APPROVED

First Pro-Rector for Scientific and Pedagogical Affairs

Lviv National Medical University

Named after Danylo Halytsky

_____

Prof. M.R. Gzhehotskyy

APPROVED

Dean of Medical Faculty

of Foreign students _____ Assoc. Prof. Ye. S. Varyvoda

Dean

of Medical Faculty No 1 _____ Prof. V. A. Serhiyenko

Dean

of Medical Faculty No 2 _____ Prof. O. B. Nadraga

APPROVED

At the meeting of the specialized methodical committee on pediatric disciplines Protocol No._2_ of "22" March 2021

The Head of the specialized

methodical commission _____ Prof. L.V. Besh

Examination Station

Objective Structured Clinical Exam (OSCE-2)

6 course of medical faculty

the subject "PEDIATRIC INFECTIOUS DISEASES"

ALGORITHM OF ACTIONS

Algorithm of the clinical situation «Scarlet fever»

A child is 7 years old, ill for 2 days. The disease began acutely, with fever, headache, vomiting. In the future he joined the sore throat. Obtained once ibuprofen. The body temperature was kept within 38-39.5^{o}C. At examination by the physician, a small red-spot rash was found on the hyperemic background of the skin, which localized mainly on the bending surfaces of the limbs, lateral surfaces of the body, at the bottom of the abdomen. In areas of natural folds of the skin (inguinal, elbow, inguinal), rash is more abundant, isolated petechiae. Hyperemia of soft palate, palatine arches, tonsils, on the surface of which there is purulent plaque. Tongue covered, with hypertrophied papillae. Submandibular lymph nodes are enlarged.

Elements of implementation

In the next 10 minutes: set a preliminary diagnosis, provide main (most informative) examinations and predicted changes in there; prescribe main medications for the treatment of the disease of this patient.

№	**Elements of implementation**
1.	The student greeted and introduced himself
2.	Formulate the diagnosis according to the classification. Has established a nosological diagnosis
3.	Considering the clinical form, severity
4.	The student formulated complications and emergent conditions
5.	Appointed a laboratory examination for the etiological confirmation of the diagnosis
6.	Assigned additional survey methods
7.	Provided interpretation of laboratory data (Expected results).
8.	The student outlined the principles of treatment of the patient
9.	Made the selection of the main drugs, their doses (single, daily), routes of administration, the frequency and duration of therapy
10.	Determined the tactics of providing emergency medical care

Algorithm of the clinical situation «Mumps meningitis»

A 10-year-old boy has the following complains; fever up to 38.5 ° C, pain when opening his mouth and chewing and an intense headache.

Physical examination: a dough formation in the area of the parotid salivary gland it's contoured and palpated on the right, and meningeal symptoms are present (positive). Cerebral spinal fluid (CSF) analysis shows the following results:

Features	Norm	Patients results
Color	Colorless	Colorless
Appearance	Transparent	Transparent
Pressure (mmH_2O)	100-180	200
Proteins (g/L)	0.15-0.33	0.33
Sediment samples	Negative	Positive
Glucose (mmol/L)	2.2-3.3	2.6
Chloride (mmol/L)	120-140	128
Cell count (in 1 μL)	3-10 (new born 10-20)	400
Type of cells	Lymphocytes	80% lymphocytes
Bacteria	Negative	Negative

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Algorithm of the clinical situation «Diphtheria»

A girl, 12 years old, was no vaccinated, acutely ill: anorexia, headache, sore throat, body temperature 39.5°C. I accepted antipyretics. Admitted to hospital after the 3-y day of illness. Objectively: very pale, swelling of the neck on both sides to the clavicle. The mucous membrane is hyperemic with a cyanotic. Tonsils, archers, uvula are covered with gray pseudomembrane, when trying to remove bleeding. Is significantly swollen around the tonsil tissue. Breathe open mouth. The voice is muzzled.

In the next 10 minutes: set a preliminary diagnosis, provide main (most informative) examinations and predicted changes in there; prescribe main medications for the treatment of the disease of this patient.

