

Odessa National Medical University Odessa
Department of Urology and Nephrology

METHODICAL WORKING
practical training for students

Academic discipline "Urology"

Congenital anomalies of the lower urinary system and male reproductive system.

Academic discipline "Urology"
Level of higher education: Second (Master's)
Knowledge field: 22 "Health Care"
Specialty: 222 "Medicine"
Program of professional education: Medicine

Approved
methodological meeting on the chair
28. 08. 2023
Protocol № 1
Head. Chair prof. F.I. Kostev

Odesa 2023

1. Subject lessons Congenital anomalies of the lower urinary system and male reproductive system. -2pm

2. The relevance of the topic.

The modest advances in the diagnosis, treatment and prevention of congenital defects that have brought widespread pathology at one of the first places in child morbidity, disability and mortality (V. Davydenko, 1994).

Social and environmental problems of Ukraine will inevitably contribute to the growth and developmental abnormalities, population frequency which has no tendency to decrease, and aggregate data on the GI Lazjuk (1991), ranged from 2.7 to 16.3%. Based on the study of clinical data, immediate and remote results of treatment can be concluded that early diagnosis of defects of the reproductive organs and urinary system (VAM) is not sufficiently high-level (VS Karpenko et al., 1991 VV Lapshin, 1994). Anomalies of kidneys and urinary tract most often identified with the bulk of education palpation in the abdominal cavity, or after the accession of complications in the form of gematurii, urinary tract infections (Gordon AC et al., 1988, KA Del 'Agnola et al., 1989).

Targeting a large number of defects of urogenital system is very important in shaping the future of the doctor. Too many medical specialties are faced with this pathology. This is particularly urology and nephrology. But there are anomalies of urogenital system and the practice of physicians, pediatricians, radiology, genetics, urgent surgery, etc. Knowledge of defects and the tactics of treatment often saves the patient from unwarranted and dangerous operation of a survey. Or conversely, the operation is proposed in time when there are favorable conditions. In addition, meeting and study allows you to understand the anomalies in their origin.

The analysis of living conditions, geographical, ethnographical, ecological and social dimensions of the patient and his relatives in connection with specific defects, and helps in identifying the genetic, toxic and other bases of this pathology and methods for its prevention.

3. The objectives of training.

3.1 The overall objectives.

To familiarize students:

- Clinical anatomy and physiology of sexual organs; variety of defects, all organs and systems of rights;
- location and frequency of abnormalities of sexual systems.
- negative vices that impede the full human life;
- means of preventive intervention in the environment of modern humans in order to prevent the anomalies;
- and economic aspects of diagnosis and treatment of anomalies of sex in adult and pediatric practices;
- territorial characteristics and geographic distribution of anomalies of sex;

3.2. Vospitatelnye objectives:

- , medical identity formation, especially preventive directions;
- Physician-oriented in many environmental factors that affect human health;
- With the education of patriotism on the basis of use during the study topics of national studies indicating their authors;
- Motivation of love and reverence to the urological specialty on the basis of positive or extreme example of the return of health or life of the patient;
- Raising the legal approach to medical manipulation and intervention: physician and patient, as the subjects of law;
- disclosure of the axiom that prevention is cheaper treatment, that is, the economic approach

to the medical case

3.3 Specific objectives

- To know:

1. Clinical anatomy of the genital organs;
2. normal and pathological physiology of the reproductive organs;
3. classification of defects of the reproductive organs;
4. clinical manifestations of defects of the genitals;
5. methods for diagnosing defects of the reproductive organs;
6. pokazanie invasive methods to study with suspected defects of the genitals;
7. oslozhneniya anomalies of the reproductive organs;
8. pokazaniya to the surgical treatment of patients with defects of the reproductive organs;
9. optimalny age for surgical intervention;
10. variety of anomalies of testicles;
11. variety of abnormalities of the penis;
12. anomalies of development that lead to bezplodiyu;
13. the clinical course of Hypogonadism and evnuoidizma, the basic principles of hormone replacement therapy;
14. Monitoring defects of the reproductive organs;
15. timing of surgical treatment of children with testes in the abdominal cavity or inguinal canal.

