ODESSA NATIONAL MEDICAL UNIVERSITY
Departmen of Urology and Nephrology

METODSCAL WORKING of practical training for teachers
Topic 11. Urolithiasis

Academic discipline “Urology”
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Topic 11. Urolithiasis

1. THE THEME URGENCY.

The theme urgency is defined by series of important points:

Frequency of an urolithiasis reaches 2 % in population, in urology departments to 25-30 % of patients with this pathology, operations on kidneys and upper urinary ways concerning urolithiasis spend at the greatest quantity of patients.

Among etiological factors which predetermine a lithogenesis of microlits and stones in kidneys and urinary ways an appreciable role exogenous (geochemistry грунтов and waters, an insolation and a temperature regimen, ecological influences, a saturation of foodstuff vitamins, trace substances and oth) and the general endogenous, caused by function or a pathology of endocrine system, a liver and other digestive organs, nervous system and to a skeleton. Without participation of hygienists, family doctors, gastroenterologists and doctors of many other specialities there can not be successful a primary preventive maintenance and metaphilactic an urolithiasis.

Clinical syndromes and urolithiasis complications, especially renal colic, acute pyelonephritis, ureterohydronephrosis, arterial hypertensia demand knowledge doctors of a wide range of medical specialities differential diagnostics and an acute management sick of an urolithiasis.

Last years frequency of occurrence of a hydronephrosis has essentially grown in connection with changes in a bionomics and a rhythm of a life of people that leads to growth of number of anomalies of development and diseases, is at the bottom of development of hydronephrotic transformation. The fact of untimely appealability of patients with an urolithiasis, oncologic pathology, benign hyperplasia of a prostate and damages of genitourinary organs is important also.

2. THE EMPLOYMENT PURPOSES:

2.1. *The educational purposes* (with definition of level of mastering)

I level

To acquaint students, to frame representation:

- About etiological factors which can influence colloids and urine crystalloids;
- About pathogenetic mechanisms of a lithogenesis in kidneys and urinary ways;
- About special value of urodynamics, infections of urinary system and urine reaction in a primary and recurrent lithogenesis;
- About the reasons of occurrence and pathogenetic features of a hydronephrosis.

II level

The student should know, acquire:

- Kinds of stones on a chemical compound, the form and the sizes, a locating;
- Clinical signs and their polymorphism depending on the size and a stone locating;
- Clinical picture of a renal colic;
- Ultrasonic, радионуклидное and radiological inspection - possibilities and methods at different stones;
- Possible complications at an urolithiasis, methods of their prevention;
- Conservative and surgical methods of treatment МКБ and a hydronephrosis;
- Extracorporal lithotripsy, tool methods of treatment МКБ;
- Methods метафилактики lithogenesises in kidneys, a bladder.
- Etiological factors of development of a hydronephrosis;
- Classification of a hydronephrosis by stages;
- Semiology and clinical current МКБ and a hydronephrosis;
- Diagnostics, differential diagnostics and hydronephrosis treatment.

III level

To give to students possibility to seize habits, performance technics:

- To seize a technique of inspection of the patient (the anamnesis, survey of kidneys in three positions, a symptom Pasternatsky);

- To be able to estimate laboratory researches of urine and a blood at sick of an urolithiasis;
- To be able to estimate results survey and excretory urographies at sick of an urolithiasis and a hydronephrosis;
- To seize technics of performance of blockade on Lorin-Epstein at a renal colic;
- To be able to make the plan of inspection of the patient at suspicion on an urolithiasis and a hydronephrosis.

IV level - to give to students of ability to investigate theoretically, clinically, experimentally:
- To make the plan of inspection and revealing of etiological factors МКБ at the concrete patient;
- To outline features дифференционной diagnostics of a renal colic and intestinal impassability;
- To formulate possibilities, features of pregnancy at an urolithiasis;
- Offers on experimental studying of an urolithiasis, a lithogenesis, hemolysisa and another.

2.2. The educational purposes:
- To underline the contribution of the Ukrainian, Russian scientists and works of chair concerning an urolithiasis problem;
- To generate at students representation about necessity of deep studying of environment and an integrated organism of the patient;
- To develop clinical thinking at students concerning diagnostics, a choice of a method of treatment and dynamic observation over patient МКБ;
- To generate representation about necessity of the economical and safe approach to diagnostics and treatment at МКБ;
- To underline fast scientific and technical progress in diagnostics and treatment МКБ.
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3. INTERDISCIPLINARY INTEGRATION.

Disciplines: **. Previous (disciplines which provide)...**	**The nobility**	**To be able**
Normal human anatomy. Topographical anatomy and operative surgery	Anatomy of kidneys and urinary ways. A kidney: the form, a structure, topography of retroperitoneal space and mutual relations with the next organs; Anatomy and topography of an ureter, feature of topography in тазовом department;	Kidney palpation in three positions
Histology and fetology:	Органогенез kidneys, urinary ways and man's organs.	-

Normal physiology	Functions of kidneys, уродинамика. A role of kidneys in an exchange of electrolytes.	-
Pathological physiology	The lithogenesis mechanism. Influence of a pathology of endocrine organs on an exchange of electrolytes	-
Biochemistry and medical chemistry	Inorganic urocherases at its acidic and alkaline reaction; urinary stones and their types.	-
Propaedeutics of internal illnesses.	Semeiology of diseases of kidneys and urinary ways	Kidney palpation in three positions. A symptom Pasternatsky. To treat the data of radiological and ultrasonic researches, clinical symptoms (complaints and the data of physical inspection) and laboratory signs of kidneys.

4. THE EMPLOYMENT MAINTENANCE:
THE STRUCTURALLY-LOGIC SCHEME OF THE MAINTENANCE.

Theme substantive provisions	The characteristic

1. Aetiology МКБ	Value of knowledge of an aetiology of an urolithiasis. Role of exogenous factors in уролитогенезе: Climate and intensity of an insolation; geography of a residence with influence of a ground and the water factor on foodstuff; potable water - the general mineralization, macro- and trace substances, toxins; a financial position and security of products vitamins and trace substances; a bionomics of a residence and professional harmful factors. III. Role in уролитогенезе the general factors: disturbance of endocrine system, function of a liver and other organs of a gastroenteric tract and their role in a lithogenesis; a role of a trauma of a skeleton and a pathology of bones in occurrence of a hypercalcemia and - урии; infectious and other illnesses which are accompanied by disturbance of acid-alkaline balance; stresses in уролитогенезе. IV. Role local (that concern kidneys and urinary ways) factors: тубулопатии and ферментопатии congenital - hereditary character (a renal tubular acidosis, a syndrome де Tone-derbe-fankoni - disturbance реабсорбции amino acids, a glucose and Natrii phosphases, a cystinuria and others, and also accompanying anomalies of kidneys; and got ензимопатии owing to action ekzo - and endogenous toxins and at disturbances krovo - or a lymph drainage with a hypoxia; Role of an infection of kidneys and urinary ways in уролитогенезе; a microbic urease (протей, E. coli, a pyocyanic rod); microlits (полисахариди, a desquamated epithelium, slime, leucocytes, bacteria and another); Disturbance уродинамики at anomalies, a pyelonephritis, a tuberculosis, инфравезикальной obstructions, neurogenic disorders.
2. A pathogenesis (mechanisms) уролитогенеза	The kristalizatsionnaja theory. The Kolloidno-kristalloidnaja theory. Inhibitors and activators уролитогенеза. The proteolizno-ionic theory of a lithogenesis. A role of reaction of urine in a lithogenesis.
3. A chemical compound of stones.	Sodium oxalatums. Lithates. Natrii phosphases. The admixed stones. Albuminous stones.
4. Патоморфология.	Role of the size of a stone and its location in urinary ways. A role of an inflammation and its expression; secondary shrinkage, a pyonephrosis, педункулит, a paranephritis.
5. A clinical picture.	Triad of symptoms. The characteristic of a syndrome of a renal colic. An infection role in clinical implications. Atypical clinical implications. Features of signs at children. Acute renal insufficiency at an urolithiasis.
6. Diagnostics	The anamnesis and physical inspection. Laboratory inspection of urine, a blood (including electrolytes). A role of ultrasonic scanning. Radionuklidnye researches. Various methods of a X-ray inspection and signs of presence of stones of a kidney, an ureter, a bladder. Cystochromoscopy.

