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GUIDELINES FOR STUDENTS ON THE TOPIC OF PRACTICAL TRAINING: "The female genitals: external and internal structure, topography. Perineum: structure, topography".

Specialty general medicine

For 1<sup>st</sup> year students

# Topic: "Female genitals: external and internal structure, topography. Perineum: structure, topography".

#### **Purpose of the lesson:**

- to learn to use Latin terminology for to name and demonstrate the internal and external female genitals and their parts on anatomical preparations.
- to study the internal structure and functions of the female reproductive system and their topography.

**Motivation of the lesson:** the knowledge on the structure and functioning of the female reproductive system is necessary for studying subsequent sections of anatomy, histology, human physiology, topographic anatomy, pharmacology, pathological anatomy, pathological physiology, and is the basis for studying clinical disciplines: urology, obstetrics and gynecology. **Competences:** GPC-1, 9.

## **Control questions for the lesson (application 1)**

### Lesson plan

1. Testing the assimilation of knowledge gained in the previous lesson: test control, oral questioning, testing of practical skills

2. Conversation on the topic of the lesson.

- 3. Performance of tasks.
- 3.1. Independent classroom work of students.

Study the topography and structure of internal and external female genitalia on a corpse, sagittal pelvic saw and organ complex. Analyze the structure of the ovaries, emphasize their relationship to the peritoneum, pelvic walls, to the uterus and fallopian tubes. Have an idea of the cyclic and age-related changes of the ovary.

On the organ complex, find the uterus, show its parts, the relationship to the peritoneum, pelvic diaphragm and neighboring organs (bladder, rectum, vagina). Be able to demonstrate the broad fallopian ligament, mesentery of the fallopian tube and ovary; between the leaves of the broad ligament, show the appendages of the ovary, explaining their origin. Considering the position of the uterus in the small pelvis, pay attention to its relation to the peritoneum, show the organ complex vesico-uterine and rectal-uterine recess. Usually the uterus is tilted and has a bend in front, in this position it is held by the connection with the vagina, with the help of its ligaments, the position of the pelvic diaphragm, with which the uterus is connected by a seal of connective tissue at the base of the broad ligaments of the uterus. On preparations of the opened uterus, show its cavity, which passes into the cervical canal, the wall of the uterus, consisting of three layers (perimetry, myometrium, endometrium).

In the study of the fallopian tubes to highlight parts of it (the uterine portion, isthmus, ampulla, funnel with fringes, from which to select ovarian the fringe). When considering the structure of the wall (serous, muscular, mucous membrane), it should be noted that the fringes make movements directed towards the fallopian tube opening. Since the abdominal opening of the fallopian tube is open into the peritoneal cavity, and its fallopian opening is turned into the uterine cavity, which communicates with the external environment through the vagina, the peritoneal cavity in women is not hermetically closed. It is necessary to learn how to determine the topography, walls, arches and folds of the vagina on the preparation.

In the study of the external female genital organs (pubis, large and small labia, vestibule of the vagina, uniting the concept of "female reproductive area", and clitoris) should be allocated to the eve of the vagina, with the opening of the vagina in front and above him – the outer opening of the urethra, which ends in the female urethra. The bulb of the vestibule and the clitoris (having legs, body, head, foreskin and frenulum) should be considered in analogy with the spongy and cavernous bodies of the male penis. The large gland of the vestibule, the paired one located at the

base of the labia minor behind the bulb of the vestibule, is explained by analogy with the bulbourethral gland.

The muscles and fascia of the female and male perineum are studied on preparations and models. Name and show the muscles of the pelvic diaphragm and urogenital diaphragm: the muscle that raises the anus, the upper fascia of the pelvic diaphragm, which is a continuation of the iliac fascia, the deep and superficial transverse perineal muscles, the sphincters of the anus and urethra, the sciatic-cavernous and bulbous-spongy muscles. Show the tendon center, the lower fascia of the pelvic diaphragm, which covers it from below, the upper and lower fascia of the genitourinary diaphragm, as well as the superficial fascia of the perineum, paying attention to the topography of the sciatic-rectal foss.

