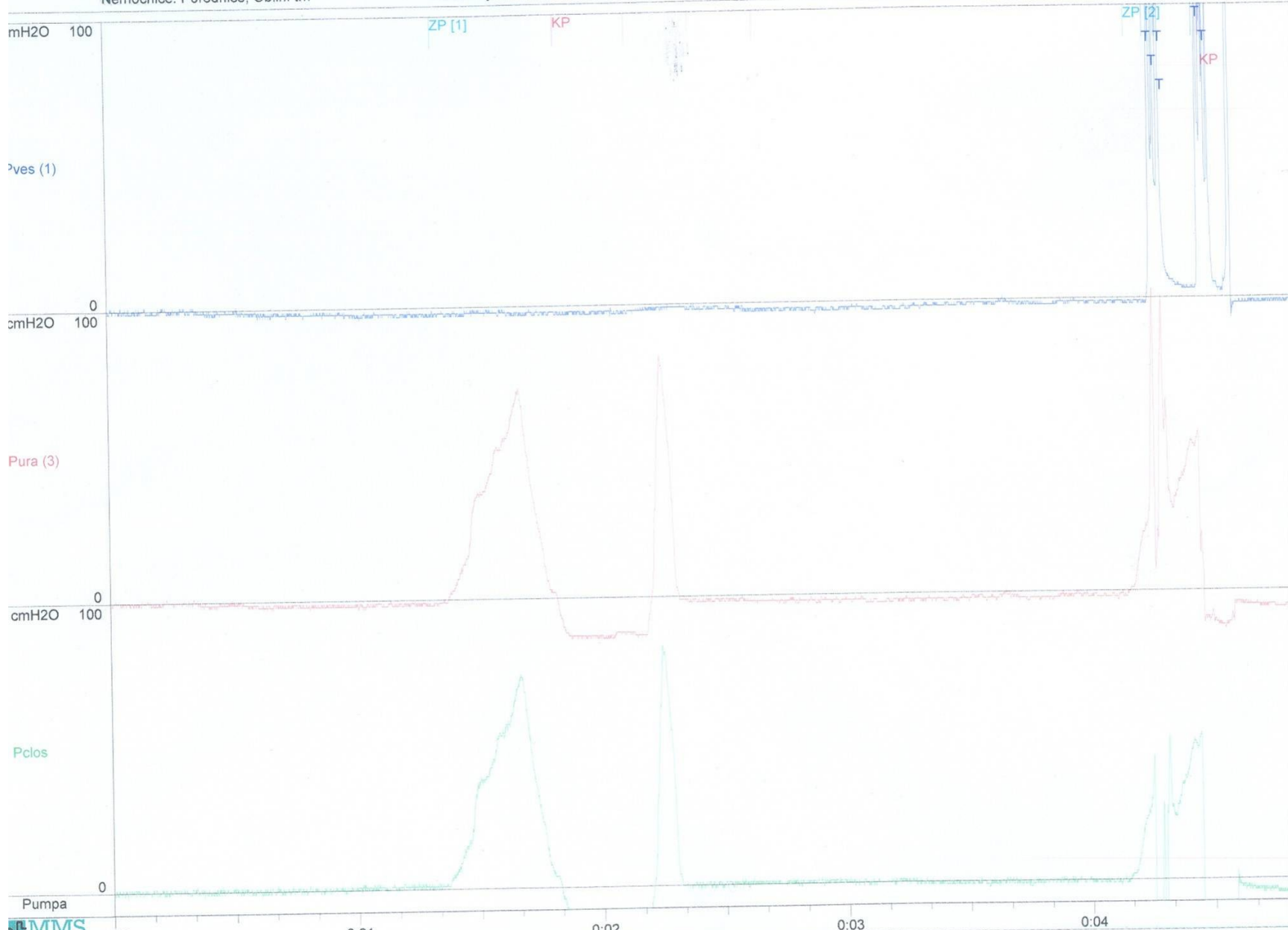
- maximal uretral pressure (P<sub>ura, max</sub>)
- maximal uretral close profile (MUCP)
- functional length of uretra (FUL)