3.4. Based on the theoretical knowledge subjects to be able to:

1. perform palpation of scrotum in norm and dystopia of testicles, kriptorhizme, hypoplasia, to determine their consistency, mobility;
2. perform finger rectal examination to determine the size and consistency of the prostate, the mobility of the prostate gland;
2. on the basis of complaints and clinical findings suspected anomaly of the reproductive organs in a patient with partially missing organs scrotum
3. to plan additional surveys child and adult with suspected defects of urogenital system
4. during the interpretation of clinical data to determine the type of anomaly and its complications reliable (Hypogonadism, bezplodie, sexual disorders
5. perform palpation and percussion in the projection of the abdomen and inguinal canal;
6. through a survey to identify abnormalities of the penis
7. under a set of clinical-laboratory and instrumental examinations suspect Hypogonadism;
8. perform routine and puncture biopsy of testicles, prostate gland with the interpretation of its results
9. perform vpravlennie head for the jam ring foreskin when parafimoze.
10. transillumination comply with the interpretation of its results;
11. to undertake the interpretation of the analysis of secretion of the prostate.

4. Materials outside the classroom self-training (interdisciplinary integration)

Number number

yy Subjects able to know

1. 2. 3. 4.

1.

Previous discipline

1. Normal anatomy of human

2. Normal human physiology

3. Pathological anatomy of genital organs

4. Pathological physiology of the reproductive organs

5. Endocrinology

Macrostructure and the size of genitals

The functional purpose of each sex organ

Pathomorphology genital defects

Influence of abnormal structure in the state of genital functions

Biochemistry and treatment of sex hormones.

Interpretation

norms of sexual organs on a computer tomogram.

Selection of laboratory findings that may indicate normal function of the reproductive organs

Find a place specific shortcomings of the reproductive organs in the existing classification.

Disapproved functional parameters to determine the degree of functional defects of the genital system. Find a set of surveys with suspected anomaly of the reproductive organs.

2. Following disciplines

Genetics

Genetically dependent deficiencies

Recalculate reliable factors of the environment for the emergence of gene-related aberrations.

3. Interdisciplinary integration

Andrology

Possibilities of substitution therapy.

Select the best option for a specific clinical situation.

5. The content classes (structural and logical framework).

Anomalies of genital organs.

I Abnormalities of the penis:

1. Congenital absence of a member;

2. Doubling or ectopic member;

3. Congenital absence of the head;

4. Webbed member;

5. Hidden penis;

6. Congenital phimosis

- Atrophic

- Hypertrophic;

7. Short foreskin.

II Anomalies testicles:

a) the number of

1. monoorhizm;
2. poliorhizm;
3. anorhizm;
4. sinorhizm;

b) the location

1. kriptorhizm

- Unreal and the real
- One-and two-way
- Inguinal and ventral.

2. ectopic testicle

- Abdominal
- Inguinal
- Pubic
- Promezhnostnaya
- Femoral

c) structure

1. hypoplasia testis.

III congenital hydrocephalus shell eggs

IV congenital hydrocephalus seed hulls kentia

V cyst testicle and its appendage

VI Varicose veins seed kanatika

VII abnormalities of the prostate:

1. Aplasia;
2. Hypoplasia;
3. Atrophy;
4. ectopia.

6. Materials methodical employment.

6.1. Materials control for the preparatory phase of training.

1.1. Vopros.

1. How are anatomically male genitals?

Answer: The male sex organs anatomically divided into external and internal. The external refer penis and scrotum, the inner - testis, their appendages, semyavynosyaschie ducts, bulbouretero gland, prostate and seminal vesicles.

2. What functions are carried out by the male genitals?

Answer: The male sex glands perform two important functions: reproduction (spermatogennuyu), ensuring the preservation of species and the endocrine influence on spermatogenesis and the formation of different body systems. These functions are closely interrelated and are getting the greatest harmony with their parallel development.