List of anatomical formations that a student should be able to find and demonstrate on natural preparations of Female genitals

Female genital organs	Organa genitalia feminina
Ovary	Ovarium
Medial surface	Facies medialis
The lateral surface	Facies lateralis
Free edge	Margo liber
The mesenteric edge	Margo mesovaricus
Tubular end	Extemitas tubaria
The uterine end of	Extemitas uterina
Appendage of the ovary	Epoophoron
Fallopian tube	Tuba (salpinx) uterina
Abdominal opening of the fallopian tube	Ostium abdominale tubae uterinae
The funnel of the fallopian tube	Infundibulum tubae uterinae
Pipe fringes	Fimbriae tubae
Ampulla of the fallopian tube	Ampulla tubae uterinae
Isthmus of the fallopian tube	Isthmus tubae uterinae
Uterine part	Pars uterina
Uterus	Uterus
Uterine body	Corpus uteri
Uterine fundus	Fundus uteri
Cervix uteri	Cervix uteri
Supravaginal part	Partio supravaginalis
Front lip	Labium anterius
Back lip	Labium posterius
Cervical canal	Canalis cervicis uteri
The muscular coat, the myometrium	Tunica muscularis (myometrium)
The mucous membrane, the endometrium	Tunica mucosa (endometrium)
Round ligament of the uterus	Lig. teres uteri
Vagina	Vagina
Fornix	Fornix vaginae
Female genital area	Pudendum femininum
Labia major	Labium majus pudenda
Labia minor	Labium minus pudenda
Vestibule of the vagina	Vestibuium vaginae
Opening of the vagina	Ostium vaginae
The great glands of the vestibule (bartholian glands)	Gl. vestibularis major
Clitoris	Clitoris
The body of the clitoris	Corpus clitoridis
The head of the clitoris	Glans clitoridis

The cavernous body of the clitoris (right/left)	Corpus caveinosum clitoridis
	(dextrum/sinistrum)
The female urethra (the female urethra)	Urethra feminina
The external opening of the urethra (urethral)	Ostium urethrae externum
Tendon center of the perineum	Centrum tendineum perinei
Pelvic floor	Diaphragma pelvis
The muscle that lifts the anus	M. levator ani
External sphincter of the anus	M. sphincter ani extemus
Fascia of the pelvis	Fasciae pelvis
Upper fascia of the pelvic diaphragm	Fasciae diaphragmatis pelvis superior
Lower fascia of the pelvic diaphragm	Fasciae diaphragmatis pelvis interior
Sciatic-rectal foss	Fossa ischiorectalis
Fat body of the sciatic-rectal foss	Corpus adiposum fossae ischiorectalis
Urogenital diaphragm	Diaphragma urogenitale
Deep transverse perineal muscle	M. transversus perinei pofundus
Sphincter of the urethra	M. sphincter urethrae
Upper fascia of the urogenital diaphragm	Fascia diaphragmatis urogenitalis sup
Lower fascia of the urogenital diaphragm (perineal	Fascia diaphragmatis urogenitalis
membrane)	inferior
Superficial transverse fascia of the perineum	M. transversus perinei superficialis
Sciatic-cavernous muscle	M. ischiocavemosus
Bulbous-spongy muscle	M. bulbospongiosus

3.2. Control of the knowledge obtained in this lesson (App 2).

3.3. The decision of situational tasks.

1. During the autopsy of a female corpse, the dissector found a two-horned uterus. What can explain such a congenital abnormality of the organ?

2. When examining the cervix through the vagina, the gynecologist determined that the opening of the uterus has the form of a transverse slit. Can we say that the woman has already given birth?

3. During an operation for an inguinal hernia in a woman, the surgeon inadvertently dissected part of the fixing device of the uterus. Which ligament was damaged during this operation?

4. Task for the next lesson. Topic: "Female genitals: external and internal structure. Perineum: structure, topography". The topic "Final section Splanchnology" is intended for self-study.

# List of references

Main literature

Prives M. G. Human Anatomy / M. G. Prives, N. N. Lysenkov, V. I. Bushkovich, - Moscow: MIR publishing HOUSE , 2004., Volume 1, - Pp. 559-582.

App 1

Control questions on the topic of the lesson

1. Name and show the internal female genitals on the preparation.

2. Name and show the female sex gland on the preparation, determine its functions.

3. Tell us about the structure of the ovary.

4. What anatomical formations are located in the ligament that suspends the ovary?

- 5. What is the position of the ovary in relation to the peritoneum?
- 6. Name and show the parts of the uterus on the preparation.
- 7. Name the layers of the uterus wall.
- 8. Name and show on the preparation of the ligaments of the uterus.
- 9. Name the options for the position of the uterus.
- 10. Name and show the parts of the fallopian tube on the preparation.
- 11. How does the abdominal cavity in women communicate with the external environment?
- 12. Name and show on the preparation parts of the vaginal arch, specify which of them is deeper.