7. Differentsionnaja diagnostics of a renal colic	Acute appendicitis and renal colic. Acute inflammatory processes in an abdominal cavity. Acute intestinal impassability. Stones of a cholic bubble, phleboliths and a tuberculosis of kidneys, тубмезаденит.
8. Treatment	Conservative and tool methods of treatment of a renal colic. Blockade on Lorin-Epstein. Conservative treatment of stones of an ureter and kidneys in межприступный the period. Surgical methods of treatment of stones of kidneys, ureters, a bladder. Tool methods of treatment of stones of an ureter, kidneys. An extracorporal lithotripsy, possibilities, contraindications.
9. Preventive maintenance МКБ	Revealing and influence on etiological factors. Struggle against an infection. Influence on kolloidno-kristalloidnye properties, urine reaction. A diet, a water regimen. Sanatorium factors in preventive maintenance МКБ.

Hydronephrosis. A hydronephrosis - disease of a kidney which is characterised by expansion of pyelocaliceal system, an atrophy of a renal parenchyma and progressing deterioration of all basic functions of a kidney as a result of disturbance of outflow of urine from a kidney and haemocirculation in it.

Recently it is accepted to distinguish concept "hydronephrosis" and "hydronephrotic transformation". As a hydronephrosis understand disease which it is shown by expansion of caliceally-misochnoj system of the kidney, caused by the reason concerning anomalies of development of a kidney (a congenital hydronephrosis). Cavity reductions in that case cannot achieve without plasty performance pyelus. As hydronephrotic transformation understand disease which it appears also expansion of cavitary system of a kidney, but is a consequence of other disease (more often an urolithiasis, онкопатологии and prostate hyperplasias). The sizes ЧЛС in this case are normalised independently after elimination of the reason of their occurrence.

Aetiology. The hydronephrosis always develops at occurrence of obstacles to outflow of urine which can be localised on any site of an urinary tract, but more often them find in lohanochno-mochetochnikovom a segment. S.P.Feodor parts these obstacles in 5 groups:

1. Obstacles which are in a bladder and an urethra;
2. Obstacles on a course of an ureter and out of its lumen;
3. The obstacles, caused to deviations in ureter position;
4. Obstacles which exist in a lumen of the ureter and in pyelus;
5. Changes in walls of an ureter or pyelus which cause difficulty of outflow of urine.

Pathogenesis. According to the modern doctrine about a hydronephrosis, this current part on three stages: I a stage - expansion only pyelus (pyeloectasis) with insignificant disturbance of function of a kidney; II a stage - expansion not only pyelus, but also cups (hydrocalycosis), reduction of a thickness of a parenchyma of a kidney and appreciable disturbance of its function; III стадяя - a sharp atrophy of a parenchyma of a kidney, its transformation into a thin-walled bag.

At a hydronephrosis processes of secretion and реабсорбции urine remain, but backlog реабсорбции from secretion is observed, as causes urine accumulation in renal pyelus. Radioisotope researches show that with окклюзированной renal pyelus occur реабсорбция in a current of a blood of isotopes of iodine, sodium, colloid gold.

Classification. From the practical point of view and proceeding from modern theoretical representations about a hydronephrosis, the most comprehensible distribution of disease to two kinds.

1. A primary, congenital hydronephrosis which develops owing to a congenital obstacle in areas lohanochno-mochetochnikovogo a segment which breaks outflow of urine from a kidney.
2. Secondary, got, a hydronephrosis - complication of any disease (an urolithiasis, a kidney tumour, pyelus, an ureter, a trauma of urinary ways, etc.).

Both primary, and a secondary hydronephrosis opened, closed and intermittent. Presence of one of kinds of obstacles to urine outflow a vmochetochnikovo-VESICAL segment leads to development of

a unilateral ureterohydronephrosis (a hydronephrosis with a sharp megaloureter), and at obstruction in the field of a neck urinary or a bubble, мочеиспускательного the channel there is a bilateral ureterohydronephrosis. The hydronephrosis is one of the most frequent diseases in children's urological practice.

5. THE PLAN AND ORGANIZATIONAL STRUCTURE OF EMPLOYMENT.

№ п/п	The basic stages of employment, their function and the maintenance	The educational purposes in mastering levels	Tutorial and the control	Materials concerning methodical maintenance of presentation of employment, the control of knowledge	Time (in minutes or in %) from the general time of employment
1	2	3	4	5	6
1.	***Preparatory stage***				
1.1. 1.2.	The employment organisation Statement of the educational purposes and motivation			 Item 2 See. The educational purposes. Item 1 See. A theme urgency	1-3 minutes
1.3. 1.3.1 1.3.2 1.3.3 1.3.4 1.3.5 1.3.6	The control of initial level of knowledge: Aetiology and pathogenesis Патоморфология МКБ and a hydronephrosis Clinic MKB and a hydronephrosis Diagnostics and дифференционная diagnostics Treatment Preventive maintenance	 And or II level And or II level II or III level II or III level II or III level II level	1. Individual oral interrogation (the question 6.1 see.) 2. The written theoretical decision of problems II level (problems 6.1 see.)	1. Questions for oral interrogation 2. On 5 problems for the written decision. 3. Tables 4. Roentgenograms 5. Visit to an office of BRIDLES, цистоскопическую	10-20 % ((5 %)
2.	***The basic stage***				
2.1.	To seize skill рентгендиагностики МКБ and a	III level	Practical training	Set of roentgenograms	60-70 %

	hydronephrosis				
2.2. 2.3. 2.4.	To seize technics of performance of blockade of a funicle, a kidney palpation To make the scheme of inspection of the patient, to establish the diagnosis To spend курации the patient		Demonstration near the patient Practical training Practical training	Algorithm of mastering by performance technics Case histories, text situational problems (see 6.3.) Algorithm курации (see 6.2.)	
3.	***The final stage***				
3.1.1 3.1.2	To make the radiological diagnosis The decision of atypical situational problems	III level	The individual control of result of studying by the student of the roentgenogram The individual control	X-ray films Atypical situational problems (see 6.3)	10-15 %
3.2.	Employment summarising				
3.3.	House problem: the educational literature on a theme, the basic and additional (see 8)			Rough card of independent work with the literature (see 6.4)	

6. MATERIALS CONCERNING METHODICAL ОСБЕСПЕЧЕНИЯ EMPLOYMENT.

6.1. Materials of the control for a preparatory stage of employment.

Questions for a preparatory stage of employment.

1. Exogenous and internal causes of an aetiology of an urolithiasis.
2. Mechanisms of education (pathogenesis) of microlits - sand - stones in kidneys and urinary ways.
3. Chemical compound of stones.
4. The basic symptoms of illness.
5. Clinical signs of a renal colic.
6. Value and place in diagnostics of different diagnostic methods at МКБ and a hydronephrosis.
7. Differential diagnostics of a renal colic from one of illnesses of group "acute abdomen".
8. Complications МКБ and a hydronephrosis, their mechanisms.
9. Methods of conservative treatment and метафилактики МКБ. Хемолиз stones.
10. Methods of tool treatment of stones of an ureter, bladder, dive.
11. Methods of surgical treatment of stones of different localisation and the sizes.
12. Classification, diagnostics and hydronephrosis clinic.
13. Surgical treatment at a hydronephrosis: органосохраняющие operations and a nephrectomy.
14. Sanatorium treatment МКБ.
15. With great dispatch-wave lithotripsy, indications and method contraindications.

