U2 Circulatory system disease module

U3 Rhythm disturbance

#The characteristic electrocardiographic sign of ventricular extrasystole:

 + broadening and deformation of the ventricular complex.

 normal ventricular complex

presence of atrial complex before extrasystole

absence of a compensatory pause

#The most important ECG sign of atrial flutter:

QRS irregularity

lengthening PQ

+ the presence of 2 or 3 atrial complexes in front of one ventricular

lack of Р wave

#When paroxysmal ventricular tachycardia is contraindicated:

+ atropine.

atenolol

potassium preparations

electric pulse therapy

#Electropulse therapy is not indicated only for:

ventricular fibrillation

paroxysmal tachycardia in the absence of the effect of antiarrhythmic therapy

+ complete atrioventricular block.

sinus node arrest

#Sodium channel blockers include all drugs, except:

rhythmylene

+ verapamil.

procainamide

lidocaine

# To maintain sinus rhythm in people with MI and paroxysms of atrial fibrillation in the presence of heart failure, preference should be given to:

sotalolu

+ cordaron.

propafenone

procainamide

# When an attack of paroxysmal ventricular tachycardia is impossible to apply:

+ strophanthin.

lidocaine

procainamide

electric pulse therapy

Cordaron

# The use of cardiac glycosides and isoptin is contraindicated:

with AV receptor paroxysmal tachycardia with narrow QRS complexes

+ with AV receptor paroxysmal tachycardia with wide QRS complexes.

no has contraindications

atrial tachycardia

# What gradations of ventricular extrasystole are dangerous for the development of VT or VF:

​​II - V

+ III - V

IV – V

II-V

# During atrial fibrillation, the rhythm of ventricular excitation:

correct

is determined by the cells of the pacemakers of the atrioveitricular node

 is determined ventricular ectopic foci of excitation

+ is determined by impulses coming from the atria

# Atrioventricular block of the 1st degree is characterized by:

the gradual lengthening of the interval PQ

+ stable elongation of the PQ interval over 0. 20 s \*

periodic precipitation of ventricular complexes (QRS)

complete dissociation of the chairman and ventricular complexes

# When atrioventricular blockade of the III degree is observed

+ complete dissociation of atrial (P) and ventricular (QRS) rhythms.

periodic loss of the QRS complex

periodic precipitation of the PQRS complex

lack of wave P

# The cause of broadening and deformation of the ventricular complex (QRS) may be:

hypertrophy of one of the ventricles

+blockade of the legs of the bundle of His \*

migration of supraventricular pacemaker

pre-sulfur extrasystole

# With atrial flutter on an ECG

+ appear waves F \*

appear waves f

no isoline

atrial frequency of 160-180 per minute

\*The occurrence of ectopic heart rhythms may be due to (2):

+ a decrease in the automatism of the CA node

an increase in the excitability of CA-node cells

+ blockade of the conduct of impulses along the conduction system of the heart

weakening of the tone of the vagus nerve.

#The migration of the supraventricular pacemaker is characterized by (2):

+ changes in the polarity of tooth P on the ECG

pronounced fluctuations in the duration of the intervals R-P

+ periodic changes in the PQ interval on the ECG '

the formation of the QRS complex

\* The appearance of a circular motion (circulation) of excitation in the myocardium contribute (2)

shortening the path of the possible

circular motion excitation

+ lengthening the path of a possible circular motion of excitation

+ an increase in the period of myocardial refractoriness

a decrease in the speed of propagation of excitation

\*Atrial block is characterized by the following ECG signs (2):

by lengthening the PQ interval of more than 0.20 s

+ an increase in the duration of the tooth P more than 0.11 s

+ splitting of the tooth P (the appearance of the "two-humped" tooth P)

deformation of the QRS complex

\*Replacing heterotopic arrhythmias include rhythms originating fro (2):

+ atria outside the sinoauricular (SA) node

atrioventricular node

+ ventricles

CA site

\* Nomotopic arrhythmias include (3):

+ sinus tachycardia

+ sinus bradycardia

+ sinus arrhythmia

 sick sinus syndrome

atrial flutter

paroxysmal ventricular tachycardia

\* Sinus bradycardia correspond to (3):