3. What is the function vnutrisekretornaya testicles?

Answer: Vnutrisekretornaya function of the testicles is the allocation of male sex hormones (androgens) and female - estrogen. Androgenic steroids produced as adrenal glands. Much of androgens, which were some changes, the kidneys are allocated in the form of 17-ketosteroidov, with 1 / 3 metabolites represent the testicles and 2 / 3 - adrenal. Only the direct determination of testosterone and estrodiola in blood and urine is an indicator function of seminal glands.

4. Which of the evils of human development constitute defects of the reproductive organs?

Answer: 5 - 15%.

5. In what period of intrauterine development is the process of lowering the testicles?

Answer: In the period 20-32 weeks of intrauterine development is the process of lowering the testicles of the lower pole of kidneys in the scrotum. Nedodostatok androgen and the endocrine glands lyutropina gonadotropin maternal and fetal placenta leads to kriptorhizmu and ektopii testicle.

6. What is the normal mechanism of omission testicle?

Answer: 1 traction down by gubernaculum testis; 2 difference in the growth rate of the body in combination with seed kanatikom and gubernaculum testis; 3 vnutribryushnogo increasing pressure to push through the inguinal canal testis, 4 endocrine factors; 5 development and maturation of appendage testis.

7. What substances play a major role in the development of male sex?

Answer: For the proper development of male sex plays a primary role of testosterone fetal testes, the level of which 12-20 weeks of pregnancy with the level of the adult male.

8. What external factors are the most aggressive in utero?

Answer: The most aggressive during this period of development of the fetus is alcohol, nicotine, steroid hormones, antibiotics, psychotropic drugs, infection, intoxication, hot tub, stress, pesticides, radiation, which can cause pathology.

9. What could be due to delayed migration of the testicles?

Answer: endocrine disruption, mechanical causes, hereditary, genetic features, or the association of these factors.

10. What are the solutions to the global public policy issue for the Conservation of the gene pool of nations?

Answer: The solution of global public policy issue for the Conservation of the gene pool of nations is not conceivable without the development and implementation of medical practice and public awareness of prevention of diseases of the reproductive system of men.

Prevention of diseases of the reproductive organs should be carried out throughout the period of formation and development of the male body, beginning with fertilization and continuing with the completion of the formation of the reproductive system.

6.2. Information necessary for the formation of knowledge, skills can be found in textbooks

7. Books for teachers:

1. Возіанов О.Ф., Люлько О.В. Урологія/ Київ: Вища школа, 2009, -711 с.

2. Куш Н.Л., Пугачев А.Г., Москаленко В.З. Хирургия пороков почек и мочевых путей/ Киев: Здоров'я, -2011, -182.

8. Literature for Students:

Main reading

1. Urology (practical skills for interns). Study guide /ed. by V.P. Stus and S.P.

Pasechnikov / Dnipro: LLC «Accent PP», 2017. -282 p.

2. Urology: S.P. Pasechnikov, V.M. Vozianov, V.M. Lesovoy end. By S.P. Pasechnikov. - Vinnytsia: Nova Knyha, 2016. -400p.

3. European Association of Urology Guidelines. 2010 edition.

The main objectives of Guidance Answers

Learn:

1. Etiology.

2. Classification of sexual developmental system.

3. Clinical manifestations.

4. The main methods of diagnosis.

5. Evaluation of Laboratory-governmental data

6. Otsenka results of physical examination, ultrasound, computer Tomo-graphite, a study of hormonal background

7. Principles and methods of treatment.

What are the main factors vzniknooveniya defects (aggressive during domestic triutrobnogo development that lead to delay migration of the testicles).

Make a classification of complications defects testes, prostate gland, penis.

Give a list of clinical manifestations for defects testes, prostate gland, penis.

Enter the basic methods of diagnosing defects testes, prostate gland, penis.

Interpret indicators of hormonal background, the content in serum and urine androgens, estrogen-new, etc., cytological and bacteriological investigation of urine and the secretion of the prostate.