6.2 Materials of methodical maintenance of the basic stage of employment

Atypical situational problems.

1. The patient With. 42 years it is delivered СМП in connection with an acute pain attack in hypochondrium. In the past with urine fine concrements departed. Muscles of a forward wall of a stomach and a loin are strained. The body temperature with a fever raised to 39,5°с. For the morning the temperature has decreased to 37в With with excessive потовыделением. Tongue dry. Consciousness замутнено. Pressure of a blood is lowered. The general analysis of urine – without changes. The blood analysis – a leukocytosis (20.100 in 1 мм^3), a deviation to the left. Rising of an ESR to 36 mm/ch.

   The possible diagnosis:
   Acute appendicitis
   Acute obstructive калькуллезный a pyelonephritis
   Acute cholecystitis
   d) an acute salpingo-oophoritis
   (A right answer In, acute obstructive калькуллезный a pyelonephritis)

2. The patient With. 40 years the meteorism, dryness in a company, a nausea, vomiting is delivered in hospital SMP with complaints to an acute sudden pain in the left half of stomach. The temperature did not raise. Stomach muscles in ileal and lumbar area at the left are strained. Tongue dry. Impellent excitation of the patient. Pulse 78 beats/min. During auscultation intestinal hums are weakened. The blood analysis - without changes. The urine analysis - quantity of fiber in urine of 0,165 %, leucocytes 30-40 in sight, erythrocytes - fresh 20-30. An amylase of urine of 250 odes. Urea level in blood serum - 9 mm/l.

   The preliminary diagnosis:
   Acute pancreatitis
   Acute cholecystitis (hepatic colic)
   Renal colic
   Intestinal colic
   (A right answer With, a renal colic)

   3. Patient Д. 38 years suffer a recurrent nephrolithiasis. Has some times transferred surgical органосохраняющее treatment on both kidneys and urinary ways. Has arrived in a grave condition: the general delicacy, a pain in a lumbar site from both parties. Temperature subfebrile. At радиоренографии on the right изостенурический curve type, at the left - obstructive type with depression of a secretory part of a curve. Ultrasonic scanning, excretory urography bilateral plural concrements of kidneys have shown. Accumulation of a contrast liquid in pyelocaliceal system are not present. At the left - accumulation is lowered, the pyelocaliceal system is dilated. An anaemia, a leukocytosis, ESR rising. Rate of a glomerular filtration - 65 ml/minutes
   The diagnosis: an urolithiasis. Bilateral concrements of kidneys. A pyelonephritis. ХПН II item
   It is offered to choose a treatment planning.
   Right-hand nephrectomy
   Link sided pyelolithotomy
   Percutaneous link sided lithotripsy
   d) bilateral percutaneous percutaneous a nephrostomy
   (Right answer D, bilateral percutaneous percutaneous a nephrostomy)

   4. Patient Ц, 48 years, throughout 3 years suffers attacks of a link sided renal colic. At out-patient research it is found corral a stone of a left kidney of I item With the help excretory urography the left kidney depression of function is defined. The Pyelocaliceal system is dilated. The Lohanochno-mochetochnikovyj segment is narrowed (signs педункулита). The urine analysis – fiber of 0,165 %,

leucocytes entirely cover a field of vision, erythrocytes 30-40 in the item/zr the Bacteriological analysis of urine – E. coli, microbic number of urine $2,5X10^5$.

The diagnosis: an urolithiasis. A korallovidnyj stone of a left kidney. A hydronephrosis. Xp. A pyelonephritis.

What method of treatment should be preferred?

Extracorporal with great dispatch-wave lithotripsy

Pyelolithotomy and nephrostomy

Nephrectomy

d) a percutaneous pyelolithotomy

(A right answer In, a pyelolithotomy and a nephrostomy)

5. Patient H. 56 years has arrived in hospital in connection with an acute pain attack in lumbar department at the left, subfebrile temperature. The left kidney palpation causes pains. The emiction has become frequent. The general analysis of urine: leucocytes 80-100 in п/з, erythrocytes 30-40 in п/з, fiber - 0,132 %. Ultrasonic scanning: expansion of the left pyelocaliceal system. Radioisotope renography - secretion and an egestion are not broken. On a left-hand side - афункцуональная a curve. On survey уроrрамме in a zone тазового department a left ureter small shades are taped some.

The preliminary diagnosis: left ureter Stones? A hydronephrosis? Obyzvestvlennye lymph nodes?

What research will be the most informative?

excretory urography

Cystochromoscopy

Left ureter catheterization

d) link sided retrograde уретеропиелография

(Right answer Д, link sided retrograde уретеропиелография)

6.2.1. A *rough card for formation of professional skills*

Problem	Sequence of actions	Indicatings for performance
Blockade of a seed funicle on Lorin-Epstein	1. To lay the patient on a back	
	2. To prepare a surgery field	To soap and shave the right or left pahovo-pubic zone. To wipe a skin in this place alcohol.
	3. Define a place of introduction of a needle	After a palpation of the middle of a pubic bone and a verhne-forward arista of a basin it is necessary to spend conditionally between them a line; on border of the bottom and average third there is an injection point.

	4.приготовьте Novocainum of 0,5 % 100,0 and 2 syringes on 20,0	
	5.проведите an injection	5.1. Type Novocainum in 2 syringes, changing them. 5.2. In an injection point make an intradermal nyxis of 1-2 ml to “a lemon peel” 5.3. A syringe hold upright to a skin surface, move a needle more deeply, simultaneously entering Novocainum. 5.4. When will feel resistance апоневроза, cautiously pierce and deepen on 2-4 mm. Moving a needle, continue infiltration. 5.5. After a puncture апоневроза delay on itself the syringe piston to be convinced that there is no blood. 5.6. To inject into the inguinal channel of a solution of Novocainum of 60-80 ml. Extend a needle.
6.2.2. *Курация the patient*	Complaints	6.1. Character and pain localisation in a lumbar site, in a stomach, suprapubic area, in the field of a perineum. 6.2. Presence of a hematuria, urethremorrhagia. 6.3. Character of an emiction (A pollakiuria, an urodynia, feeling incomplete опорожнения a bladder, quantity of the allocated urine at each emiction and from the moment of the beginning of pains.)

	The disease and life anamnesis	7.1. The moment of the beginning of pains, their intensity, dynamics, иррадиация. 7.2. Whether were in the past of disease of kidneys? What concrements departed? Whether there were operations? 7.3. To find out possible etiological factors of a lithogenesis (ekzo - and endogenous), ecological external and professional harmful factors. 7.4. To find out presence of complaints and diseases in the past of other organs.
	Objective research	8.1. The general condition of the patient, adequacy and behaviour, position of the patient. 8.2. To pay attention to a tongue condition, a pulse rate and level of arterial pressure. 8.3. At survey of a stomach to adhere to principles of survey of surgical patients with "acute abdomen" clinic 8.4. Special attention to give palpations of kidneys in three positions, presence of a symptom Pasternatsky. 8.5. For all men of advanced age survey of organs of a scrotum and manual rectal survey of a prostate is obligatory. 8.6. Macroscopical estimation of urine.
	Estimation of datas of laboratory	9.1. The general analysis of a blood 9.2. The urine analysis, reaction (pH) urine 9.3. Biochemical blood analysises: a glucose, urea, a creatinine, bilirubin, a fibrinogen, electrolytes.

