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

TITLE:**Typical forms of heart pathology**

TOPIC: **Coronary insufficiency. Myocardial infarction.**

Developed: teacher Ismailov I.Dzh.

Methodical instructions approved at a meeting of the department

\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_ 20\_\_. Protocol number \_\_\_\_

OSH

**Study subject:** Coronary insufficiency. Myocardial infarction.

**Aim of the lesson**: to study the coronary insufficiency and compensative and decompensative reactions during myocardial infarction.

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

**Questions for self-study:**

1. Definition of coronary insufficiency. The main causes of coronary insufficiency.

2. Mechanisms of injury to the myocardial cells during ischemia and reperfusion: role of Ca2+, oxygen free radicals, and leukocytes.

3. Adaptive mechanisms developing during acute and chronic coronary insufficiency.

4. Biochemical, mechanical and electrical changes elicited in the myocardium during ischemia. Signs of reversible and irreversible ischemic injury.

5. The syndromes of coronary insufficiency: angina pectoris, myocardial infarction, chronic ischemic heart disease, sudden coronary death.

6. Methods of diagnostics of myocardial infarction.

**List of practical skills**

 1. Using the algorithm of analysis of the electrocardiogram, be able to identify the main types of arrhythmias associated with the communication I breach automaticity and conduction.

2. Using the algorithm of analysis of the electrocardiogram, to be able to determine the combined cardiac arrhythmias.

**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 pathology refers to coronarogenous myocardial blood circulation insufficiency?*

a) ischemic heart disease

b) the valve insufficiency

c) valvular stenosis

*2. What pathology leads to myocardial blood circulation insufficiency?*

a) myocardithis

b) the valve insufficiency

c) valvular stenosis

d) hearts tamponade

*3. Which of the following conditions may cause myocardial ischemia?*

a) partial or total coronary obstruction.

b) hemodilution

c) hypercapnia

*4. What is the most common cause of coronary occlusion?*

a) atherosclerotic narrowing of the coronary vessels

b) vasospasm

c) polycythemia

*5. Which of the following substances induce constriction of the coronary vessels?*

a) serotonine

b) adenosine

c) NO

d) lactate

LITERATURE:

1. Lecture material.

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

Vinnytsa: Nova Knyha Publishers.– 2011.–P. 460-478.

3. Pathology/ ed. by E. Rubin and J.L. Farber. – 2nd ed. – 1994. – P.502 –

555.

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

1995. – P. 1–25.

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

S. J. McPhee, W. F. Ganong. – 2006. – P. 259 – 299.

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

1514 –1526.