PARACLINICAL METHODS OF INVESTIGATION AND SEMEOLOGY OF THE CARDIOVASCULAR SYSTEM DISEASES IN CHILDREN
Academic discipline «Pediatric Propedeutics»
Self-study guide for the 3rd year
English medium students

ПАРАКЛІНІЧНІ МЕТОДИ ОБСТЕЖЕННЯ ТА СЕМІОТИКА УРАЖЕНЬ СЕРЦЕВО-СУДИННОЇ СИСТЕМИ У ДІТЕЙ
З дісципліни «Пропедевтика педіатрії»
Методичні вказівки до самостійної роботи студентів 3-го курсу медичного факультету
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З дісципліни «Пропедевтика педіатрії»

Методичні вказівки
dо самостійної роботи студентів 3-го курсу
медичного факультету

Затверджено
Вченою радою ХНМУ
Протокол № від

Харків
ХНМУ
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Number of class periods: independent work – 4; practical trainings – 4.

Contents

Semeiology of the cardiovascular system affection: dyspnoea, pain in the heart region, heart hump, cyanosis of skin, lips, nails, vessels pulsation, systolic trembling (vibration), heart rhythm disorders (tachyarhythmia, bradyarhythmia, change of rhythm’s leader, extrasystole, blockade of conductivity, paroxysmal tachycardia, ciliary arrhythmia). Change of heart borders, displacement of heart borders. Change of intensity of heart sounds – weak, slightly dulled, dulled, accentuated heart sounds, heart murmurs (systolic, diastolic, pericard friction rub), change of pulse (pulse of poor volume, abrupt pulse, hard, irregular, running, small, tense, thready, weak, etc.).

Specific goals:
- to prescribe the number of laboratory investigations in case of the cardiovascular system diseases in children.
- to prescribe the number of instrumental investigations in case of the cardiovascular system diseases in children
- to provide syndrome-based diagnosis of the cardiovascular system diseases in children.

To know:
- The main clinical signs of cardiovascular system disorders in children (cyanosis, bradycardia, tachycardia, etc.).
- Semeiology of congenital and acquired heart and blood vessels disease in children.
- Features ECG and PCG in healthy children of all ages.
- Echocardiography.

**Be able to:**

to prescribe the laboratory investigations in case of the cardiovascular system diseases in children.
- to prescribe the instrumental investigations in case of the cardiovascular system diseases in children
- to provide syndrome-based diagnosis of the cardiovascular system diseases in children

**Basic knowledge, practices and skills necessary for the topic (interdisciplinary integration).**

<table>
<thead>
<tr>
<th>Names of previous branches of learning</th>
<th>Acquired skills</th>
</tr>
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<tbody>
<tr>
<td>2. General physiology.</td>
<td>Knowledge of characteristics of organs and body systems functioning.</td>
</tr>
<tr>
<td>3. Introduction to psychology.</td>
<td>Analysis of patient’s emotions, interpersonal relationships, children’s behavior.</td>
</tr>
<tr>
<td>Introduction to pedagogics</td>
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</table>

**Control questions to the lesson:**
1. State the main clinical methods of examination of the cardiovascular system.
2. State the main paraclinical methods of examination of the cardiovascular system.
3. What is the role of the cardiovascular system examination in pediatric practice?
4. Describe the semiology of the cardiovascular system affections.
5. Describe the main pathological syndromes of the cardiovascular diseases.
6. What do you know about pathology of child cardiovascular system?

**Graphical structures of individual issues of the topic.**
1. ECG, PCG.
2. Main syndromes of the cardiovascular system diseases.

**Tests for self-control:**

1. **What methods of paraclinical examinations of the cardiovascular system do you know?**
   A. x-ray
   B. phonocardiography
   C. ultrasound
   D. electrocardiography
   E. All answers are correct

2. **The pulsation of the carotid arteries, visually defined medially from the sternocleidomastoideus muscle is:**
   A. "Carotid shudder"
   B. cardiac hump
   C. apical beat
   D. cardiac impulse
   E. symptom Myusi

3. **What is the general complaint of patients with diseases of the cardiovascular system, except:**
   A. temperature increase
   B. dyspepsia
   C. weight loss
   D. memory impairment
4. What disorders in diseases of the cardiovascular system can see the parents of infants, except for:
A. a sudden cry
B. restless
C. weight gain
D. violation of the act of sucking
E. attacks of dyspnoe and cyanosis