	5. The analysis of X-ray inspections	5.1. On the survey roentgenogram of urinary system to estimate: quality of the roentgenogram, a skeleton condition, presence of artefacts at the expense of a contained gastroenteric tract; shades, suspicious on stones in a projection of a kidney, an ureter, a bladder; presence of phleboliths and обызвествленных lymphonoduses 5.2. On экскреторных урограммах: to find a contour of kidneys (nephrogram), to define function of kidneys, to outline a stone shade in ЧЛС, an ureter or a bladder (or suspicion on them), defects of filling, suspicious on a stone. 5.3. To pay attention to the information in late pictures or on infusional урограмму. 5.4. Retrograde уретеропиелография and its application at МКБ.
	6. An estimation of tool methods	6.1. Ultrasonic, its possibilities. Cystochromoscopy. Радионуклидная renography.

6.3 Materials of the control for the employment final stage.
Test problems of the control of final level of knowledge

Find one or several right answers.

1) After a pyelolithotomy remains phosphaturia. The patient should recommend
a) Health resorts of Yalta, Sochi
b) *Martsialnye mineral waters, waters the North Caucasus
c) Borzhomi, Dzhermuk
d) Health resorts of the general type in a midland of Russia
e) Bajram-ali
2) After excision of an oxalic stone remains oxaluria. The patient should recommend a resort therapy
a) *Zheleznovodsk, Truskavets
b) Borzhomi, Dzhermuk
c) Martsialnye mineral waters, Narzany
d) Bajram-ali
e) High-mountainous health resorts
3) After dissolution уратного a kidney stone the uraturia remains. The patient should recommend a resort therapy

a) Zheleznovodsk, Truskavets
b) Narzans, Martsialnye mineral water
c) *в) Bajram-ali
d) Health resorts of the general type of a midland of Russia
e) Yalta, Sochi
4) At sick oxalic stones independently depart, remains oxaluria. She should recommend
a) Restriction of the products containing an oxalic acid (deciduous greens, chocolate, etc.)
b) Restriction of the products containing lemon acid (citrus)
c) Restriction of milk products
d) Augmentation of the products containing vitamins B6 and And and magnesium
e) *all listed
5) At the sick phosphatic stones depart and remains phosphaturia. She can recommend all listed, except
a) Restrictions of milk products
b) Augmentations of fiber, Adepses
c) Normal consumption of vegetables, fruit
d) *lemons
e) Vitamin A
6) At the sick depart urate stones and the uraturia remains. She can recommend all listed
a) Fiber restriction (meat to 1g on 1 kg of weight a day)
b) Is milk-vegetative diet
c) Restriction of a high-caloric diet
d) Fruit
e) *a) and c) are correct),
7) Before all at hydronephrotic transformation arise
a) Ectasia renal pyelus
b) *Ectasia pyelus or calyxes
c) Ectasia of calyxes
d) Flattening renal papillas
e) Narrowing of a renal artery
8) At a hydronephrosis most often there is a complication
a) Arterial hypertensia
b) Venous hypertensia
c) *A pyelonephritis
d) Is renal-stone illness
e) Hematuria
9) Hydronephrotic transformation at children becomes complicated a chronic pyelonephritis
a) In 50 % of cases
b) In 60 % of cases
c) In 70 % of cases
d) In 75 % of cases
e) * in 85 % of cases
10) Hydronephrotic transformation at adults becomes complicated a chronic pyelonephritis
a) In 30 % of cases
b) In 35 % of cases
c) In 45 % of cases
d) * in 55-60 % of cases
e) In 70-80 % of cases
11) The basic radiological methods of diagnostics of hydronephrotic transformation are all listed, except
a) excretory urographies
b) *cystographies
c) Renal arteriography
d) Retrograde pyelography

12) Methods of diagnostics of the "closed" hydronephrosis at a sharp depression of function of a kidney are
a) Renal arteriography
b) excretory urography
c) Retrograde ureterography
d) *г) percutaneous антеградная a pyelography
e) Dynamic scintigraphy
13) Methods of diagnostics of hydronephrotic transformation at renal insufficiency are
a) excretory urography
b) Infusional urography
c) Scanning isotope
d) Ultrasonic scanning
e) * it is correct a) and c)
14) At the hydronephrotic transformation caused with additional lower-polar vessel, complicated by an acute serous pyelonephritis, it is expedient
a) Operation on Culp de Weerd
b) Resection pyeloureteral a segment with pyeloureteroanastomosis
c) *Percutaneous nephrostomy
d) Operation on Foleju
e) Antevasal pyeloureteroanastomosis
15) For a unilateral alternating hydronephrosis are characteristic
a) Low relative density of urine
b) Intermittent back pain
c) эритроцитурия at a fervescence
d) Short-term polyuria
e) * it is correct b) and c)
16) In an out-patient department the patient of 37 years with complaints to the general delicacy, aching back pains on the right has addressed. Two hours has transferred the attack of a right-hand renal colic accompanied by rise in temperature, a fever with the subsequent fast depression of temperature, down-pour then and disappearance of back pains back. At the moment of survey the symptom Pasternatsky is weakly positive on the right, kidneys are not palpated, the emiction is not broken, urine transparent, a body temperature 37.2 C. The Most probable diagnosis
a) Condition after an attack of a right-hand renal colic
b) Acute purulent pyelonephritis
c) Pyelitis
d) Acute hematogenic pyelonephritis
e) *д) an acute serous pyelonephritis, a stone of the right ureter
17) In an out-patient department the patient of 37 years with complaints to the general delicacy, aching back pains on the right has addressed. Two hours has transferred the attack of a right-hand renal colic accompanied by rise in temperature, a fever with the subsequent fast depression of temperature, down-pour then and disappearance of back pains back. At the moment of survey the symptom Pasternatsky is weakly positive on the right, kidneys are not palpated, the emiction is not broken, urine transparent, a body temperature 37.2 C. Tactics of the doctor in this case includes
a) Appointment of out-patient researches
b) *б) urgent hospitalisation
c) Hospitalisation in a planned order
d) Dynamic observation
e) Out-patient treatment appointment
18) The patient has arrived in an urology department concerning a right-hand acute serous pyelonephritis, a stone of the bottom third of ureter in the sizes 0.6x 0.8 tactics of the doctor see In this case provides the following sequence of application of medical actions: 1) intensive antibacterial

therapy 2) operation - kidney audit, a nephrostomy 3) a catheterization of the right ureter 4) an ureterolithotomy 5) percutaneous nephrostomy

a) Correctly 1, 2, 3, 4 and 5
b) Correctly 1, 3, 4, 5 and 2
c) Correctly 2, 4, 5, 1 and 3
d) *It is correct 3, 4, 2, 1
e) Correctly 2, 4, 5, 3 and 1

19) The patient of 65 years has arrived concerning an acute purulent pyelonephritis, a stone pyelus a right kidney in the sizes 1.5 ¦ 2 the Heat with periodic cold fits within 10 days see. For the patient are necessary

a) Planned inspection
b) Ureter catheterization
c) Intensive antibacterial therapy
d) Remote lithotripsy
e) *Operation - kidney inspection, a pyelolithotomy

20) To the patient 32 years. Has arrived concerning an acute purulent pyelonephritis, a stone of the bottom third of right ureter. It is sick 10 days. On excretory urograms right kidney function is absent within 1.5 hours of observation. For the patient are necessary

a) Planned inspection for the purpose of specification of function of kidneys
b) Ureter catheterization
c) Ureterolithotomy
d) * urgent operation - right kidney audit, a nephrostomy
e) And intensive antibacterial therapy
f) Intensive antibacterial therapy

21) Sick of an urolithiasis make in an urological hospital to

a) 10 %
b) * 20 %
c) 45 %
d) 70 %
e) 80 %

22) The high case rate is observed by an urolithiasis in all listed regions, except

a) Uzbekistan
b) Turkmenistan
c) Armenia
d) * Western Siberia
e) Tajikistan

23) Etiological factors of an urolithiasis concern

a) Disturbance fosforno-kaltsievogo an exchange
b) Disturbance of an exchange of an oxalic acid
c) Disturbance of a purine exchange
d) Urinary infection (pyelonephritis)
e) * all listed