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4.	The student formulated complications and emergent conditions
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6.	Assigned additional survey methods
7.	Provided interpretation of laboratory data (Expected results).
8.	The student outlined the principles of treatment of the patient
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10.	Determined the tactics of providing emergency medical care

Algorithm of the clinical situation «ARVI. Croup syndrome»

A 2 year old child was admitted to the hospital for abrupt difficulty in breath, irritability. Two days prior to admission he developed fever 37-38^0 C, non productive barking cough, hoarseness, and discharges from nose bilaterally. On admission:

retraction of intercostal spaces, hyperemic pharynx, catarrh, pale skin. His mother caught a cold with normal temperature, and hoarseness.

In the next 10 minutes: set a preliminary diagnosis, provide main (most informative) examinations and predicted changes in there; prescribe main medications for the treatment of the disease of this patient.

№	**Elements of implementation**
1.	The student greeted and introduced himself
2.	Formulate the diagnosis according to the classification. Has established a nosological diagnosis
3.	Considering the clinical form, severity
4.	The student formulated complications and emergent conditions
5.	Appointed a laboratory examination for the etiological confirmation of the diagnosis
6.	Assigned additional survey methods
7.	Provided interpretation of laboratory data (Expected results).
8.	The student outlined the principles of treatment of the patient
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Algorithm of the clinical situation « Meningococcal meningitis»

A 14 year girl was admitted with fever, severe headache, vomiting for one day duration. She was initially placed on oral antibiotics for throat infection. Epidemiologic history fall known contact. Physical findings: all meningeal signs were positive, red coloration of pharynx, pale skin, BP 120/80 mm Hg, P 125, T $38,8^0$C. Lumbar puncture: white colored fluid with WBC 2.560/mm^3 (84% PMN's), protein 1.2 g/L, sugar 1,5 μmol/L; throat culture growth negative Gram diplococci.

In the next 10 minutes: set a preliminary diagnosis, provide main (most informative) examinations and predicted changes in there; prescribe main medications for the treatment of the disease of this patient.

№	**Elements of implementation**
1.	The student greeted and introduced himself
2.	Formulate the diagnosis according to the classification. Has established a nosological diagnosis
3.	Considering the clinical form, severity
4.	The student formulated complications and emergent conditions
5.	Appointed a laboratory examination for the etiological confirmation of the diagnosis
6.	Assigned additional survey methods
7.	Provided interpretation of laboratory data (Expected results).
8.	The student outlined the principles of treatment of the patient
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Algorithm of the clinical situation «Infectious mononucleosis»

A 10-year old patient on 3rd day of disease is complaining of temperature increase to 39 C, sore throat during swallowing, hard breathing through a nose. On examination: face very edematous, markedly enlarged neck lymph nodes, increase in size of the liver and spleen (3 and 2 cm below the rib arches respectively). The pharynx is hyperemic. The tonsils are swollen and covered by a white coating.

In the next 10 minutes: set a preliminary diagnosis, provide main (most informative) examinations and predicted changes in there; prescribe main medications for the treatment of the disease of this patient.

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2.	Formulate the diagnosis according to the classification. Has established a nosological diagnosis
3.	Considering the clinical form, severity
4.	The student formulated complications and emergent conditions
5.	Appointed a laboratory examination for the etiological confirmation of the diagnosis
6.	Assigned additional survey methods
7.	Provided interpretation of laboratory data (Expected results).
8.	The student outlined the principles of treatment of the patient
9.	Made the selection of the main drugs, their doses (single, daily), routes of administration, the frequency and duration of therapy
10.	Determined the tactics of providing emergency medical care

Algorithm of the clinical situation «Shigelosis»

A child 9 mo old was admitted to a hospital on the 2nd day of disease for "meningitis". She got ill acutely: body temperature increased to 39°C, she complained of a headache, vomiting which was observed several times. At the admission: severe condition, consciousness was somewhat altered, rigidity of back-spine muscles, painful abdomen in palpation, especially in area of spasmodic sigmoid intestine. Feces contained mucus and blood.

In the next 10 minutes: set a preliminary diagnosis, provide main (most informative) examinations and predicted changes in there; prescribe main medications for the treatment of the disease of this patient.