Pacient: Krajčová, Viera (Žena)  
Nemocnice: Porodnice, Obilní trh

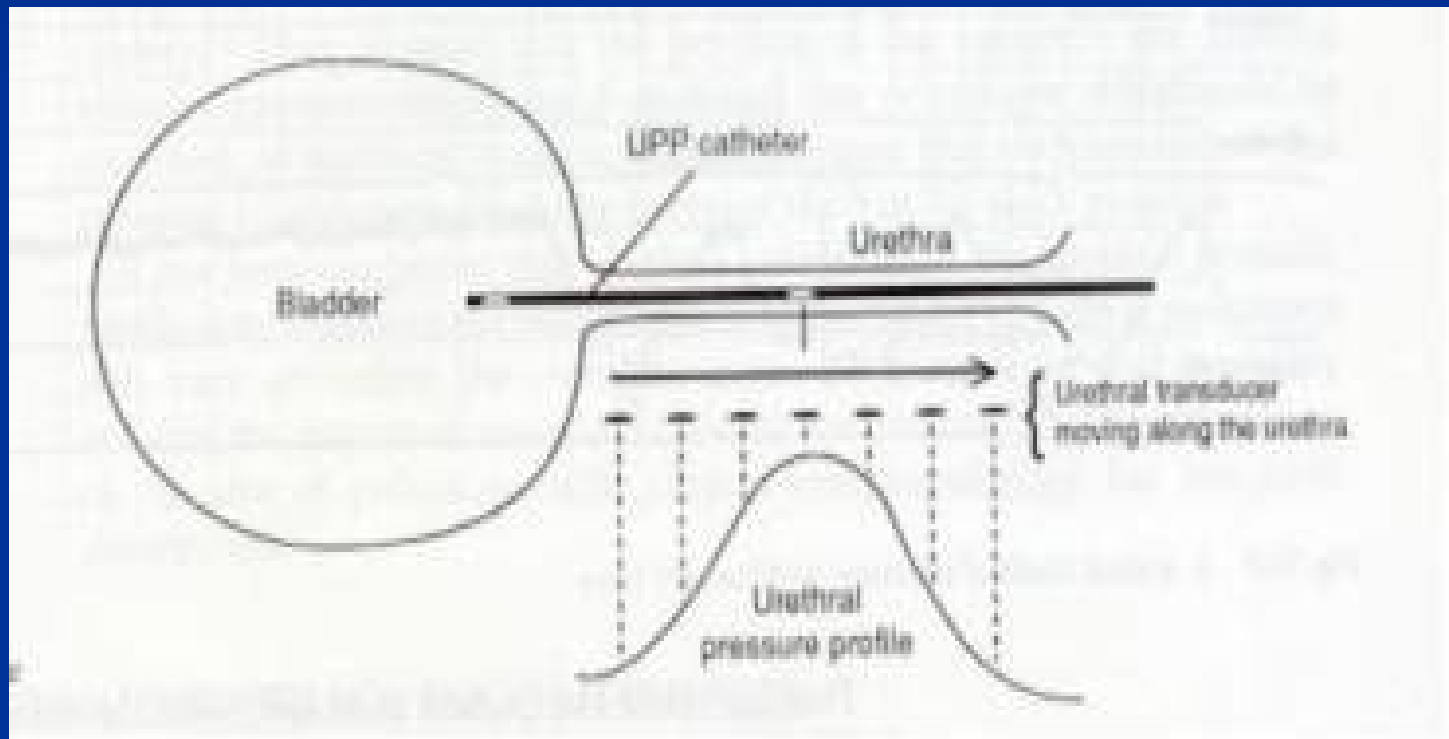
Datum narození:  
Datum vyšetření: 27.02.2009

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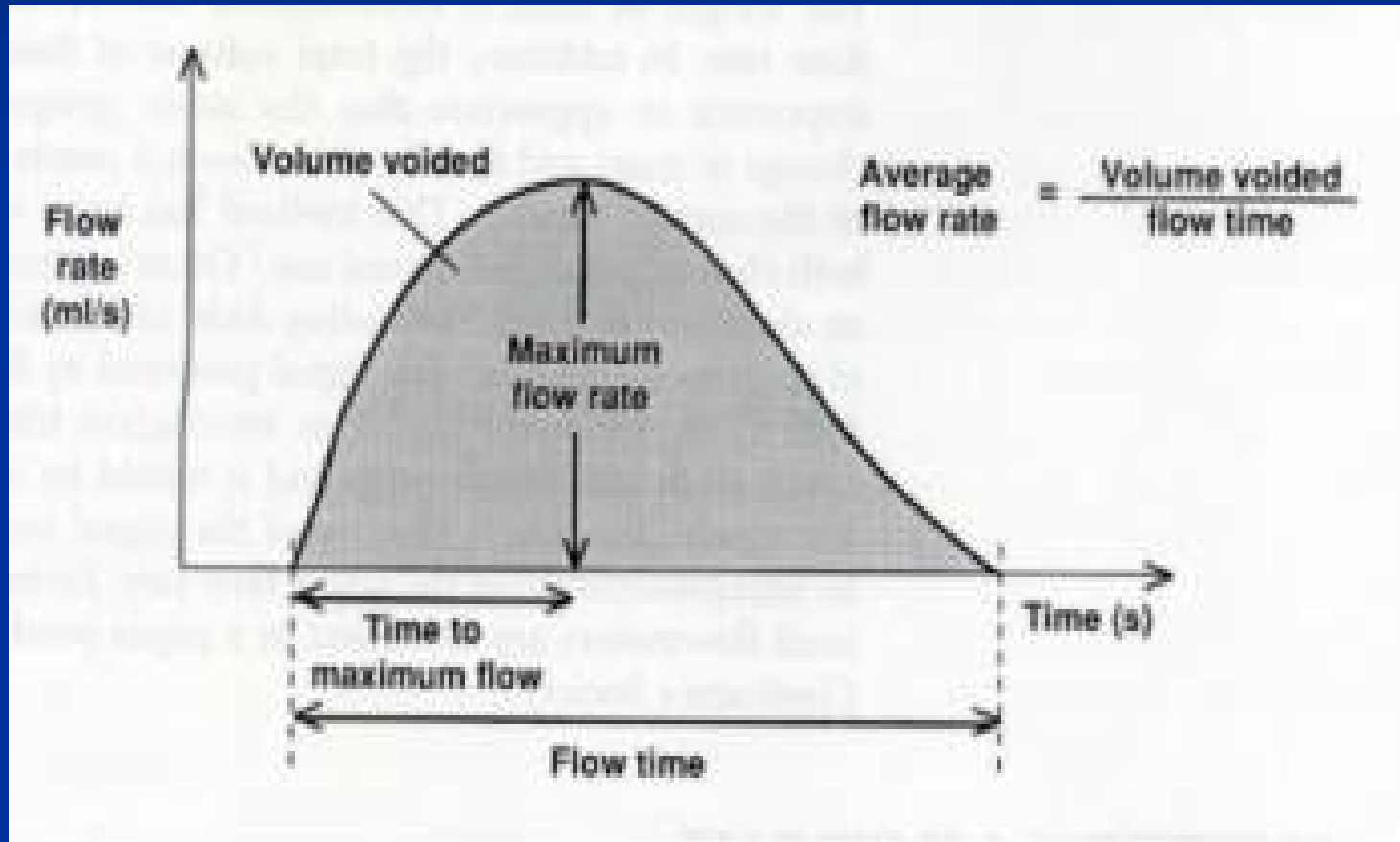
Test #: 02 Stránka: 1  
Vyšetření: Uretrální tlakový profil