24) At alkaline reaction of urine can be formed

a) Urate (urate) stones
b) Cystine stones
c) *phosphatic stones
d) Oxalic stones
e) Alkaline reaction of urine does not influence character of stones

25) Development oxaluria is promoted by all, except

a) Deficiency in an organism of vitamin B6
b) *deficiency in an organism of vitamin D2
c) The nutrition containing excess of lemon acid

d) Chronic colitises
e) Citrate preparations (Blemarenum, uralit, etc.)
26) The hypercalcemia and hypercalcuria promote formation
a) Cystine stones
b) Urate (urate) stones
c) Oxalic stones
d) Phosphatic stones
e) *it is correct a) and c)
27) Disturbance of reabsorbtion in canaliculuses of kidneys of products of an exchange can lead to formation
a) Cystine urinary salts
b) Oxalic urinary salts
c) urate (urate) urinary salts
d) Phosphatic urinary salts
e) *any of the listed
28) To formation of nephroliths promote following anatomo-morphologic changes in kidneys
a) Chronic glomerulonephritis
b) *intrarenal pyelus and disturbance of a lymph drainage from a kidney
c) Venous plethora
d) Extrarenal pyelus
e) Renal arterial hypertensia
29) To the factors which are not influencing formation and growth of urinary stones, concern
a) *High concentration of sodium and creatinine in a blood
b) Urostasis
c) High viscosity of urine
d) Absence or low level of protective colloids in urine
e) High concentration oxalic, urinary acid, calcium in urine
30) For crystallisation oxalic stones optimum pH urine is
a) 3.5
b) *б) 5.5
c) 6.9
d) 7.5
e) 8.8
31) For crystallisation urate (urate) urinary stones optimum pH urine is
a) 3.5
b) *б) 5.5
c) 7.0
d) 7.5
e) 8.5
32) For crystallisation of phosphatic stones optimum pH urine is
a) 4.0
b) 5.7
c) *в) 7.1
d) 8.8
e) 8.9
33) Following local changes in urinary ways do not influence formation of urinary stones
a) Suture material (silk, lavsan, даксон)
b) Excess, ureter stricture, urostasis
c) Foreign matter (a drainage tube, a metal bracket, etc.)
d) *г) an ureter hypertonus, pyelus, calyxes
e) Ureter hypotension, pyelus, calyxes
34) Lithogenesis risk factors do not concern

a) Uraturia, оксалатурия
b) *б) the high maintenance of urea and a creatinine in a blood
c) The high maintenance in a blood and in urine of calcium, urinary and an oxalic acid
d) Leukocyturia, Er-uria, slime in urine
e) phosphaturia

35) All concern radiopaque types of stones listed, except
a) Sodium oxalatums
b) Natrii phosphases
c) The admixed
d) *г) lithates
e) Lithates and Sodium oxalatums

36) To roentgennegative types of stones concern
a) Natrii phosphases
b) Natrii phosphases and lithates
c) Lithates and Sodium oxalatums
d) *г) lithates (urate)
e) Lithates + Sodium oxalatums + Natrii phosphases

37) Pyelonephritis at an urolithiasis tap approximately
a) In 10 % of cases
b) In 30 % of cases
c) In 50 % of cases
d) *г) in 80 % of cases
e) In 98 % of cases

38) The pyelonephritis precedes urolithiasis development, that is is primary approximately
a) In 10 % of cases
b) *б) in 30 % of cases
c) In 50 % of cases
d) In 80 % of cases
e) In 90 % of cases

39) The pyelonephritis joins after formation of stones in kidneys (again)
a) In 10 % of cases
b) In 20 % of cases
c) *в) in 50 % of cases
d) In 80 % of cases
e) In 90 % of cases

40) Choose an optimum variant of sequence of actions in diagnostics of a prospective urolithiasis: 1) ultrasonic scanning of kidneys 2) the clinical analysis of a blood and urine 3) excretory urography 4) a jaderno-magnetic resonance 5) radioisotope nephroscintigraphy 6) a renal venography
a) 1, 6, 5, 3, 4, 2
b) 2, 1, 3
c) *в) 3, 4, 1, 6, 2, 5
d) 5, 4, 3, 2, 1, 6
e) 6, 1, 5, 4, 2, 3

41) In a choice of a method of operative treatment the renal arteriography is expedient
a) At a stone of a calyx of a kidney
b) *б) at corral a stone of a kidney of III degree
c) At a stone pyelus kidneys
d) At a sponge kidney and plural stones
e) In one case

42) The computer x-ray tomography is expedient
a) At corral a kidney stone
b) At stones of both kidneys (a calyx, pyelus)

c) At urate a stone pyelus kidneys
d) In all cases
e) *д) in one case
43) Retrograde уретеропиелография it is expedient
a) At a stone (Sodium oxalatum) pyelus, a kidney or an ureter
b) *б) at a stone (lithate) of an ureter, pyelus or calyxes
c) At a stone (Natrii phosphas) of a calyx, pyelus, a kidney or an ureter
d) In all cases
e) In one case
44) Radioisotope renography it is expedient
a) At corral a kidney stone
b) At stones of both kidneys
c) At a stone of an ureter or both ureters
d) *г) in all cases
e) In one case
45) Ultrasonic scanning of kidneys expediently
a) At a stone (lithate) of a calyx of a kidney (suspicion)
b) At corral a kidney stone
c) At an ureter stone
d) In one case
e) *д) in all cases
46) Survey and excretory urography are expedient
a) At stones of pyelus of both kidneys
b) At corral a kidney stone (both kidneys)
c) At a stone (lithate) of an ureter
d) *г) in all cases
e) Only and
47) Dynamic nephroscintigraphy it is most expedient
a) *At corral a kidney stone
b) At a stone pyelus kidneys in the size 5 ¦ 6 mm
c) At an ureter stone
d) At stones of both ureters
e) At the departed stone of an ureter
48) Radioisotope static scanning of kidneys expediently
a) At an ureter stone
b) At a stone pyelus kidneys in diameter not less than 5 mm
c) At stones of both ureters
d) In all cases
e) *д) in one case
49) At the patient independently depart уратные stones and salts. In diagnostics it is applicable necessary researches from the offered: 1) the general analysis of urine, urinary acid of daily urine 2) a transaminase of a blood 3) urinary acid of a blood 4) survey and excretory urography 5) ultrasonic research of kidneys 6) isotope scanning of kidneys and a liver
a) 1, 3, 4, 5
b) 1, 2, 3, 5, 6
c) 2, 3, 5, 6
d) *г) all kinds of researches
e) Everything, except 2
50) Independently oxalic stones and salts depart. Select a necessary variant of inspection
a) The general analysis of urine, daily urine and calcium, urine crops on flora
b) Calcium, blood serum phosphorus
c) Survey and excretory urography