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2.	Formulate the diagnosis according to the classification. Has established a nosological diagnosis

3.	Considering the clinical form, severity
4.	The student formulated complications and emergent conditions
5.	Appointed a laboratory examination for the etiological confirmation of the diagnosis
6.	Assigned additional survey methods
7.	Provided interpretation of laboratory data (Expected results).
8.	The student outlined the principles of treatment of the patient
9.	Made the selection of the main drugs, their doses (single, daily), routes of administration, the frequency and duration of therapy
10.	Determined the tactics of providing emergency medical care

Algorithm of the clinical situation «Measles complicated by pneumonia»

The patient 13 years old presented rash, fatigue, headache, high temperature, cough, weakness, loss of appetite for 4 days. Physical examination findings: moderate condition, dry cough, confluent macular-popular rash localized on the face, neck lymph nodes hyperplasia, bilateral conjunctivitis, pharyngeal hyperemia, Koplik' spots on the buccal mucosa of the mouth; moist rales over the upper parts of both lungs on auscultation. BP 120/80 mm Hg, PR 96, RR 24. Laboratory findings: CBC: Hb 114 g/L, WBC – 9.800 $x10^6$, E 5%, B 12%, PMN 59%, Lymphocytes 18%, M 6%, ESR 35 mm/hr. Urin alysis was normal.

In the next 10 minutes: set a preliminary diagnosis, provide main (most informative) examinations and predicted changes in there; prescribe main medications for the treatment of the disease of this patient.

№	**Elements of implementation**
1.	The student greeted and introduced himself
2.	Formulate the diagnosis according to the classification. Has established a nosological diagnosis
3.	Considering the clinical form, severity
4.	The student formulated complications and emergent conditions

5.	Appointed a laboratory examination for the etiological confirmation of the diagnosis
6.	Assigned additional survey methods
7.	Provided interpretation of laboratory data (Expected results).
8.	The student outlined the principles of treatment of the patient
9.	Made the selection of the main drugs, their doses (single, daily), routes of administration, the frequency and duration of therapy
10.	Determined the tactics of providing emergency medical care

Algorithm of the clinical situation «Poliomyelitis»

A 10-mo-old child suddenly developed peripheral paralysis of right leg with preserved sensation (cranial nerves are normal), which occurred after 3 days of mild cold-like symptoms; positive meningeal signs were reveled on physical examination. The CSF results: neutral color with 10.0/mm^3 WBC (84% L), protein 0.2 g/l, sugar 2,5 mmol/l; CBC: Hb 100 g/l, WBC 4,600 x10^6 , with B 6%, PMN 34%,LC 55%, M 5%, ESR – 10 mm/hr.

In the next 10 minutes: set a preliminary diagnosis, provide main (most informative) examinations and predicted changes in there; prescribe main medications for the treatment of the disease of this patient.

№	**Elements of implementation**
1.	The student greeted and introduced himself
2.	Formulate the diagnosis according to the classification. Has established a nosological diagnosis
3.	Considering the clinical form, severity
4.	The student formulated complications and emergent conditions
5.	Appointed a laboratory examination for the etiological confirmation of the diagnosis

6.	Assigned additional survey methods
7.	Provided interpretation of laboratory data (Expected results).
8.	The student outlined the principles of treatment of the patient
9.	Made the selection of the main drugs, their doses (single, daily), routes of administration, the frequency and duration of therapy
10.	Determined the tactics of providing emergency medical care

Algorithm of the clinical situation « MIS-C, associated with COVID-19»

A 14.5-year-old girl was admitted to the intensive care unit with complaints of fever, neck pain, difficulty breathing, severe weakness, and swelling of her arms and legs.

Objectively: t- 38,2^{0}C Ps- 148 per minute, BR-46-50 per minute. SpO2 80-82% without oxygen, 94% on oxygen. The child's condition is very serious. Significantly languid (inert), adynamic. Conjunctivitis. Signs of intoxication, respiratory and cardiovascular insufficiency. Pale skin with a gray tinge, considerable swelling of the hands, forearms and feet, legs, partially thighs, confluent macula-papular rash on the legs and arms. Expressed sweating. Cervical lymph nodes are enlarged, painful on palpation. Auscultatory over the lungs hard breathing, weakened in the lower parts, wheezing is not heard. Heart tones are muted. The abdomen is swollen, painful on deep palpation. Stool 2 times liquid, without pathological impurities. Meningeal symptoms are negative. CBC: Hb-120 g / l, erythrocytes- 4,3x10^{12}/l, leukocytes -17,3x10^9 /l, neutrophils -78%, lymphocytes -14%, platelets-148x10^9 / l. Ultrasound of the heart: lesions of the coronary vessels. A month ago, the girl's parents were ill with COVID-19.