# Measurement of UP :



# Uroflow :



# Therapy of urge incontinence

- **psychoprophylaxy**
- **Daily pelvic floor muscle excercise**
- **Bladder drill**

# Farmakoterapie :

- **parasympatolytika** (Oxyphenon, Spasmex, Toviaz )
- **spasmolytika** ( Ditropan, Cystrin )
- **anticholinergica** ( Vezicare )
  
- **sympatomimetika** ( Gutron )
- **sympatolytika** ( Xantral )
- **betablokátory Ca<sup>2+</sup> kanálů** ( Isoptin )
  
- **antidepresiva** ( Melipramin )
  
- **inhibitory syntézy prostaglandinů** ( Indren )
- **antiparkinsonika** ( Parlodel )
- **estrogeny** ( Ovestin, Ortho-Gynest )

# Therapy of SIU:

- **Excercises** – contraction and relaxation of specific pelvic floor muscles
- **Elektrostimulation** – positiv influence on the muscles contractions
- **Peessaries and devices for non-surgical treatment**



# Vaginal conusis



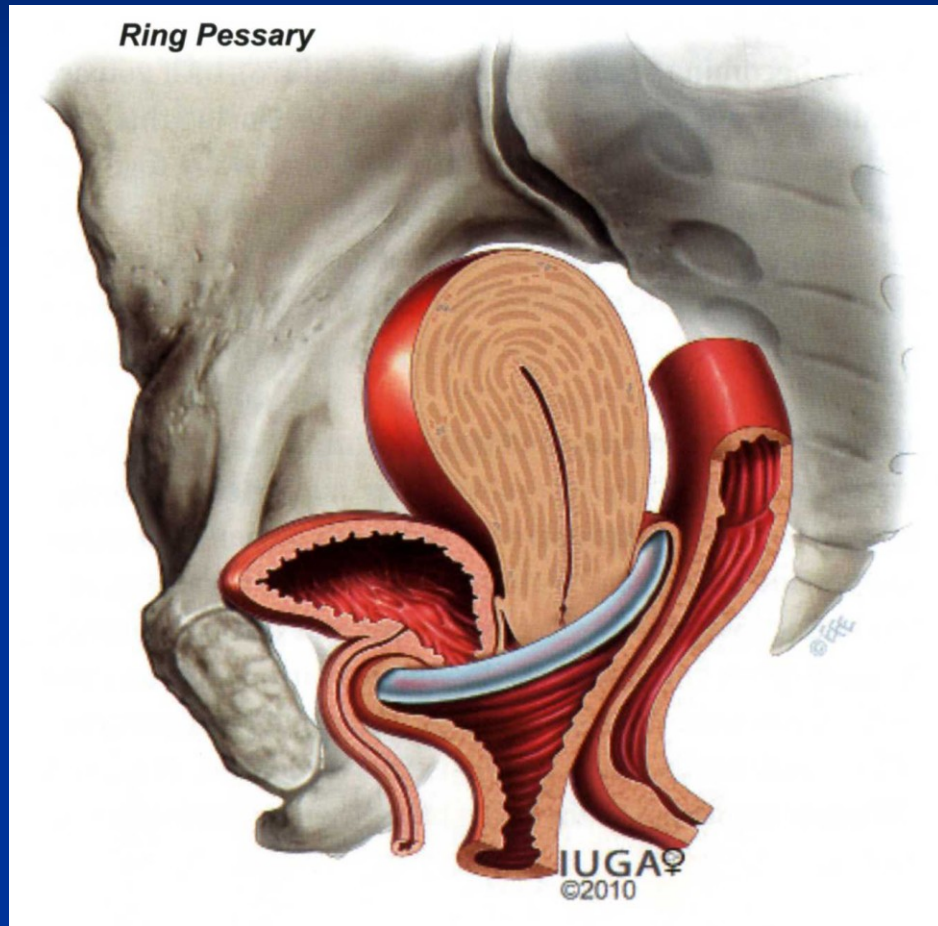
# Vaginal devices :

- **The effectiveness of devices are small and short**
- **Recomandit only in cases where the operativ treatment is contraidicated**
- **Uretral occlusive devices,intrauretral devices**