d) Ultrasonic scanning of kidneys
e) *д) taken all together
51) Independently phosphatic stones and salts depart. Select a necessary variant of inspection
a) *All нижеперечисленное
b) The general analysis and urine crops on flora, pH urine, calcium of daily urine
c) Survey and excretory urography
d) Calcium, blood serum phosphorus
e) Ultrasonic scanning of kidneys
52) Stone of the bottom third of ureter of 3 mm, уретеропиелоэктазия (above a stone). Specify a correct method of treatment
a) Antispasmodics
b) Neostigmine methylsulfate subcutaneously
c) *в) water loads
d) UHF and an ureter electrical stimulation
e) Truly and
53) Domiciliary the renal colic, temperature is diagnosed for the patient 38.3 C within two days, cold fits. Your actions
a) To treat domiciliary antibiotics
b) To hospitalise in therapeutic unit
c) Urgently to hospitalise in an urological hospital
d) To measure arterial pressure
e) *д) it is correct) and
54) Bilateral stones of the bottom third of ureters, renal colic and acute purulent pyelonephritis on the right. A bacteriemic shock. Select a variant of the emergency help
a) Urgent nephrostomy, right kidney decapsulation
b) Intravenously corticosteroids, Polyglucinum, cardiovascular agents
c) *в) an urgent ureterolithotomy on the right
d) Catheterization of the right ureter
e) Originally, further and
55) Анурия within 24 hours. In the anamnesis отхождение urate stones and salts. A variant of the emergency help
a) Catheterization, Lasixum intravenously 100 mg
b) Catheterization of ureters
c) Urgent nephrostomy
d) Intravenously 1 l of a normal saline solution
e) *д) it is true) and
56) At urate (roentgennegative) a stone 25 ¦ pyelus kidneys without disturbance уродинамики treatment is the most expedient to begin 25 mm
a) With percutaneous чрезкожной nephrolithotomias
b) From a remote with great dispatch-wave lithotripsy
c) From a pyelolithotomy
d) *г) with hemolysisa
e) The intervention is not shown
57) At an oxalic stone pyelus kidneys 20 ¦ 25 mm without disturbance уродинамики are most rationally shown
a) *Remote with great dispatch-wave lithotripsy
b) Hemolysis
c) Pyelolithotomy
d) percutaneous a nephrolithotomia
e) The intervention is not shown
58) At a phosphatic stone pyelus kidneys 25 ¦ 20 mm without disturbance уродинамики, a chronic latent pyelonephritis the most expedient method of treatment are

a) Pyelolithotomy
b) The intervention is not shown
c) *в) a with great dispatch-wave lithotripsy
d) Hemolysis
e) Nephrolithotomia

59) At urate a stone pyelus 20 ¦ 18 mm, a chronic pyelonephritis in an active phase, педункулите, a periureteritis, a hydrocalycosis it is necessary to apply kidneys to treatment
a) With great dispatch-wave lithotripsy
b) Antibacterial therapy, intervention it is not shown
c) Hemolysis
d) percutaneous a nephrolithotomia
e) *д) a pyelolithotomy, an ureterolysis

60) At an oxalic stone pyelus kidneys 25 ¦ 30 mm, a chronic latent pyelonephritis, a hydrocalycosis are shown
a) hemolysis
b) With great dispatch-wave lithotripsy
c) The intervention is not shown
d) *г) a pyelolithotomy
e) percutaneous a nephrolithotomia without a contact lithotripsy

61) At an oxalic stone pyelus kidneys 15 ¦ 16 mm without disturbance уродинамики an optimum method of treatment are
a) hemolysis
b) *б) percutaneous a nephrolithotomia
c) Pyelolithotomy
d) The intervention is not shown
e) Sanatorium treatment

62) At the patient of 40 years corral a radiopaque stone pyelus intrarenal type without disturbance of urodynamics, a chronic latent pyelonephritis. To it it is shown
a) Pyelolithotomy, nephrostomy
b) Sectional nephrolithotomia, nephrostomy
c) hemolysis
d) percutaneous a nephrostomy, a nephrolithotomia
e) *д) an intervention not to make

63) At the patient of 40 years corral a radiopaque stone intrarenal pyelus, a hydrocalycosis, a chronic pyelonephritis in an active phase. Treatment includes it
a) Intervention not to make
b) *б) a nephrolithotomia (a sectional nephrolithotomia), a nephrostomy
c) percutaneous a nephrolithotomia
d) With great dispatch-wave lithotripsy
e) hemolysis

64) At the patient of 20 years corral roentgenpositive stone 2deg at extrarenal type pyelus, a chronic latent pyelonephritis, pedunculitis. An optimum method of treatment at it is
a) Intervention not to make
b) With great dispatch-wave lithotripsy
c) Sectional nephrolithotomia, nephrostomy
d) * Pyelocalicolitotomy (by Zhil - Vernetu), a nephrostomy
e) hemolysis

65) At the patient of 45 years corral a radiopaque stone of II stage extrarenal pyelus, a hydrocalycosis, a chronic pyelonephritis in an active phase. The patient should recommend
a) Intervention not to make
b) * back cross-section pyelocalicolitotomy, a nephrostomy, an ureterolysis
c) percutaneous a nephrostomy in a combination to a lithotripsy

d) hemolysis
e) Sectional nephrolithotomia, nephrostomy

66) At the patient sponge kidneys, plural stones, a chronic pyelonephritis in an active phase. It should execute
a) Nephrolithotomia and nephrostomy
b) Antibacterial therapy without an operative measure
c) *в) a with great dispatch-wave lithotripsy
d) hemolysis
e) percutaneous nephrolithotomia

67) At the patient of 35 years bilateral corralные the stones of kidneys localised in extrarenal pyelusx, moderate disturbance of urodynamics, a chronic pyelonephritis in an active phase. He can recommend
a) *Pyelolithotomy, nephrostomy on the one hand
b) Back cross-section, intrasinus pyelolithotomy, nephrostomy simultaneously from 2 parties
c) Operation it is not shown
d) Hemolysis
e) Bilateral percutaneous a nephrostomy

68) At the patient of 50 years a pyonephrosis on the right and corral a stone at the left. He should recommend
a) Pyelolithotomy and nephrostomy at the left
b) * a nephrectomy on the right
c) Nephrectomy on the right, a pyelolithotomy and a nephrostomy at the left it is single-step
d) With great dispatch-wave lithotripsy at the left
e) The intervention is not shown

69) At the patient of 50 years уратные stones of calyxes of both kidneys, a chronic latent pyelonephritis. To it it is shown
a) Operative treatment
b) With great dispatch-wave lithotripsy
c) * Hemolysis
d) percutaneous nephrolithotomia
e) Sanatorium treatment

70) At urate a stone of a bladder 30 ¦ and a prostate adenoma it is necessary to recommend 25 mm
a) Hemolysis, cystolitotomy and cystostomy
b) With great dispatch-wave lithotripsy
c) *г) cystolitotomy, an adenomectomy and cystostomy
d) The intervention is not shown

71) At urate a stone lohanochno-mochetochnikovogo a segment, an acute serous pyelonephritis are shown
a) Antibiotics, conservative treatment
b) Percutaneous nephrolithotomia
c) *в) a pyelolithotomy, audit kidneys (nephrostomy)
d) With great dispatch-wave lithotripsy
e) Ureter catheterization

72) At слабоконтрастном a stone (85 % a lithate + 15 % Sodium oxalatum are conditional) 15 ¦ 17 mm pyelus kidneys, a chronic latent pyelonephritis probably to recommend all listed, except
a) * Hemolysis
b) Pyelolithotomies
c) With great dispatch-wave lithotripsy
d) Percutaneous nephrolithotomias
e) All is true

