Chapter 44
Pelvic Relaxation

What does pelvic relaxation mean and define the main features of it.

- Herniation of the pelvic organs into or out of the vagina.
- Etiology is multifactorial but the main factor is the weakness of the pelvic floor support (especially pelvic diaphragm).
- The most common indication of the hysterectomies in women over 55 years is pelvic relaxation.

What are the etiological factors of pelvic relaxation?

- Pregnancy
- Vaginal delivery
- Increased age
- Menopause, hypoestrogenism, estrogen deficiency
- Chronical increasing of the intra-abdominal pressure; constipation, chronic obstructive pulmonary disease (constantly coughing)
- Pelvic floor traumas; recent operations and hysterectomy
- Connective tissue diseases (e.g., Ehlers–Danlos syndrome)
- Spina bifida

What are the anatomical structures that support the pelvic floor?

- Endopelvic fascia
- Cardinal and uterosacral ligament
- Pelvic diaphragm
  - M. levator ani (m. pubococcygeus, m. puborectalis, m. iliococcygeus)
  - M. coccygeus

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What does cystocele mean, and what are the etiological factors?
- The herniation of the bladder into the vagina from the retropubic area.
- Most commonly related to the defects on the pubocervical fascia, due to the traumas during the labor.
- The grade of the prolapse may increase because of the defects of pubocervical fascia because of hypoestrogenism after menopause.
- Any protrusion or bulge felt on the anterior or superior side vaginal orifice are the signs of the cystocele.

What are the complications of the cystocele?
- Residual urine related complications (cystitis, dysuria, urgency) secondary to the incomplete drainage of the bladder

What are the treatment options of cystocele?
(a) Medical and non-surgical

- Pessary
- Kegel exercises
- Local estrogen for postmenopausal women

(b) Surgery

- **Anterior colporrhaphy** is the most commonly used technique in the surgical treatment of cystocele. It is important to know that, In 2019, the US Food and Drug Administration (FDA) banned the sale and distribution of surgical mesh for use in transvaginal anterior compartment prolapse (ie, cystocele, rectocele) repair because they were unable to confirm that the probable benefits outweighed the probable risks.

What does rectocele mean, how is it physically examined?
- The herniation of the rectum to the lumen of the vagina from the posterior vaginal wall.
- Usually secondary to the traumatic deliveries.
- **Median episiotomy** increases the risk. Other risk factors are menopause and chronically increased intra-abdominal pressure.
- **Sense of vaginal pressure and rectal fullness** are the most common symptoms.

What are the treatment options of rectocele?
(a) Medical

- Fluid intake and use of laxatives

(b) Surgical

- Posterior colporrhaphy

What does enterocele mean, how is it physically examined?
- Protrusion of the small intestines and peritoneum into the vaginal canal.
- Hysterectomy is the most common reason.

- Common symptoms are: urinary incontinence, defecation disorders (tenesmus, constipation, diarrhea, fecal incontinence), pelvic pain, low back pain, dyspareunia.

What are the treatment options of enterocele?

(a) Medical

- Vaginal pessary
- Bacteriostatic and estrogen containing topical agents

(b) Surgical

- Enterocele could be repaired with transabdominal or vaginal approach. Enterocele pouch is obliterated with sacrouterine ligaments and endopelvic fascia by transabdominal approach (Moschcowitz technique).
- The vaginal approach gives the best results in enterocele which occurs after hysterectomy. Colpopexy, sacrospinous fixation, and high sacrouterine ligament suspension (Mc Call Culdoplasty) are mentioned in these kinds of techniques.

What does uterine prolapse mean, and what are the etiological factors?

- The apical supporters of the cardinal and uterosacral ligament weaken and the cervix and uterus descends towards or into the vagina.
- The risk is higher for the retroverted uterus.
- Procidentia is the complete prolapse of the uterus out of the vagina. Risk factors of pelvic organ prolapse are: Vaginal childbirth (strongest risk factor), episiotomy and operative vaginal delivery, age, increased intraabdominal pressure, increased body mass index (some studies do not find any relationship, though), repetitive heavy lifting, chronic constipation, cigarette smoking and chronic obstructive pulmonary disease, chronic coughing, connective tissues diseases (like Ehlers-Danlos and Marfan's syndrome) etc.

What are the surgical and non-surgical treatment options of uterine prolapse?

(a) **Non-surgical**

- Vaginal pessary

(b) **Surgical**

- The surgery in younger patients is recommended to perform after the fertility is completed.
- **Le Fort Operation**
  - In senile patients who cannot overcome a major surgery
  - Internal closure of the vagina
- **Manchester-Fothergill Operation**
  - Performed in younger patients

  - Cervical amputation, shortening of the cardinal ligaments, and anterior colporrhaphy

- Vaginal hysterectomy is performed in most of the cases.

What are the stages of pelvic organ prolapse quantification (POPQ) system?

- **Stage 0:** No prolapse.
- **Stage 1**: The most distal portion of the prolapse is more than 1 cm above the level of the hymen.
- **Stage 2:** The most distal portion of the prolapse is 1 cm or less proximal or distal to the hymenal plane.
- **Stage 3:** The most distal portion of the prolapse protrudes more than 1 cm below the hymen but protrudes no farther than 2 cm less than the total vaginal length.
- **Stage 4:** Complete vaginal eversion.

Suggested Reading

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