+ the automatism of the sinus node is reduced

heart rate less than 40 / min

+ the rate of diastolic depolarization is reduced

the PQ interval is reduced

vawe P is usually deformed

+ refers to nomotopic arrhythmias

\*With an atrial blockade, ECG signs correspond to (3):

lengthening of the interval PP

+ complete loss of individual cardiac cyclone

+ an increase at the time of falling out of the heart cycles of the R-R interval by 2. 3 or 4 times in comparison with the usual R-R intervals

+ the appearance of replacement heart rhythms

\*The following signs correspond to paroxysmal ventricular tachycardia:

+ heart rate reaches 140-220'min

the heart rate in most cases is incorrect

+ QRS complex is deformed and expanded

+ there is a complete disunity of changes in systemic circulation

\*Atrioventricular extrasystoles are characterized by the following electrocardiographic signs (3)

+ shortening of the R-R interval before extrasystole

+ the appearance of (-) P wave after the ventricular complex

+ the absence of the P wave in front of the ventricular complex

deformation and broadening of the ventricular complex (QRS)

a full compensatory pause

\* Atrioventricular block II degree is characterized by (3):

+ stable elongation of the PQ interval

+ gradual lengthening of the PQ interval

+ periodic loss of ventricular complexes (QRS)

complete dissociation of the atrial (P) and ventricular (QRS) rhythms

\*The absence of the P wave on the ECG in all leads is observed with the following arrhythmias (3):

+ atrioventricular rhythm (due to absorption by the ventricular complex of the P wave)

atrioventricular blockade of the III degree

+ atrial fibrillation

ventricular fibrillation

+ atrial block

\* The mechanism of re-entry of the excitation wave (re-entry) can lead to the following arrhythmias (3):

+ atrial fibrillation

paroxysmal tachycardia

+ extrasystoles according to the type of allorrhythmias (bigeminias. trigeminias)

\* Hypernatremia promotes the development of hypertension by means of (4):

enhancing the formation of angiotensin III

+ inhibition of reuptake of norepinephrine by nerve endings

+ the development of hypervolemia

+ increase the sensitivity of adrenergic receptors to pressor factors

+ the development of edema of the cells of the walls of the VESSELS

blood thickening

activation of prostacyclin synthesis by endothelial cells

\* Indicate the pathogenetic factors of the development of cardiac arrhythmias (4):

+ intracellular acidosis in cardiomyocytes

+ loss of potassium ions by cardiomyocytes

the accumulation of potassium ions in cardiomyocytes

+ ATP deficiency in myocardial cells

excess ATP in myocardial cells

+ f) accumulation of calcium ions in the sarcoplasm and mitochondria of cardiomyocytes

\* Violations of any of these functions of the heart can lead to cardiac arrhythmias (2)?

automatism

+ excitability

+ conductivity

Contractility

\*To heterotopic arrhythmias include (3):

+ atrial flutter

+atrial fibrillation

+ paroxysmal atrial tachycardia

+ paroxysmal ventricular tachycardia

sinus arrhythmia

\*. Select indicators specific to paroxysmal atrial tachycardia (4):

+ the heart rate in most cases is correct

the heart rate in most cases is incorrect

the heart rate is usually 100-140 / min

+ heart rate is usually 140-250 / min

heart rate exceeds 250 / min

vaweP on the ECG is not changed

+vawe P on the ECG is deformed

+ h) QRS complex

in most cases not changed

the QRS complex in most cases is deformed

\*The ectopic focus of excitation can be localized (3):

+ in the atria

+ in the atrioventricular junction

+ in the bundle of His

at the mouth of the vena cava

\*Atrial paroxysmal tachycardia is characterized by signs (4):

+ the source of pathological impulse is located in the atria

+ the P wave on the ECG is usually deformed

+ the interval of the PP on the ECG is extended

d) the QRS complex is usually changed

+ the heart rate in most cases is correct

\*The signs of paroxysmal tachycardia from the atrioceptricular compound are (4):