73) At the patient of 50 years a stone a lithate (рентгенонегативный) 12 ¦ 8 mm of the top (average) third of the ureter, breaking уродинамику, a chronic pyelonephritis in a remission stage. He should recommend
a) Hemolysis
b) *б) an ureterolithotomy
c) Conservative treatment
d) Ureterolitoextraction
e) Lytotripsy on apparatus "Lithate-II"
74) At urate a stone 7 ¦ 10 mm in the bottom third of the ureter, moderately breaking urodynamics, a chronic latent pyelonephritis are shown
a) Hemolysis
b) Ureterolitoextraction
c) *в) an ureterolithotomy
d) Intervention not to make
e) Sanatorium treatment
75) At an oxalic or phosphatic stone 12 ¦ in an average third of ureter (the kidney functions) it is possible to recommend 7 mm
a) Hemolysis
b) With great dispatch-wave lithotripsy
c) Ureterolithotomy
d) *г) it is correct) and
e) Ureterolitoextraction
76) At the patient of 20 years a stone Sodium oxalatum 5 ¦ 8 mm of the bottom third of ureter with moderated ureteroectasy. To it it is shown
a) Ureterolitoextraction
b) Ureterolithotomy
c) Conservative treatment within 1 month
d) *г) it is possible) and
e) Probably and
77) At the patient of 25 years stones of the bottom third of both ureters in the size 12 ¦ 6 mm and moderated ureteroectasy. He should recommend
a) To continue conservative therapy
b) Ureterolitoextraction it is single-step from 2 parties
c) Ureterolitoextraction on the one hand
d) *Ureterolithotomy single-step from 2 parties
e) Percutaneous nephrostomy from both parties
78) At sick 40 years a stone Natrii phosphas 5 ¦ 10 mm of the bottom third of ureter, within 4 months a moderate ureterectasia. To it it is shown
a) Ureterolithotomy
b) *б) уретеролитоэкстракция
c) With great dispatch-wave lithotripsy
d) Hemolysis
e) Conservative treatment to continue
79) At a stone in уретероцеле in the sizes 12 ¦ 12 mm and not broken уродинамике are the most expedient
a) Intervention not to make
b) Excising transvesically of ureterocele
c) *Transuretral resection of ureterocele with an electroknife (coagulator) on ureteral catheter
d) With great dispatch-wave lithotripsy
e) Ureterocystoneostomy

80) At the patient of 45 years plural stones in an expanded bottom calyx, its neck is narrowed, a thickness of a parenchyma of the bottom pole of a kidney to 4 mm. Kidney function is kept. He should recommend
a) Intervention not to make
b) Nephrolithotomia
c) Pyelolithotomy
d) *г) a resection of the bottom pole of a kidney
e) Nephrectomy
81) At the patient of 55 years plural stones of a kidney, a chronic pyelonephritis in an active phase, again a contracted kidney, an arterial hypertensia within 2th years. To it are shown
a) Antiinflammatory, hypotensive therapy it is out-patient, long
b) Pyelolithotomy, nephrostomy
c) *Percutaneous nephrostomy
d) Nephrectomy
e) With great dispatch-wave lithotripsy
82) At a stone of pyelus of kidney 20 ¦ 25 mm and the bottom third of ureter from the same party in the size 14 ¦ 8 mm, kidney function it is kept, a chronic pyelonephritis in an active phase it is shown
a) Long antibacterial and spasmolytic therapy
b) Ureterolitoextraction+ a pyelolithotomy
c) With great dispatch-wave lithotripsy
d) Pyelolithotomy and ureterolithotomy from one cut on Izraelju
e) *Ureterolithotomy and a pyelolithotomy from 2 cuts
83) At a stone pyelus kidneys, a kidney anthrax, the heat of a body expressed to an intoxication, suspicion on a sepsis follows
a) To prescribe intravenously and endolymphatic antibiotics, detoxicating
b) *б) to execute an urgent nephrectomy
c) To execute an urgent pyelolithotomy, anthrax excising, a nephrostomy
d) To make an ureter catheterization, conservative therapy
e) To execute percutaneous nephrostomy
84) At a stone of the top third of the ureter, complicated by an acute purulent pyelonephritis, it is necessary to recommend
a) *Ureterolithotomy, nephrostomy and kidney decapsulation
b) Ureter catheterization, conservative therapy
c) Conservative treatment: intravenously or эндолимфатически antibiotics of a wide spectrum of action
d) Truly and
e) Nephrectomy
85) At a stone of the bottom third of ureter 5 ¦ 4 mm, complicated by an acute serous pyelonephritis, it is shown
a) Ureterolithotomy
b) Nephrostomy and kidney decapsulation
c) *в) an ureter catheterization, antibiotics of a wide spectrum of action
d) Ureterolitoextraction
e) It is interconvertible, and
86) At a stone 25 ¦ 20 mm and pyelus the admixed type it is most expedient
a) *Back cross-section intrasinus pyelolithotomy
b) Forward cross-section pyelolithotomy
c) The bottom longitudinal pyelolithotomy
d) The top cross-section pyelolithotomy
e) All methods are interconvertible
87) At corral a stone of II stage with diffusion on a neck of the top and bottom calyx of a kidney, extrarenal pyelus it is possible to apply

a) Back longitudinal pyelolithotomy
b) *б) back cross-section intrasinus пиелокаликолитотомию on Zhil - Vernetu
c) Sectional nephrolithotomia
d) Anterior longitudinal pyelolithotomy
e) All methods are interconvertible

88) At performance of a pyelolithotomy, a nephrolithotomia apropos corral a kidney stone it is necessary to apply
a) *Nephrostomy
b) To sew up pyelus tightly without a nephrostomy
c) Pyelostomy
d) Circular (ring) nephrostomy
e) All methods are interconvertible

89) At stone excision in pyelus and calyxes salts, a detritis are found out. It is necessary to execute
a) Circular nephrostomy
b) *б) a nephrostomy
c) Pyelostomy
d) To take in лоханку tightly
e) All methods are interconvertible

90) During a pyelolithotomy and a nephrolithotomia there was an appreciable bleeding. In this case it is necessary to execute
a) Introduction in лоханку and absorbable gelatin sponge calyxes
b) Pyelostomy
c) *Nephrostomy
d) Nephrectomy
e) To sew up лоханку tightly

91) At corral stone of III degree the pyelolithotomy, a nephrotomy and a nephrostomy is planned. A kidney locating high, XI and XII ribs long. Rational operative access will be
a) Lumbotomy on Fedorovu
b) Lumbotomy with transition in 9 межреберье
c) Lumbotomy with transition in 11 межреберье
d) Lumbotomy on Izraelju
e) *д) a lumbotomy on Nagamatsu

92) At a stone pyelus kidneys 25 ¦ 20 mm and a stone juxtavesical department of an ureter 12 ¦ 9 mm from the same party are shown
a) *Lumbotomy on Federovu and a cut on Pirogovu
b) Cut on Izraelju
c) Pararectal cut
d) Ureterolithotomy the first stage
e) Pyelolithotomy the second stage

93) At urate (рентгенонегативном) a stone of an average third of ureter, the size 15 ¦ 9 mm, breaking urodynamics, are shown
a) hemolysis
b) To establish ureteral catheter
c) * an ureterolithotomy
d) Spasmolytic therapy, ureter electrical stimulation
e) Nephrostomy

94) At a prostate adenoma, a stone (Sodium oxalatum) of a bladder 30 ¦ 30 mm are shown
a) hemolysis
b) cystolitotomy and cystostomy
c) *в) an adenomectomy, cystolitotomy and cystostomy
d) Transurethral cystolithotripsy
e) With great dispatch-wave remote lithotripsy