# Frank's cubic pessary:



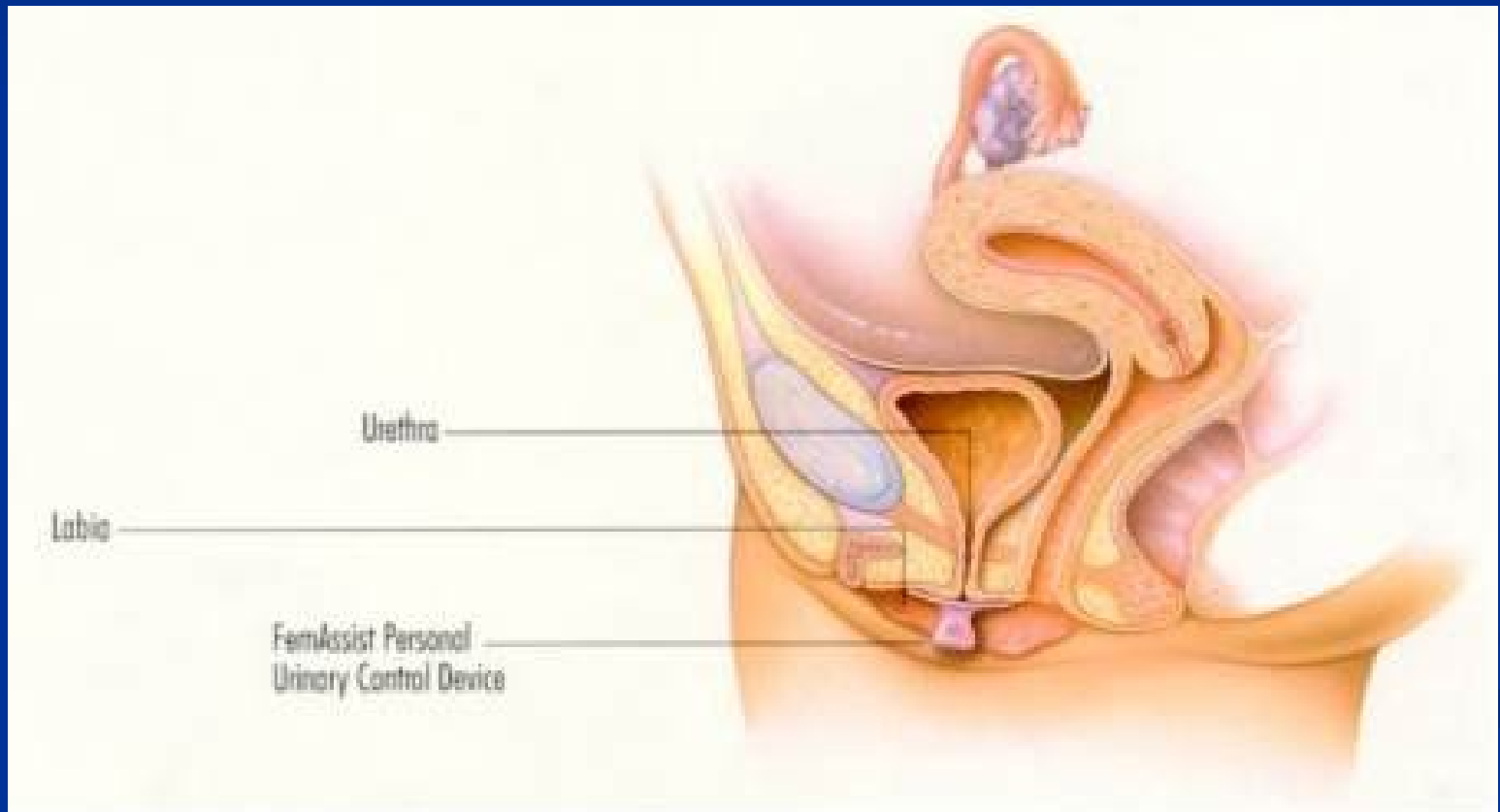
**Ring Pessary**



# Uretral prosthesis:



# Urethral suction cap:



# History of operative treatment of SUI

<b>BAKER a BROWN</b>	<b>1864</b>
<b>GIORDANO</b>	<b>1907</b>
<b>KELLY</b>	<b>1913</b>
<b>STOECKEL</b>	<b>1920</b>
<b>MARSHAL - MARCHETTI - KRANTZ</b>	<b>1949</b>
<b>BURCH</b>	<b>1961</b>
<b>PEREYRA</b>	<b>1958</b>
<b>STAMEY</b>	<b>1971</b>
<b>RICHARDSON</b>	<b>1981</b>
<b>ULMSTEN</b>	<b>1996</b>

