

**ANATOMO-PHYSIOLOGICAL PECULIARITIES, METHODS OF EVALUATION,
PARACLINICAL METHODS OF INVESTIGATION AND SEMEIOLOGY OF THE
DIGESTIVE SYSTEM DISEASES IN CHILDREN**

Academic discipline «Pediatric Propedeutics»

Teacher's guide for the 3rd year

English medium students

**АНАТОМО-ФІЗІОЛОГІЧНІ ОСОБЛИВОСТІ, МЕТОДИ ОБСТЕЖЕННЯ ТА
СЕМІОТИКА ЗАХВОРЮВАНЬ СИСТЕМИ ТРАВЛЕННЯ У ДІТЕЙ**

З дисципліни «Пропедевтика педіатрії»

*Методичні розробки для викладачів до аудиторної роботи студентів 3-го курсу
медичного факультету*

МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
Харківський національний медичний університет

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Compiled by: Klymenko V.A.
Sirenko T.V.
Karpushenko J.V.

Анатомо-фізіологічні особливості, методи обстеження та семіотика захворювань системи травлення у дітей: метод. розр. для викладачів до аудит. роботи студентів 3 курсу медичних факультетів / упор. В.А.Клименко, Т.В. Сіренко, Ю.В.Карпушенко. – Харків, ХНМУ, 2016. – 12 с.

Упорядники: Клименко В.А.
Сіренко Т.В.
Карпушенко Ю.В.

Amount of educational hours:

Independent work – 4;
Practical training – 4.

Contents

Digestive system of children has certain anatomical and physiological peculiarities that determine the features of feeding, as well as the specific pathology of the system. This pathology takes one of the leading places in the incidence of both infants and older children. Knowledge of these features and the gradual maturing of the system is required from a doctor during the diagnosis, treatment and prevention of diseases of the digestive system in children of all ages. It helps to organize a rational food regime and care of children.

Specific goals

- To know the embryogenesis of the digestive system in children.
- To know main morphofunctional peculiarities of the digestive system in children.
- To get skills of clinical and paraclinical methods of examination of the digestive system in children.

To know:

1. Embryogenesis of the digestive system in children
2. The main morphofunctional peculiarities of the digestive system in children.
3. Peculiarities of the digestion of children in different age.
4. The main symptoms and syndromes of the digestive system diseases in children.
5. How to interpret results of laboratory and instrumental methods of examination of the digestive system of children.

Aims of the practice:

1. To demonstrate the technique of interrogation, inspection, palpation and percussion of the abdomen.
2. To interpret the results of clinical and paraclinical investigations.
3. To appoint laboratory and instrumental methods of investigations of the digestive system of children.
4. To conduct syndromic diagnosis of the digestive system diseases of children.
5. To get skills of care of children with diseases of the digestive system.

Providing initial level of knowledge, skills

To apply the materials of the guidelines for independent extra-curricular activities of students to the subject 14.

Materials needed for methodological support:

Medical case history of the child with digestive system disease, the results of laboratory tests: blood (clinical, biochemical), urine, stool (bacteriological research

koproctogramm), instrumental methods: fibroezofagogastroduodenoscopy, pH - meter, ultrasound, chamihatives X - ray of the abdomen.

The technological card of the lesson

№ 3/II	Stage classes	Training time (min.)	Study Materials		Place of the lesson
			learning Tools	Equipment	
1.	Determination of the initial level of knowledge	20	Testing	Tests	Classroom
2.	Determination of the main positions of the topic	25	Quiz, discussion	Graphology structure of the topic, sample the case histories of child with disease of the digestive system, echosonogramm, cX-ray, laboratory test samples	Classroom
3.	Break	10			
4.	Solution for the training tasks of the topic	45	Independent work of a student under the guidance of a teacher - training of practical skills	Premises and equipment of the hospital	Department s of the hospital
5.	Break	30			
6.	Solution for the training tasks of the topic	45	Independent work of a student under the guidance of a teacher - training of practical skills. Completion of the diary of practical training.	Premises and equipment of the hospital	Department s of the hospital
7.	Break	10			
8.	Determination of the output level of skills readiness.	20	Checking of the practical skills of a student while work in the departments.	Premises and equipment of the hospital	Department s of the hospital
9.	Determination of the output level of knowledge and skills readiness.	15	Solving and discussion of situational assignments Checking entries in the diary of practical training	Situational tasks	Classroom
10.	Summation of the lesson. Assignment to the next lesson.	10	Quiz, discussion		Classroom

Approximate basis of action in solving educational problems topics:

1. Studying the medical case history of a child with disease of the digestive system, determination of physiological characteristics depending on age.
2. Independent classroom work in somatic branch - work at the bedside: interrogation, examination, palpation, percussion, auscultation, review of the results of further investigation, analysis and the interpretation.