13. What anatomical formation in women is the homologue of the cavernous bodies of the male penis?

14. What anatomical formation in women is identical in development and structure to the spongy body of the male penis?

- 15. What opens in the vestibule of the vagina?
- 16. Determine the boundaries of the genitourinary area.
- 17. Define the boundaries of the anal area.
- 18. Name and show the surface muscles of the urogenital diaphragm on the preparation.
- 19. Name and show the deep muscles of the urogenital diaphragm on the preparation.
- 20. Imagine the layout of the fascia of the urogenital diaphragm.
- 21. Name and show the surface muscles of the pelvic diaphragm on the preparation.
- 22. Name and show the deep muscles of the pelvic diaphragm on the preparation

23. Imagine a diagram of the location of the pelvic diaphragm fascia on the front section of the pelvis.

24. What anatomical formations form the walls of the sciatic-rectal foss?

25. Name the contents of the sciatic-rectal foss.

App 2

List of questions for the test control of knowledge obtained in the current lesson

- 1. The uterus develops from?
- 2. From the sexual tubercle in women develops?
- 3. The fallopian tube develop from?
- 4. From an indifferent sexual gland in women develops?
- 5. The vagina develops from?
- 6. Does the ovary have surfaces?
- 7. Does the ovary have edges?
- 8. Does the ovary have ends?
- 9. Is the ovary located?
- 10. Under the single-layer germ epithelium of the ovary is located?
- 11. In the cortical substance of the ovary are located?
- 12. Own ligament of the ovary connects?
- 13. In the brain matter of the ovary are located?
- 14. The gate of the ovary are located in the area?
- 15. External female genitalia?
- 16. To the tubal end of the ovary is attached?
- 17. Ovulation is called?
- 18. The relation of the ovaries to the peritoneum?
- 19. Is the tube end of the ovary fixed?
- 20. Is the ovarian appendage located?
- 21. in the appendage of the testicle distinguish?
- 22. Are the palm-shaped folds located?
- 23. Layers of the uterine wall?

- 24. Is the round ligament of the uterus coming off?
- 25. Parts of the fallopian tube?
- 26. Is the uterus located?
- 27. The uterus is covered with peritoneum?
- 28. The shape of the uterine opening in an unborn woman?
- 29. Do you distinguish edges in the uterus?
- 30. The peritoneal fiber (parametrium) is located at the level of?
- 31. Is it called a perimeter?
- 32. In the inguinal canal passes?
- 33. At the base of the broad ligaments of the uterus between the uterus and the pelvic walls pass?
- 34. The shape of the uterine opening in a woman who gave birth?
- 35. Parts of the uterus?
- 36. Does the uterus have surfaces?
- 37. Is it called a parameter?
- 38. The uterine cavity on the front section has the shape?
- 39. The broad ligament of the uterus consists of?
- 40. Is Douglas space located?

41. The name of the loose fat tissue located near the uterus, which contains blood vessels and ureters?

- 42. To the tubal end of the ovary is attached?
- 43. The layers of the wall of the fallopian tube?
- 44. Are the fallopian tubes covered?
- 45. Is the fallopian tube located?
- 46. Through the lumen of the fallopian tube, the uterus is communicated?
- 47. The surface of the ovary is covered?
- 48. Is the parotid (appendage of the appendage) located?
- 49. The uterus is covered with peritoneum?
- 50. Layers of the vaginal wall?
- 51. What are the bodies in contact to the front wall of the vagina?
- 52. What organs does the back wall of the vagina touch?
- 53. Bartolin's glands ducts open?
- 54. Is the vestibule of the vagina restricted?
- 55. Between the large labia is located?
- 56. The foreskin of the clitoris form?
- 57. Is the sex gap restricted?
- 58. The legs of the clitoris are attached to?
- 59. The deep muscles of the urogenital diaphragm include?
- 60. The coccygeal muscle applies?
- 61. Specify the formation in the female genitals corresponding to the spongy body in men?
- 62. The frenulum of the clitoris to form?
- 63. Between the labia minor is located?
- 64. Parts of the clitoris?
- 65. When connecting the labia minor is formed?

66. Specify the formations in the female genitals that correspond to the cavernous bodies of men?

- 67. Through the urogenital diaphragm in women passes?
- 68. The surface layer of the pelvic diaphragm muscles include?
- 69. Bulbous-spongy muscle refers to?
- 70. The deep layer of the pelvic diaphragm muscles include?
- 71. The superficial transverse perineal muscle refers to?
- 72. The superficial muscles of the urogenital diaphragm include?
- 73. Deep transverse perineal muscle refers to?

74. Sciatica-cavernous muscle refers to?

75. The muscle that lifts the anus is related?