# Operative treatment of SUI:

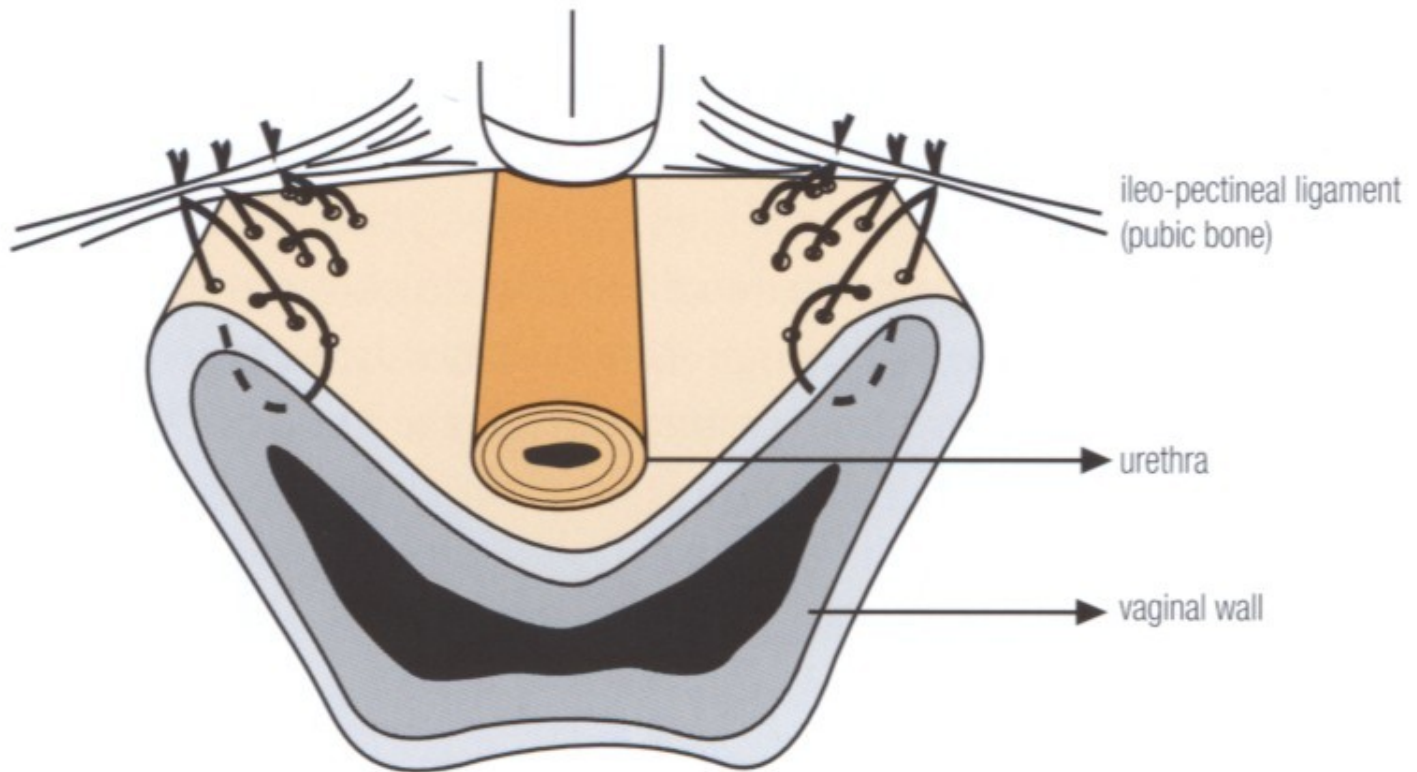
- **URETROPEXE - TVT**  
(tension free vaginal tape)
- **KOLPOSUSPENSION sec. BURCH**
-