95) At the patient of 55 years a stone juxtavesical department of an ureter in the size 6 ¦ 9 mm, breaking an urodynamics. To it are shown
a) Conservative therapy
b) *б) an ureterolithotomy
c) ureterolytoextraction
d) Ureter catheterization
e) It is interconvertible and
96) At the patient of 55 years a stone of an average third of ureter in the size 6 ¦ 9 mm, breaking urodynamics. To it are shown
a) Conservative therapy
b) *б) an ureterolithotomy
c) ureterolytoextraction
d) Ureter catheterization
e) It is interconvertible and
97) At sick 30 years a stone of the bottom third of ureter 5 ¦ 9 mm, breaking urodynamics. To it are shown
a) Conservative therapy
b) Ureterolithotomy
c) *в) ureterolytoextraction
d) Ureter catheterization
e) It is interconvertible
98) At proof phosphaturia after a pyelolithotomy follows: 1) to prescribe a milk diet 2) daily to accept on 1 lemon 3) to prescribe antibiotics of a wide spectrum of action, uroantiseptics 4) to prescribe methionine, Acidum ascorbinicum 5) to use the nutrition rich with fiber (meat, fish), Adepses, oils 6) to prescribe diuretic vegetative agents 7) to prescribe citrate preparations (Magurlitum, Blemarenum, etc.)
a) All listed is correct
b) *б) everything is correct, except 1, 2, 7
c) Correctly everything, except 5 and 7
d) Correctly everything, except 1, 2, 3
e) Correctly everything, except 2, 5, 7
99) At proof oxaluria after triple delivery of oxalic stones it is necessary to recommend: 1) the nutrition rich with deciduous greens, bean, citron 2) the nutrition rich with calcium (milk products, a potato, eggs, etc.) 3) the nutrition containing vitamins of group In, And, magnesium 4) citrate preparations 5) magnesium oxyde, Sodium thiosulfatum of magnesium 6) vitamins B6, And 7) wheaten bran 8) to enlarge a diuresis to 2 l
a) All listed is correct
b) Correctly everything, except 2 and 5
c) *в) everything is correct, except 1, 2, 4
d) Correctly everything, except 3, 5, 6, 7 and 8
e) Correctly everything, except 1 and 5
100) At a proof uraturia treatment includes: 1) a milk diet 2) a vegetative diet 3) a meat diet 4) a diuresis of 2-2.5 l 5) a diuresis less than 1 l 6) citrate preparations 7) blockers of a purine exchange (Allopyrinolum, hypuric, etc.)
a) All listed is correct
b) Correctly everything, except 1, 3, 5
c) Correctly everything, except 1, 2, 3 and 4
d) Correctly everything, except 1, 3, 4 and 6
e) *д) everything is correct, except 3 and 5
101) At the patient bilateral radiopaque corralные stones of kidneys. Suspicion on a hyperparathyreosis. It is necessary to include in diagnostics plan
a) Research of a renin, blood Aldosteronum

b) Definition of calcium, phosphorus of blood serum and daily urine
c) Definition of a parathormone, blood calcitonin
d) Assay with a parathormone, skeleton scanning
e) *д) everything, except)

102) At urate stones of kidneys we survey a condition of a purine exchange
a) Skull roentgenography
b) *б) definition of urinary acid in blood serum and daily urine
c) Definition of an alkaline phosphatase of a blood
d) Truly and
e) Truly and

103) Oxalic recurrent stones of kidneys. We survey a condition фосфоркальциевого an exchange
a) Calcium and phosphorus definition in blood serum and daily urine
b) Roentgenography of fine tubular bones
c) Scanning of parathyroid glands
d) Definition acidic фосфатазы
e) * all is true, except d)

104) Ureterolitoextraction it is expedient
a) *At women with stones of the bottom third of ureter in the sizes to 6 mm, at an uncomplicated current
b) At men in the same situation
c) At stones of an average third of ureter of 5-6 mm at men and women
d) At bilateral stones of the top third of ureter
e) In all cases

105) At prerenal anuria (stones of ureters) the emergency help is shown
a) Intravenously big doses of Lasixum, infusional therapy
b) *б) a catheterization of ureters
c) Bilateral nephrostomy simultaneously
d) With great dispatch-wave lithotripsy
e) It is interconvertible and

106) At sick in a pyelus of right kidney it is an urate stone, in left - an oxalic stone, the sizes 25 ¦ 20 mm each. She can recommend
a) *Dissolution of urate stone on the right, the second stage - a with great dispatch-wave lithotripsy or a pyelolithotomy at the left
b) Single-step pyelolithotomy from 2 parties
c) Consistently pyelolithotomy with an interval in 2-3 months
d) Bilateral with great dispatch-wave lithotripsy
e) Bilateral percutaneous nephrolithotomia

107) At the patient of 30 years bilateral corralные stones of kidneys, a chronic latent pyelonephritis. Pyeli of extrarenal type. He can recommend
a) Operative treatment is not shown
b) Single-step pyelocalicolytotomia, a nephrostomy from 2 parties
c) *в) a pyelolithotomy, a nephrostomy on the one hand, in 4-5 months - on the other hand
d) Bilateral with great dispatch-wave lithotripsy
e) Bilateral percutaneous nephrolithotomia

108) At a stone of the top third of ureter of 8 mm, an acute serous pyelonephritis it is necessary to apply
a) *Urgently ureterolithotomy, kidney audit
b) Urgently nephrectomy
c) Urgently percutaneous nephrostomy
d) The stent equipment in an ureter
e) To continue conservative, antibacterial therapy

109) At a renal stone 20 ¦ 20 mm, an acute serous pyelonephritis it is necessary to apply

a) Conservative therapy
b) *б) urgently pyelolithotomy, kidney audit, a nephrostomy
c) Nephrectomy
d) Percutaneous nephrolithotomia, a nephrostomy
e) With great dispatch-wave lithotripsy

110) At a renal stone 20 ¦ 20 mm, an acute purulent pyelonephritis it is necessary to prescribe
a) Antibiotics, corticosteroids, intravenous infusional therapy
b) *б) urgently pyelolithotomy, a nephrostomy, a kidney decapsulation
c) Urgently percutaneous nephrostomy
d) Ureter catheterization, pyelus
e) Interconvertible variants, and

111) At a stone pyelus, an acute purulent pyelonephritis, a bacteriemic shock it is necessary to prescribe
a) Urgently nephrectomy
b) Urgently pyelolithotomy, nephrostomy, kidney decapsulation
c) Ureter catheterization
d) * antishock therapy, corticosteroids 1-2 г, intravenous infusional therapy, etc., after deducing from a shock - operative treatment or an ureter catheterization
e) Interconvertible variants, and

112) At urate kidney stone, an acute serous pyelonephritis it is necessary to apply
a) Stone dissolution in a combination to antibacterial therapy
b) The stent equipment in an ureter
c) percutaneous nephrolithotomia
d) With great dispatch-wave lithotripsy
e) * an emergency pyelolithotomy, kidney audit

113) At fine stones of both ureters, анурии 20 hours should be applied
a) Intravenously Lasixum, infusional therapy
b) Bilateral nephrostomy
c) * a catheterization of ureters
d) Bilateral percutaneous a nephrostomy
e) Bilateral emergency ureterolithotomy

114) At a stone of an ureter of a unique kidney of 5 mm, анурии it is necessary to apply 12 hours
a) Intravenously Lasixum
b) Emergency nephrostomy
c) Percutaneous nephrostomy
d) *г) an ureter catheterization
e) Interconvertible variants, and

115) The ureter stone, renal colic, acute serous pyelonephritis is diagnosed for the patient in an out-patient department. He should recommend
a) To continue antibacterial, spasmolytic therapy domiciliary
b) *б) urgently to hospitalise in an urological hospital
c) Ureter catheterization in an out-patient department
d) Antishock therapy профилактически
e) Interconvertible variants, and

116) At sick 30 years bilateral stones, a chronic pyelonephritis, again contracted kidneys, an uremia. She can recommend
a) *Hemodialysis, in the long term bilateral nephrectomy and kidney transplantation
b) Pyelolithotomy, nephrostomy consistently from 2 parties
c) Infusional anti-azotemic therapy
d) Catheterization of ureters
e) Percutaneous nephrostomy

Auxiliary questions for self-checking:

1. Definition of diseases "hydronephrosis" and "hydronephrotic transformation".
2. List etiological factors of a hydronephrosis.
3. Hydronephrosis classification.
4. Name the basic symptoms of a hydronephrosis.
5. List the basic tool diagnostic receptions applied to diagnostics of a hydronephrosis.
6. List names of operations which are carried out for hydronephrosis liquidation.
7. What forecast of recover at a hydronephrosis.

6.4. Materials of maintenance of self-preparation of students.

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Recommended literature.
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Information resources:

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Library library.odmu.edu.ua
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