Assignments for testing the final level of knowledge

Tasks

Task № 1.

A newborn at 14 days has the regurgitation for 5-10 minutes after sucking the mother's breast. The infant vomits about 5 to 10 ml of uncoagulated human milk without any admixture.

1. Is this norm or pathology?
2. What can you recommend to the mother?

Key answer:

1. It is a physiological condition caused by the horizontal position of the stomach, a slight tone in the cardiac part of the stomach and a stronger tone in the pyloric part of the stomach.
2. It is recommended to keep the infant in a vertical position during 10 min. after taking milk. It is necessary for regurgitation of a portion of air from the stomach.

Task № 2.

A newborn passed stool 2 hours after the birth. The faeces has a pasty consistency and is dark-green, it is a homogenous mass.

1. Make the conclusion about the character of the faeces.
2. Is it normal or pathological stool?

Key answer:

1. The stool is the meconium (primary stool).
2. It is a normal stool for the newborn of 3-4 days of life.

Task № 3.

A girl at 3 years was examined by a pediatrician before admission to a kindergarten. The child has no complaints. The general condition of the child is satisfactory. The physical development is normal. The skin is pink, clean. No abnormalities are detected in the heart and lungs. The liver is palpated on 2 cm below the costal arch, its border is soft, painless.

1. Make the conclusion about the liver.
2. Is it normal or pathological condition?

Key answer:

1. According to the result of the clinical examination of the child the condition of the liver is normal.

2. The liver may be palpated 1-2 cm below the costal arch in children up to 5 years old.

Task № 4.

An infant at 1.5 month has the natural feeding. The child has the breast milk every 3 hours, 7 times a day. The infant has a stool after each feeding, the stool is orange-yellow, homogenous, thin, sourish.

Is it possible to suspect the dyspeptic syndrome due to a frequent and thin stool?

Key answer:

There is no reason to diagnose the dyspeptic syndrome. The frequency and character of the stool is normal for a breast-fed infant.

Task № 5.

An infant at 2 months has artificial feeding and has 1 to 3 stools a day, but the consistency of the stool is thick, giving an appearance of some whitish-yellow putty and the reaction is alkaline.

Is it possible to suspect a pathological condition of the digestive system in this infant?

Key answer:

There is no reason to suspect a pathological condition of the digestive system in this infant. The character of the stool is normal for an artificial feeding baby.

Task № 6.

A child at 14 years is admitted to the hospital with complaints about nausea, vomiting, pain in the right hypochondriac region, general weakness. The pain increases after physical exercises. The pain is marked in the right hypochondriac region during palpation, the size of the liver is enlarged +1cm, Murphy's, Ker's, Orthoner's and Mussi-Georgievsky's symptoms are positive.

1. Affection of what organs is typical for such clinical manifestation?
2. What methods of paraclinical examinations must be used for diagnostics?
3. What can you recommend for the care of this child?

Key answer:

1. Diseases of the hepato-bile system (biliary tract dysfunction, cholecystitis).
2. Biochemical investigation of the blood (ALT, AST, bilirubin, proteinogram), sonography, investigation of the stomach and duodenal juice, coprogram.
3. Dietetic regime: exclusion of broth, fat, hot and fried dishes, chocolate, to take food 5 times a day, to limit any physical strain.

Task № 7.

A boy at 13 years complains of an abdominal pain in the epigastric region. The pain appeared 6 month ago. The pain increases in 30-40min after taking food. The pain is accompanied by one nausea. The appetite is normal.

1. Affection of what parts of the digestive system is it possible to suspect?

2. What disease must be excluded during the differential diagnosis?
2. What paraclinical investigations must be done for diagnosis?

