Osh State University

Medical Faculty

Department "Biochemistry, Pathophysiology and Pharmacology"

**«APPROVED»**

Head. Chair of MD, PhD Muratov Zh. K.

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GUIDELINES FOR TRAINEES

TO EXTRACURRICULAR WORK INDEPENDENTLY

SECTION: **SYSTEMIC PATHOPHYSIOLOGY**

TOPIC: PATHOPHYSIOLOGY OF ENDOCRINE SYSTEM.

Developed: teacher Ismailov I.Dzh.

Methodical instructions approved at a meeting of the department

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OSH

**Study subject:** PATHOPHYSIOLOGY OF ENDOCRINE SYSTEM.

**Aim of the lesson**: to study the causes and mechanisms of hyper- and hypofunction of pituitary and adrenal glands.

**Format:** Preparing for the practical exercises.

**Questions for self-study:**

1. Nature of hormones. Mechanism of hormone action. Hormonal regulatory systems. A role of releasing-factors.

2. Pathologic mechanisms of endocrine diseases. Causes of hormone excess and deficiency. Role of infringement of the central, ferrous and peripheric mechanisms in endocrine diseases.

3. Classification of endocrinopathias. Concept about central (secondary and tertiary) and peripheric (primary) endocrinopathias.

4. Pathology of gipotalamo-pituitary system. Hypopituitarism. Etiology and pathogenesis. Partial and total insufficiency of a pituitary body. Panhypopituitarism. Shihene disease. The basic infringements and symptoms.

5. The diseases caused by infringement of formation of a somatotropic hormone. A role of somatomedins. Nanism. Gigantism and acromegaly. Etiology and pathogenesis.

6. Syndrome of inappropriate antidiuretic hormone (ADH) secretion pathology. Diabetes insipidus. Parhon syndrome.

7. Pathology of adrenal gland. Acute and chronic insufficiency. Addisson disease.The causes, a pathogeny of infringements.

8. Hyperfunction of adrenal gland. Primary and secondary hyperaldosteronism. Conn´s disease. Pathogeny and symptoms.

9. Itsenko-Cushing’s disease and syndrome, congenital adrenal hyperplasia.

10. Aadrenogenital syndroms. Mechanisms of development and its basic manifestations.

11. Phaeochromocytoma.

**List of practical skills**

1. To be able to calculate the color index

2. To be able to interpret the change in the main indicators of red blood.

**Recommendations to UIRS:**

1. Making the album with the relevant tasks relating to using educational and methodological literature.

2. Master the techniques of creative use of the program material on this topic by using problem solving.

**Self-control on test tasks:**

*1. What hormones formation infringement takes place in pituitary gigantism?*

a) gonadotropin

b) somatotropinum

c) prolactin

d) melanocyte-stimulating hormone

*2. What infringements are characteristic of pituitary nanism?*

a) augmentation of protein synthesis

b) reduction of protein synthesis

c) tissue differentiation infringement

d) tissue differentiation is not variated

*3. What hormones formation infringement in Simmonds disease takes place?*

a) gonadotropin

b) somatotropin

c) thyrotropin

d) anterior pituitary hormones

*4. What hormones formation infringement in Shihen disease takes place?*

a) gonadotropin

b) somatotropinum

c) corticotropin (ACTH)

d) anterior pituitary hormones

*5. What metabolic infringements are characteristic of Somatotropin hyperproduction?*

a) augmentation of synthesis of protein

b) lipolysis augmentation

c) reduction of synthesis of protein

d) lipogenesis augmentation

*6. What hormones formation infringement in Itsenko-Cushing disease occurence probably takes place?*

a) somatoliberin

b) corticoliberin

c) somatostatin

d) thyroliberin

*7. To what hormone formation decrease acromegaly is related?*

a) somatoliberin

b) coticoliberin

c) somatostatin

d) thyroliberin

*8. What change of protein metabolism characterises Itsenko-Cushing disease?*

a) augmentation of synthesis of protein

b) augmentation of a katabolism of protein

*9. What change of fat metabolism characterises Itsenko-Cushing disease?*

a) lipolysis augmentation

b) lipogenesis augmentation

*10. What changes of metabolism characterises Itsenko-Cushing disease?*

a) glyconeogenesis intensifying

b) augmentation of fat synthesis

c) glyconeogenesis reduction

d) protein synthesis augmentation

e) protein katabolism augmentation

Literature:

1. Lecture material.

2. General and clinical pathophysiology / Ed. by A. V. Kubyshkin –

Vinnytsa: Nova Knyha Publishers. – 2011. – P. 589-612.

3. Pathology/ ed. by E. Rubin and J.L. Farber. – 2nd ed. – 1994. – P.1099 –

1147.

4. Pathophysiology/ ed. by C. Paradiso (Lippincott’s review series). –

1995. – P. 223-241.

5. Pathophysiology of disease: an introduction to clinical medicine/ ed. By

S. J. McPhee, W. F. Ganong. – 2006. – P.327 –338, 543-623.

6. Internal medicine/ ed. by Harrisons. – 17 th edition. – N. Y. – 2008. –

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