Ultrasound estimate contours and sizes of the testicles, the prostate gland, CT

Make an outline of principles and methods of treating defects of the sexual system, and their complications

Endocrine disruption, mechanical causes, or nasledstvaenno genetic association of these factors.

Delayed development, Hypogonadism, male infertility, erectile dysfunction, swelling of testicles, paraphimose etc.

lack of development of the testicles: developmental delay, Hypogonadism, male infertility, erectile dysfunction, swelling of testicles, paraphimose, prostate gland, penis endocrine disruption, etc.

Physical examination, ultrasound, computer Tomo-graphite, the study hormonal background, etc.

Decreased content in serum and urine androgens, estrogens, etc.

Availability ureterogidronef-Rose. The increase in the bladder, filling defect, reflux, di-vertikuly, ureter expansion, etc.

In particular, define the indications for hormone replacement therapy.

7. Materials for self-training quality.

The question for the self with the answers.

1. Which groups are the shortcomings of the reproductive organs?

A: The penis, testes, prostate gland.

2. What could lead to maldevelopment of the reproductive organs?

Answer: the absence of androgens, the violation of their products or insensitivity of peripheral receptors to them in the process of embryogenesis external genitals may be formed on the female type, or to develop their various anomalies. By maldevelopment of the reproductive organs can also cause all sorts of embriotoksicheskie the influence of endogenous or exogenous nature.

3. Influenced by what processes might be anorhizm?

Answer: In a period of about 20 weeks, which have not yet completed the formation of sexual organs, often under the influence of an infectious process, it may be anorhizm.

4. Oharakterizuyte true hermaphroditism?

Answer: if true hermaphroditism in a man are the elements of male and female gonads or sex glands may be mixed (ovotestis). The external genitals are building with the advantage of male or female sexual characteristics. Morfotip patients is determined by hormonal activity of a sexual glands during puberty.

5. Oharakterizuyte false male hermaphroditism?

Answer: True hermaphroditism male develops as a result of degenerative changes in the testes even in utero, leaving boys in the presence of the external genitals testicles develop in the female or intersex type. The reasons for such a pathology can be hormonal changes during pregnancy, toxoplasmosis, various intoxications.

6. How is the treatment of a false male hermaphroditism?

Answer: The child in the first place psihoseksualnoe education. At birth, in cases of doubt about the sex, you should recommend to parents of children Interpol sit consonant names, for example, Valentine - Valentine, Eugene - Eugene, etc., so that in case of change of sex is less than traumatize the child.

7. How is the treatment of true hermaphroditism?

Answer: The corrective surgery, and therapy of male or female hormones, depending on the structure of internal and external genital organs. The choice of surgical treatment of adolescents is dependent on the anatomic state of the external genital organs and psihoseksualnoy targeting individuals.

8. It is characterized by hypoplasia of testicles?

A: The testes hypoplasia, underdevelopment of sexual glands in the embryonic period. Characteristic of this anomaly is reducing the size of the testicles, penis, prostate, seeming hypodynamic, delayed sexual development. Hypoplasia of testicles is often diagnosed by chance in adulthood when the patient turns on the sterility in marriage.

9. in what period it is necessary to treat phimosis?

Answer: Atrofichnye form of phimosis, and hypertrophic - first and second degrees, usually up to 4-5 years of treatment does not require

In those boys with the age and growth of the penis adhesion between the inner piece of the flesh and skin head itself and only for complications (Balani, balanopostit etc.) needed help. The boys junior secular groups (1-5 years) in the third and fourth degrees of hypertrophic phimosis and all boys senior secular groups (6-10 years), regardless of the form of phimosis, it is necessary to exclude pathology.

10. Which biochemical test used to confirm anorhizm?

Answer: kastratsionny level of testosterone after stimulation horiogonadotropinom.