Key answer:

1. The stomach.
2. Chronic gastroduodenitis, peptic ulcer of the stomach.
3. Examination of the stomach and duodenum juice, pH-metria of the stomach juice, fibrogastroduodenoscopy, coprogram, stool for occult blood.

Task № 8.

A child at 3 years has retardation of physical development, suffers from the syndrome of persistent diarrhea. The microscopic investigation of the stool shows presence of undigested muscle fibers and connective tissue, a lot of neutral fat.

1. How are these coprological data termed?
2. What syndromes are these coprological data typical for?

Key answer:

1. Creatorrhea, steatorrhea.
2. Syndrome of maldigestion.

Task № 9.

A child at 5 years is admitted to the hospital with complaints of the abdominal pain, vomiting, fever (37,8 C). It is known from anamnesis that the onset of the disease was acute. His complaints appeared 6 hours before the admission to the hospital. It is revealed during the examination that the general condition of the child is not satisfactory. The child has a forced position in bed, his expression is full of suffering. The abdomen is strained, deep palpation is impossible due to acute pain. Schetkin-Blumberg's symptom is positive.

1. Name the term for the described syndrome.
2. What disease can cause this syndrome?

Key answer:

1. The syndrome of an "acute abdomen".
2. Acute appendicitis, cholecystitis, pancreatitis, perforation of the ulcer of the stomach or duodenum, gastrointestinal bleeding, intussusception, obstruction of the intestine, hemorrhage in the abdominal cavity (rupture of the liver, of the spleen).

Task № 10.

A mother has hospitalized with an infant at the age of 1.5 months with complaints about vomiting. The infant is male, who was born with the body mass of 3200g. The pregnancy and delivery were normal. The infant has a natural feeding. The vomiting appeared within 3 weeks after his birth, occurring 4-5 times a day, the volume of the vomit mass was more than volume of the received milk. The subcutaneous tissue on the abdomen and extremities of the child is absent thin decresbol? The large fontanel is depressed. At present, the body mass of the infant is 3100g.

1. What is your diagnosis?

2. What pathology must it be differentiated from?

Key answer:

1. Pylorostenosis.
2. Pylorospasm.

The **maximum number of points** which may be consequently obtained by students is 200 points; this includes 120 points for current educational activity and 80 points for the final lesson.

Current educational activity of students is controlled during practical classes according to specific goals in the course of each practical class as well as during self-training in the hospital department. It is recommended to apply the following means of diagnostics of the students' level of readiness: control of practical skills, solving cases and test control of theoretical knowledge.

The current assessment of students on respective topics is conducted in the traditional 4-point grade scale ("excellent", "good", "satisfactory" and "unsatisfactory") with further conversion into a multiscore scale.

The grade "Excellent" is given when the student knows the program in toto, illustrating the answers with various examples; gives clear and comprehensive answers without any hints; delivers the material without any inaccuracies or errors; performs practical tasks of a different degree of complexity.

The grade "Good" is given when the student knows the whole program and understands it well, gives correct, consistent and structured but not completely comprehensive answers to questions, although he is able to answer additional questions without mistakes; solves all cases and performs practical tasks experiencing difficulties only in the most complex situations.

The grade "Satisfactory" is given to the student based on his satisfactory level of knowledge and understanding of the entire subject. The student is able to solve modified tasks with the help of hints; solves cases and applies practical skills experiencing difficulties in simple cases; is unable to deliver a consistent answer, but answers direct questions correctly.

The mark "Unsatisfactory" is given when the student's knowledge and skills do not meet the requirements of the grade "satisfactory".

Given the number of practical classes the grades are converted into the multiscore scale as follows:

The mark "Excellent" – 72-80 scores

The mark "Good" – 60-71 scores

The mark "Satisfactory" – 50-59 scores

The mark "Unsatisfactory" – 0 scores

Навчальне видання

Анатомо-фізіологічні особливості, методи обстеження та семіотика захворювань системи травлення у дітей

Упорядники: Клименко Вікторія Анатоліївна
Сіренко Тетяна Вадимівна
Карпушенко Юлія Валентинівна

Відповідальний за випуск: Клименко В.А.

Комп'ютерна верстка

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