# TVT retropubic:

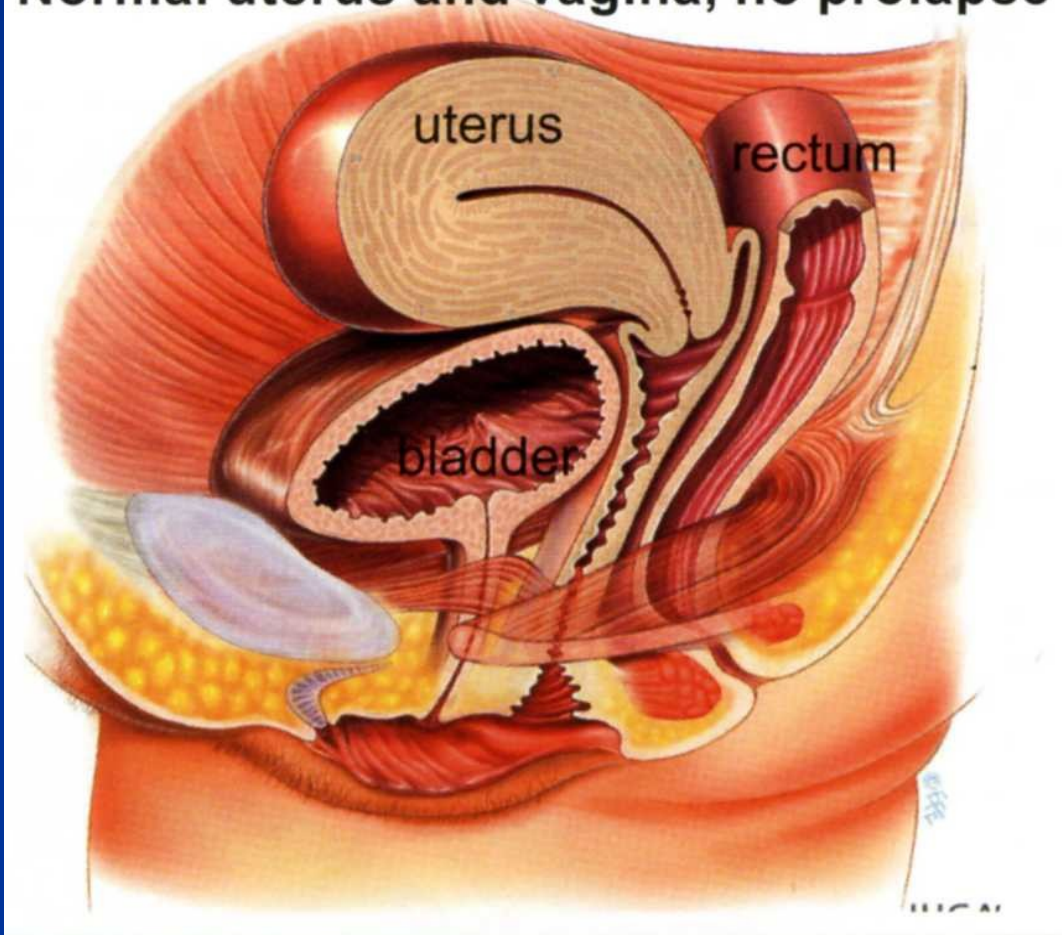


# Kolposuspensionze sec. Burch:



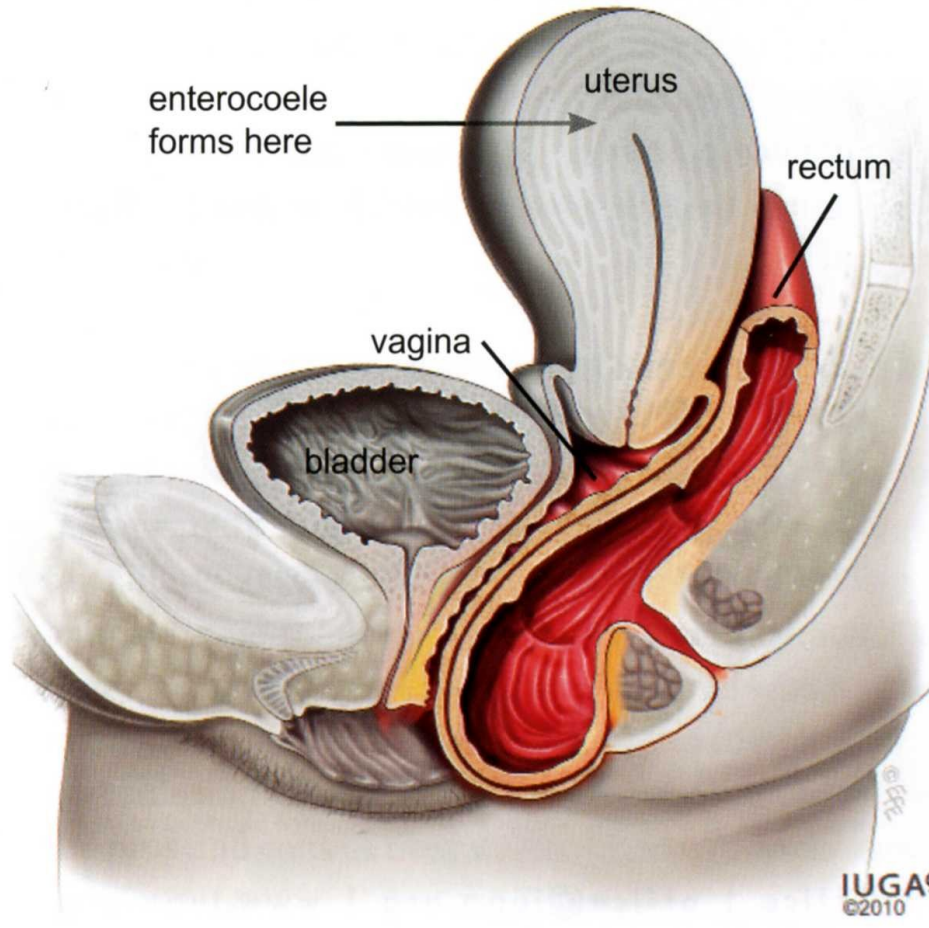
# No prolapse

**Normal uterus and vagina, no prolapse**

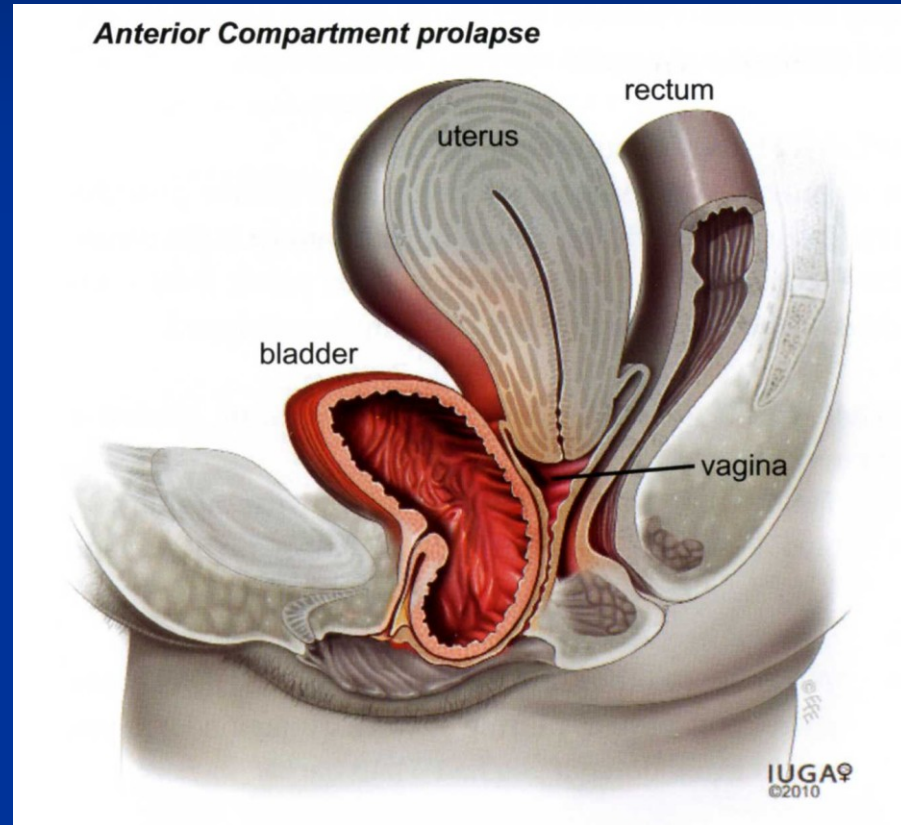