№	**Elements of implementation**
1.	The student greeted and introduced himself
2.	Formulate the diagnosis according to the classification. Has established a nosological diagnosis
3.	Considering the clinical form, severity
4.	The student formulated complications and emergent conditions
5.	Appointed a laboratory examination for the etiological confirmation of the diagnosis

6.	Assigned additional survey methods
7.	Provided interpretation of laboratory data (Expected results).
8.	The student outlined the principles of treatment of the patient
9.	Made the selection of the main drugs, their doses (single, daily), routes of administration, the frequency and duration of therapy
10.	Determined the tactics of providing emergency medical care

Algorithm of the clinical situation «Chicken pox encephalitis»

A 7-year-old child is suffering for the 8th day with the presence of vesicular rash mainly on the skin of the trunk, scalp.

There is a remarkable rise in body temperature and a deterioration of the general condition. He complains of severe headache and vomiting.

During the examination: revealed ataxia, discoordination movements, tremor of the extremities, horizontal nystagmus. The boy is unstable in the Romberg position, misplaced when performing a finger and nose test.

In the next 10 minutes: set a preliminary diagnosis, provide main (most informative) examinations and predicted changes in there; prescribe main medications for the treatment of the disease of this patient.

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1.	The student greeted and introduced himself
2.	Formulate the diagnosis according to the classification. Has established a nosological diagnosis
3.	Considering the clinical form, severity
4.	The student formulated complications and emergent conditions
5.	Appointed a laboratory examination for the etiological confirmation of the diagnosis
6.	Assigned additional survey methods
7.	Provided interpretation of laboratory data (Expected results).
8.	The student outlined the principles of treatment of the patient
9.	Made the selection of the main drugs, their doses (single, daily), routes of

	administration, the frequency and duration of therapy
10.	Determined the tactics of providing emergency medical care

Algorithm of the clinical situation «COVID-19. Pneumonia. Acute Respiratory Distress Syndrome»

A 14.5-year-old girl was admitted to the intensive care unit with complaints of fever, neck pain, difficulty breathing, severe weakness, and swelling of her arms and legs.

Objectively: t- 38,2^{0}C Ps- 148 per minute, BR-46-50 per minute. SpO2 80-82% without oxygen, 94% on oxygen. The child's condition is very serious. Significantly languid (inert), adynamic. Conjunctivitis. Signs of intoxication, respiratory and cardiovascular insufficiency. Pale skin with a gray tinge, considerable swelling of the hands, forearms and feet, legs, partially thighs, confluent macula-papular rash on the legs and arms. Expressed sweating. Cervical lymph nodes are enlarged, painful on palpation. Auscultatory over the lungs hard breathing, weakened in the lower parts, wheezing is not heard. Heart tones are muted. The abdomen is swollen, painful on deep palpation. Stool 2 times liquid, without pathological impurities. Meningeal symptoms are negative. CBC: Hb-120 g / l, erythrocytes- 4,3x10^{12}/l, leukocytes -17,3x10^9 /l, neutrophils -78%, lymphocytes -14%, platelets-148x10^9 / l., ESR 45 mm / hour.Ultrasound of the heart: lesions of the coronary vessels. A month ago, the girl's parents were ill with COVID-19.

№	**Elements of implementation**
1.	The student greeted and introduced himself
2.	Formulate the diagnosis according to the classification. Has established a nosological diagnosis
3.	Considering the clinical form, severity
4.	The student formulated complications and emergent conditions
5.	Appointed a laboratory examination for the etiological confirmation of the diagnosis
6.	Assigned additional survey methods
7.	Provided interpretation of laboratory data (Expected results).
8.	The student outlined the principles of treatment of the patient

9.	Made the selection of the main drugs, their doses (single, daily), routes of administration, the frequency and duration of therapy
10.	Determined the tactics of providing emergency medical care