5. What is not typical for the edema of cardiac origin:
A. extend from the top down
B. apply at the bottom up
C. combined with cyanosis of the skin
D. dense
E. occur or are worse after physical exertion

6. What are the specific complaints of the patient in diseases of the cardiovascular system?
A. pain in the heart, cardiac dyspnea
B. palpable heartbeat, swelling of lower limbs and other body parts
C. pallor, cyanosis of the skin
D. pain in the large and small joints
E. All answers are correct

7. What is term of condition when the pulse rate increases on inhale and on reduced on exhale?
A. deficit pulse
B. excess of the pulse
C. respiratory arrhythmia
D. asynchronous pulse
E. alternating pulse

8. For diseases of the cardiovascular system of the child is not typical:
A. developmental abnormalities (congenital heart disease)
B. the development of abnormalities in blood vessels
C. inflammatory diseases
D. choanal atresia, rhinitis, laryngitis
E. septic endocarditis

9. Tachycardia can be in all following conditions on except:
A. intoxication
B. hyperthermia
C. diseases of the cardiovascular system
D. hypertyreosis
E. hypothyroidism

10. When pulse on the left and right hands is unequal or late with respect to time, it means:
A. pulse deficit
B. excess of the pulse
C. respiratory arrhythmia
D. asynchronous pulse
E. alternating pulse

11. For what age is characterized by vegetative-vascular dysfunction?
A. the neonatal period
B. infant period
C. during the preschool age
D. puberty
E. adolescence

12. The reasons for extending the boundaries of the relative dullness of the heart:
A. congenital and acquired heart defects
B. myocarditis, fibroelastosis
C. ascites, atony of the diaphragm
D. all the answers wrong
E. all answers are correct

13. The reasons for the restriction the borders the relative dullness of the heart, except for:
A. asthenic body constitution
B. right-sided pneumothorax
C. pulmonary emphysema
D. left-sided pneumothorax
14. What is the cause of the manifestations of "Dances of carotid":
A. aortic aneurysm, aortic valve insufficiency
B. mitral valve insufficiency
C. tricuspid valve
D. mitral valve stenosis
E. valve stenosis the pulmonary artery

15. Congenital heart diseases with an enrichment of the pulmonary circulation are include, except:
A. atrial septal defect
B. ventricular septal defect
C. patent ductus arteriosus
D. atrioventricular communication
E. Fallot's disease

16. Diagnostic program to detect congenital heart disease includes, except:
A. collection and analysis of family tree baby
B. assessment of anthropometric data
C. determination of blood pressure
D. PCG, ECG
E. sternal puncture

17. For all the signs of CHD are typical, except for:
A. dyspnea with inspiratory nature from birth
B. normal weight at birth
C. low weight gain in the child's first year of life
D. stable systolic heart murmur
E. a tendency to respiratory infections

18. Rheumatic disease - a systemic disease of connective tissue with a predominant localization process in the cardiovascular system, which develops due to an acute infection caused by:
A. pneumococcus
B. mycoplasma
C. cytomegalovirus
D. β-hemolytic streptococcus
E. Escherichia

19. The reasons of the systolic murmur, except:
A. narrowing of the aortic
B. mitral valve insufficiency
C. stenosis of the mitral and tricuspid valves
D. aortic stenosis
E. tricuspid valve stenosis


The list of study materials:

Main:

Additional:
Graflogic structure for topic “Methods of examination of the cardiovascular system in children”

<table>
<thead>
<tr>
<th>Clinical sign of the functional murmur</th>
<th>Soft, tender</th>
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<tbody>
<tr>
<td></td>
<td>Short, takes the beginning of systole</td>
</tr>
<tr>
<td></td>
<td>Inconstant, depends on breathing and exercise</td>
</tr>
<tr>
<td></td>
<td>Intensity decreases in vertical position</td>
</tr>
<tr>
<td></td>
<td>Not conducted</td>
</tr>
<tr>
<td></td>
<td>The most typical point - left mamillary line in the second intercostal space</td>
</tr>
</tbody>
</table>
Invasive methods:
- Cardiac catheterization;
- Angiocardiography;
- Coronarography.
Для нотатків
Для нотатків
Для нотатків
Навчальне видання

Параклінічні методи обстеження та семіотика уражень серцево-судинної системи у дітей

Упорядники: Клименко Вікторія Анатоліївна
Сіренко Тетяна Вадимівна
Плахотна Ольга Миколаївна

Відповідальний за випуск: Клименко В.А.

Комп’ютерна верстка

Ум. друк. арк.____. Тираж____ прим. Зам. №____.