8. Materials for self-study class:

8.1. The list of tasks that must be met during the practical exercises:

- Master the technique of examination of patients with abnormalities of sexual organs;
- Be able to in the interpretation of clinical data to determine the type of abnormalities and possible complications (Hypogonadism, male infertility, erectile dysfunction);
- Able to perform palpation and percussion in the projection of the abdomen and inguinal

canal, to detect abnormalities of the penis;

- Draw up a plan of survey, a map, conservative therapy and justify the need and scope of surgical treatment of anomalies of the sexual system.

9. Briefing materials for mastering the skills and habits:

9.1. The method of work, milestones of

– The study recommended literature

kuratsii patients with abnormalities of sexual development system–Holding (oprashivanie, physical examination, interpretation of the results of laboratory and instrumental studies)

Introduction to graphs of the logical structure –of classes

Study treatments–

– Decision case situational challenges

10. Materials for self-knowledge and skills provided by this work.

10.1 Tests of different levels.

Tests of different levels.

1. Congenital absence of one testis, together with the appendage and semyavynosyaschim

Protocols are:

- A. Anorhizm;
- B. Kriptorhizm;
- C. Monorhizm;
- D. Atrophy testis;
- E. Dystopia testis.

2. Congenital absence of both testes are:

- A. Anorhizm;
- B. Kriptorhizm;
- C. Monorhizm;
- D. Atrophy testis;
- E. Dystopia testis.

3. The presence of more than two testes are:

- A. Anorhizm;
- B. Poliorhizm;
- C. Monorhizm;
- D. Atrophy testis;
- E. Dystopia testis.

4. Under the influence of any hormones, which produce embryonic testes, is the development and establishment of internal and external genital organs of male type?

- A. prostaglandins;
- B. Steroid;
- C. Gestagenov;
- D. Estrogen;
- E. Androgens.

5. Geneticheskai (chromosomal) sex is determined at the time:

- A. fertilization;
- B. Childbirth;

- C. III trimester of pregnancy
- D. At the end of pregnancy;
- E. passing the medical board in the recruitment office.

6. A typical complication of cysts appendage testis is:
- A. Anorhizm;
 - B. Purulent inflammation of cysts;
 - C. Monorhizm;
 - D. Atrophy testis;
 - E. Bezplodie

7. The main methods of diagnosis of anomalies of the penis are:
- A. Biopsy testis;
 - B. Physical examination;
 - C. Radioisotope study;
 - D. Cystoscopy;
 - E. X-ray.

8. In which age a surgical treatment with a hidden penis?
- A. At the age of 6-8 months;
 - B. At the age of 6-8 years;
 - C. Before calling for the army;
 - D. After demobilization from the army;
 - E. Surgical treatment is not carried out.

9. Tin kriptorhizm characterized by:
- A. permanently testis in inguinal canal or abdominal emptiness.
 - B. Testis managed to slip in the scrotum or under certain conditions (warm bed, a bath), it falls to its own place;
 - C. Permanent residency in the testis hip canal;
 - D. Permanent residency in the testis nadlobkovoy field;
 - E. Permanent residency in the testis promezhnostnoy field;
10. There is no ectopic testis:
- A. prostatic;
 - B. Typhoid;
 - C. Inguinal;
 - D. Pubic;
 - E. Promezhnostnoy.

11. Objectives UDRS and NDRS of the topic.
- The human genome - History and modernity.
 - Medical Aspects of Chernobyl: acquired diseases and weaknesses of development.
 - Methods of functional research in andrology.
 - Morphological characterization of the structural elements of the genital organs in normal and disease.
12. The theme of the next session.
Semiotics of urological diseases.

Developers:
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Professor of the Department of Urology and Nephrology Yu.M. Dekhtyar
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Associate Professor of the Department of Urology and Nephrology I.V. Rachok
Associate Professor of the Department of Urology and Nephrology L.I. Krasiliuk
Associate Professor of the Department of Urology and Nephrology M.V. Shostak
Associate Professor of the Department of Urology and Nephrology R.V. Savchuk
Assistant Professor of the Department of Urology and Nephrology S.V. Bogatskyi
Assistant Professor of the Department of Urology and Nephrology O.M. Kvasha

Recommended literature.