+starts suddenly

+ the heart rate in most cases is correct

+ P wave is negative and can merge with the QRS complex

ventricular complexes are usually deformed

+ the heart rate does not change after administration atropine

\*Atrioventricular blockades include blockades caused by impaired conduction of impulses by (4):

+ the conduction system of the atria

+ atrioventricular node

+ the main trunk of the bundle of His

+ to all branches of the bundle of His

from the sinus node to the atria

\*Atrial fibrillation (flickering) is characterized by signs (4)

+ the frequency of pulses that occur in the atria reaches 350-700 / min

+ P waves on the ECG are absent

ventricular rhythm is usually correct

+ ventricular complexes are usually not changed

+ frequent irregular waves F are detected on the ECG

\*Atrial extrasystole is characterized by the following ECG signs (4):

+ the presence of (+) P wave in front of an extraordinary ventricular complex

+ deformation of the tooth P extrasystoles

broadening and deformation of the ventricular complex

+ incomplete compensatory pause

+ the presence of (-) P wave in front of an extraordinary ventricular complex

\*Ventricular extrasystoles are characterized by the following ECG signs (4):

+ shortening the RR interval before the extrasystole

the appearance of (-) P wave after the ventricular complex (QRS)

+ lack of P wave in front of the QRS complex

+deformation and broadening of the ventricular complex (QRS)

+ a full compensatory pause

#Put the response options in the sequence of myocardial arousal with blockade of the right bundle branch (1).

myocardium of the RV- myocardium of LV- myocardium of the right half of the ventricular septum- myocardium of the left half of the ventricular septum

LV myocardium- myocardium of the left half of the ventricular septum- myocardium of the right half of the ventricular septum- myocardium of the RV

myocardium of the right half of the ventricular septum- myocardium of the left half of the ventricular septum- myocardium of the LV- myocardium of RV

+myocardium of the left half of the ventricular septum - myocardium of the left ventricle - myocardium of the right half of the ventricular septum - myocardium of the right ventricle

#Put the response options in the sequence of myocardial excitation with combined blockade of both left branches of the bundle of His

 myocardium of the RV- myocardium of the right half of the interventricular septum- myocardium of the left half of the ventricular septum- myocardium LV

myocardium LV- myocardium of the left half of the ventricular septum- myocardium of the right half of the interventricular septum- myocardium of the RV

+ myocardium of the right half of the interventricular septum - myocardium of the right ventricle - myocardium of the left half of the interventricular septum - myocardium of the left ventricle

myocardium of the left half of the ventricular septum- myocardium of the right half of the interventricular septum- myocardium of the RV- myocardium LV

\*ECG signs of complete blockade of the left bundle branch block are (4):

+ an increase in the duration of the ventricular complex more than 0.12 s \*

broadening and deformation of the R wave in leads V5.6

broadening and deformation of the R wave in leads V1,2

+broadening and deformation of the S wave in leads V1,2 \*

+ decrease in the number of heart contractions \*

+ lengthening of the interval of internal deviation in the leads V5.6 \*

\* The occurrence of ventricular fibrillation contribute to (3):

+ electrical myocardial inhomogeneity

+ overstretching of myocardial fibers

+ an increase in the extracellular concentration of K + ions in the myocardium

a decrease in the concentration of phosphorus ions in the myocardium

e) excitation of the parasympathetic nervous system

\*Indicate the main factors contributing to the development of cardiac fibrillation with extensive acute myocardial infarction (5):

+he appearance of ectopic foci of excitation

+ increasing the degree of inequality of the refractory periods of different parts of the myocardium

+ increased tone of the sympathetic nervous system

a decrease in the content of extracellular potassium

+ an increase in the content of extracellular potassium

+ the appearance of necrosis in the conduction system of the heart

\*The following types of arrhythmias can be caused by the circulation of the excitation wave along the myocardium (by the 're-entry' mechanism (4):

+ paroxysmal atrial tachycardia \*

sinus tachycardia

+ atrial fibrillation \*

+ atrial flutter \*

sinoatrial block

sinus bradycardia

+ ventricular extrasystole \*