# Rectocele

## *Posterior Compartment prolapse*

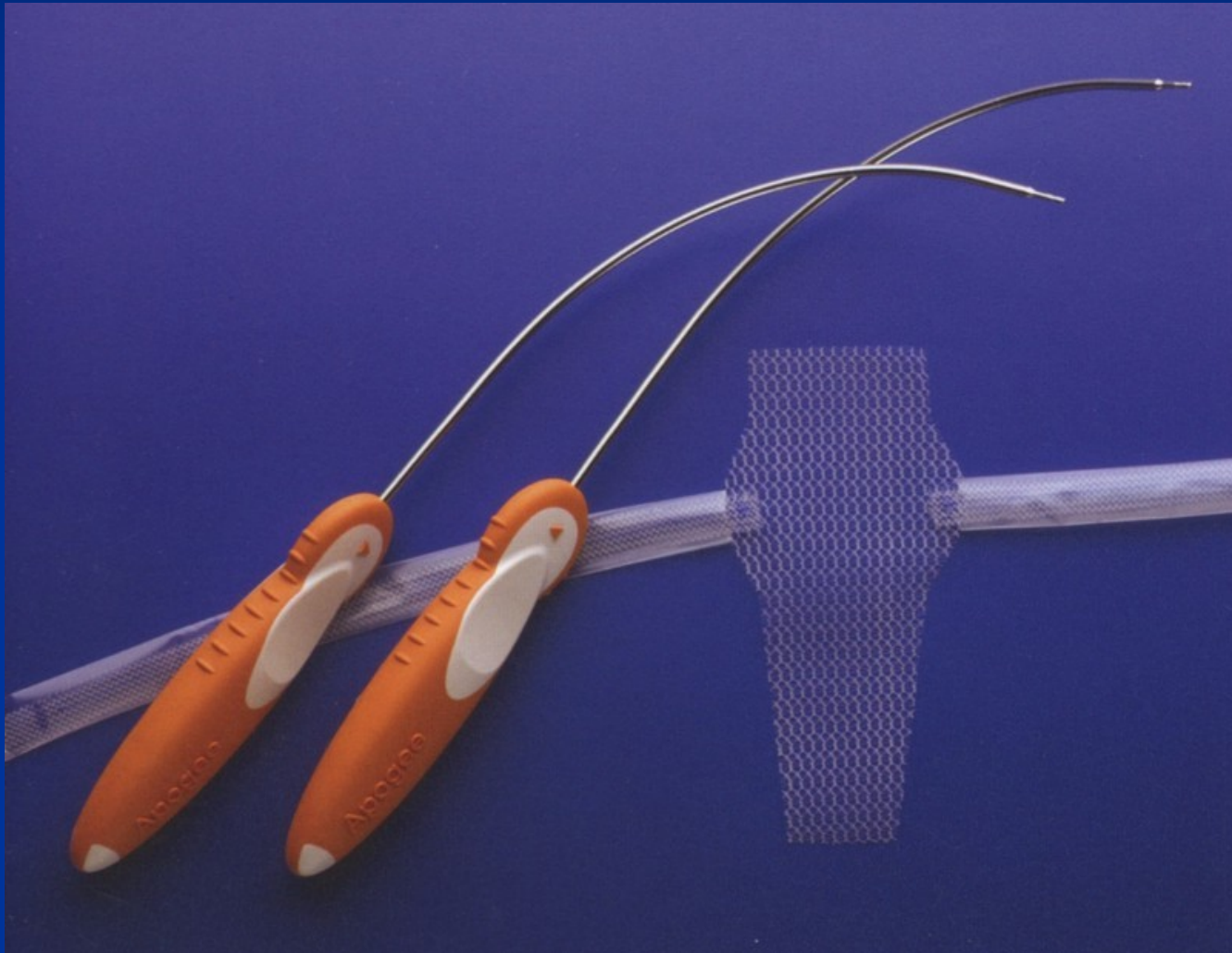


# Cystocele

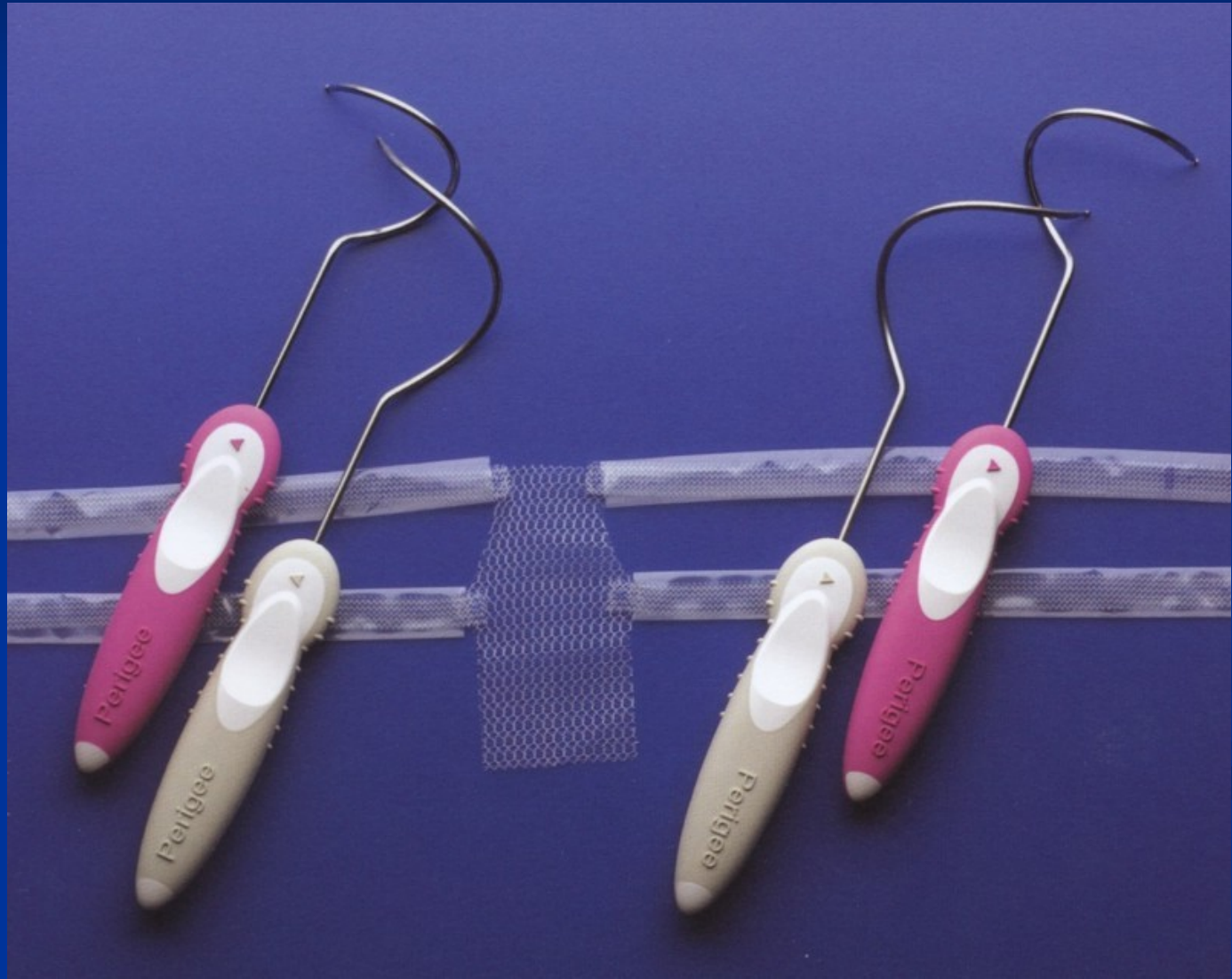




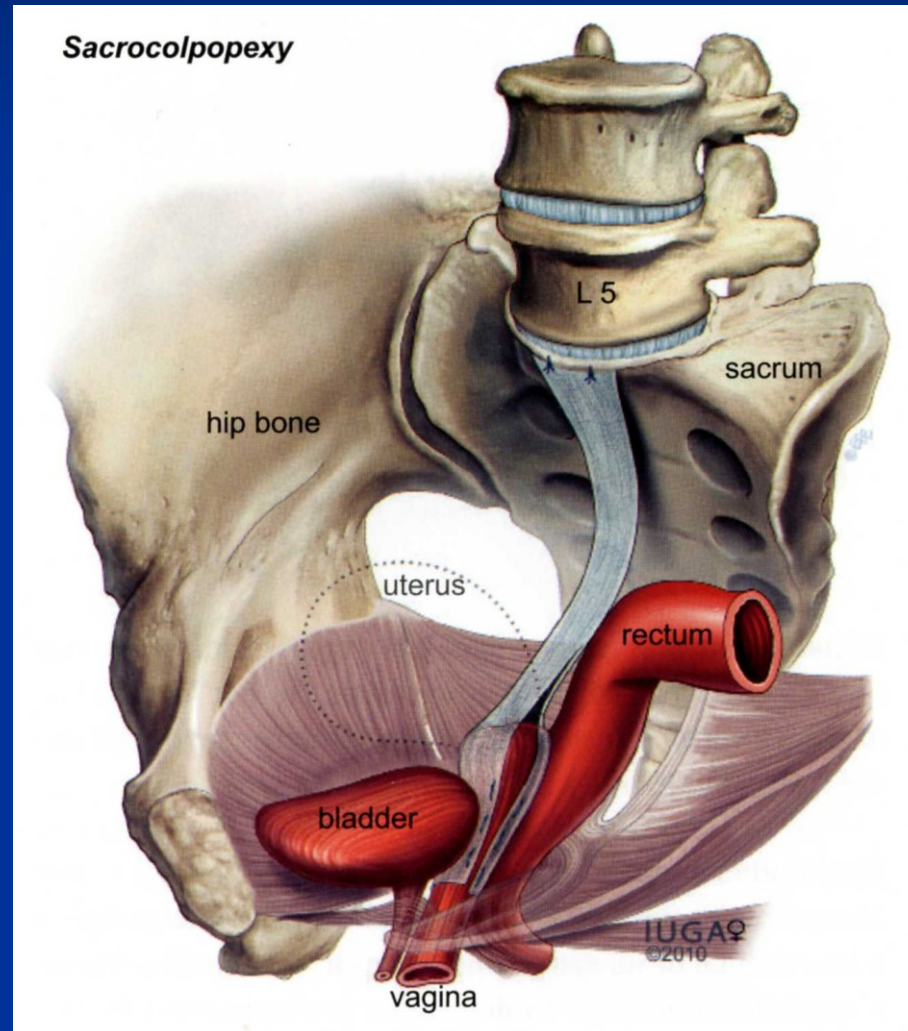
# Komplet síťky a pásky na současné řešení cystocele a inkontinence



# Komplet síťky a pásky na současné řešení prolapsu a inkontinence



# Sacrocolpopexy





# Fistula vesicovaginalis



# END

