

BOHOMOLETS NATIONAL MEDICAL UNIVERSITY

**GUIDELINES
for lecture**

« Glomerulonephritis and chronic renal failure in children »

Academic discipline

«Pediatrics, including medical practice (professional training) childhood diseases»

Field of knowledge: 22 "Health care"

Specialty: 222 "Medicine"

Department of Pediatrics No 2

Approved at the meeting of the Department of Pediatrics No. 2 on August 26, 2024, protocol No. 1

Considered and approved by: Cyclic methodological commission for pediatric disciplines
dated 29 August 2024, protocol No 1

Competencies that are formed during the lecture:

Acquiring the knowledge of the anatomical features of the organs of the urinary system: a) location of the kidneys; their mobility; b) features of the structure of glomeruli, tubules, Henle loop, interstitial tissue; c) peculiarities of the structure of kidney cups, ureters and bladder; d) features of the urethra in young boys and girls.

Acquiring the knowledge of the physiological features of the organs of the urinary system: a) kidney function; b) glomerular filtration; c) tubular absorption; d) daily diuresis; e) concentration capacity of kidneys in children.

The value of genetic factors for the growth and development of a child

Principles of care of the organs of the urinary system in a healthy and sick child

Acquiring the knowledge of appropriate methods of examination of a child with diseases of the urinary system

Acquiring the knowledge of the semiotics of urinary system disorders in children

Acquiring the knowledge of instrumental diagnostics (ultrasound, X-ray studies, CT, MRI) in children with diseases of the urinary system

Getting in acquaintance with the morphological features of the kidney's tissue and main pathomorphological changes in case of glomerular apparatus damage

The purpose of the lecture:

to provide systematized bases of scientific knowledge on the problem of glomerulonephritis and chronic renal failure in children. The formation of an indicative theoretical basis for the further assimilation of educational material by students

Equipment: Laptop, PowerPoint presentation

The task of the lecture:**Tasks of the lecture:**

- Consider the definition, prevalence, classification, etiology and pathogenesis of GN, CNN. • Consider with the clinical manifestations of GN, CRF
- To detail the criteria for establishing a preliminary clinical diagnosis of HF and the diagnosis of CRF
- Specify the methods of laboratory and instrumental examination of children with GN, CRF;
- Consider the criteria for establishing a final clinical diagnosis, treatment, prevention and prognosis in GN, CRF

Lecture plan

The name of the stage	Description of the stage	Levels of assimilation	Timing
1. The introductory part	- announcement of the plan and main issues of the lecture - motivation for studying the topic	*	5 min

2. The main stage	- teaching material, explanation, connection with practice;	* **	80 min
3. The final stage	- summing up - general conclusion; methodical advice, answers to questions; - tasks for independent work;	*	5 min

* Introductory, **Reproductive, *** Reconstructive, **** Creative levels of assimilation.

Recommended Books:

1. Nelson Textbook of Pediatrics, 2-Volume set, 21-th edition. By Robert M. Kliegman, Bonita M.D. Stanton, Joseph St. Geme and Nina F Schor. – Philadelphia, PA : Elsevier Inc., 2020 - 4264 p. (2713-2728)
ISBN-10 : 032352950X ISBN-13 : 978-0323529501

2. Pediatrics : textbook / O. V. Tiazhka, T. V. Pochinok, A. M. Antoshkina [et al.] ; edited by O. Tiazhka. – 3 rd edition, reprint. – Vinnytsia : Nova Knyha, 2018. – 544 pp. (pp. 435-449) : il. ISBN 978-966-382-690-5

Additional

1. *Kidney Disease: Improving Global Outcomes (KDIGO) Glomerular Diseases Work Group. KDIGO 2021 Clinical Practice Guideline for the Management of Glomerular Diseases. Kidney Int. 2021. 100(4S). S1-S276.*
<http://dx.doi.org/10.22141/2307-1257.11.1.2022.355>

Questions for student self-preparation for the lecture

1. Histopathology of GN
2. Assessment of kidney function. Glomerular filtration. Tubular reabsorption and secretion
3. The role of immune complexes and complement in the development of immune complex diseases.

Questions for preparing for the current control, which the lecture material reveals:

1. Etiology and pathogenesis of glomerulonephritis
2. Morphological and clinical classification of GN in children
3. Features of the clinical picture, diagnosis, course of post-streptococcal GN in children
4. General principles of treatment of GN in children
5. Peculiarities of treatment of CRF in children
6. Clinical features of individual forms of GN: GN, nephrotic syndrome with minimal changes, FSGS, mesangioproliferative, membrane proliferative GN, membranous GN, extracapillary GN

7. Chronic kidney failure in children: etiology and pathogenesis
8. Clinical features of CRF
9. Peculiarities of CRF DDx in children

Methodical development is completed by

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pediatrics № 2 Iemets O.V.