Basic:

1. S.P. Pasechnikov; Urology: textbook/ Ed. S. P. Pasyechnikova, S. A. Vozianov, V. N. Lesovy [and others]. - View. 3rd – Vinnytsia: New Book, 2019.
2. Pasechnikov S.P. Modern problems of urology: [manual]: doctor's guide/ S.P. Pasechnikov, V.I. Zaitsev. - Kyiv: L-ry Health of Ukraine; 2017.
3. Stus V.P. Urology (practical skills for intern doctors) / V.P. Stus, S.P. Pasechnikov. Teaching and methodical manual. - Dnipropetrovsk: Akcent PP LLC, 2016.
4. Sarychev L.P. Symptoms of urological diseases: method. rec. For teachers / L. P. Sarychev, S. M. Suprunenko, S. A. Sukhomlyn, Ya. V. Sarychev. – Poltava, 2019.
5. O.V., Lyulko, O.F. Vozianov Textbook "Urology" 3rd edition. Thresholds Dnipropetrovsk. - 2012 p.
6. "Urology (Methodical development of practical classes for students)" edited by Professor V.P. Stus, second edition, supplemented. / A.P. Stus, Moiseenko M.M., Fridberg A.M., Pollion M.Yu., Barannik K.S., Suvaryan A.L., Krasnov V.M., Kryzhanivskiy O.Yu. - Dnipro: Accent LLC. - 2018. - 336c.
7. Urology: textbook for students. higher med. academic established: translation from Ukrainian publications / S.P. Pasechnikov, S.A. Vozianov, V.N. Lesovoy, F.I. Kostev, V.P. Stus, et al./ Ed. S.P. Pasechnikov - Edition 2. - Vinnytsia: Novaya Knyga, 2015. - 456 p.: illustr.
8. Urology: textbook for students of higher medical education Institutions /S.P. Pasechnikov, S.O. Vozianov, V.M. Lesovoy (et at.); ed. by Pasechnikov. / S.P. Pasechnikov, S.O. Vozianov, V.M. Lesovoy (et at.) - Vinnytsia: Nova Knyha, 2016. - 400 p.
9. EAU Guidelines, edition presented at the 28th EAU Annual Congress, Milan 2021. ISBN 978-90-79754-71-7. EAU Guidelines Office, Arnhem, The Netherlands.
10. Alan W. Partin, Alan J. Wein, et. all - Campbell Walsh Wein Urology, E-Book (12th ed.) – 2020.
11. Omar M. Aboumarzouk - Blandy's Urology, 3rd Edition – 2019.
12. David Thurtle, Suzanne Biers, Michal Sut, James Armitage. - Emergencies in Urology – 2017. 4. Philipp Dahm, Roger Dmochowski - Evidence-based Urology, 2nd Edition – 2018.

Additional:

1. Boyko M.I., Pasechnikov S.P., Stus V.P. and others Clinical andrology // Doctor's guide "Androlog". - K.: LLC "Library "Health of Ukraine", 2013. - 222 p.
2. Sarychev L.P. Clinical anatomy and physiology of organs of the urinary and male reproductive system: method. rec. for teachers / comp. L. P. Sarychev, S. A. Sukhomlyn, S. M. Suprunenko. – Poltava, 2019. – 11 p.

3. Sarychev L.P. Symptoms of urological diseases: method. rec. for teachers / L. P. Sarychev, S. M. Suprunenko, S. A. Sukhomlyn, Ya. V. Sarychev. – Poltava, 2019. – 14 p.
4. Medical student's library. Urology. Edited by F.I. Kosteva. - Odesa, 2004. – 296p.
5. Atlas-guide to urology. Ed. A.F. Vozianova, A.V. Lulko Dnipropetrovsk, 2002.-T. 1,2,3
6. Urology / Ed. Prof. O.S. Fedoruk - Chernivtsi: Bukovyna State Medical University, 2011. - 344p.