

**Ministry of health of Ukraine**  
**National Pirogov Memorial Medical University**

“AGREED”

at Methodical Meeting  
of pediatric disciplines  
protocol № 6  
from 25.04.2023

Head of Methodical Meeting,  
professor of HEI

  
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“APPROVED”

by Academic Council  
National Pirogov Memorial  
Medical University  
protocol № 4  
from 27.04.2023

Head of Academic Council,  
professor of HEI

  
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**Instructions for station number 6**

**Pediatric clinical emergency care task with standard patient**

**Tasks:**

1. Be able to establish the most possible emergency case based upon received data.
2. Be able to evaluate results of the additional laboratory and instrumental investigations.
3. Determine strategy of emergency medical support upon standard schemes.

**Equipment of the station:**

1. Clinical situation scenario.
2. Pediatric phantom.
3. Results of additional laboratory and instrumental investigations.
4. Paper A4.
5. Pen.

**In the case of distance form** (in the conditions of the wartime situation and in order to prevent the spread of acute respiratory disease COVID-19 caused by coronavirus SARS-CoV-2), the procedure of Objective structured practical (clinical) exam (OSP(C)E) is regulated by the Regulations on the introduction of elements of distance learning in VNPMU and will be held on the Microsoft Teams platform.

**Equipment for remote form of OSP(C)E:** situational tasks, data sets, virtual patients.

On the day of the exam, the secretary of the State Examination Commission join a student to the examiner's meeting accordingly to the schedule of a group that passes the exam. At the station the student must greet and introduce himself, provide a document (passport) proving his identity to the teacher. The student receives a clinical task, which include assessment of the patient's complaints, patient's history and physical examination data, interpret the results of laboratory and instrumental methods of examination of the patient, make a diagnosis, determine the tactics of the patient and prescribe treatment with naming a group of drugs and examples, students have to give a short answer to additional questions if it present in task.

**The duration of passing of each station** is 5-7 minutes. When the time is up the examiner will not accept the answer. Note that the teacher is an observer of your actions and does not provide instructions, comment or question.

**Requirements for passing the station:**

- Use a computer or laptop during the exam.
- The answer will be accepted only when camera and microphone are turned on and the student who passes the exam is clearly visible with a clear sound.
- Video is recorded at every station.

**It is forbidden** to use a mobile phone and other electronic gadgets, copy and take out any information related to the exam.

Part of OSP(C)E -2 for pediatric infectious diseases consists of two stations.

Station № 6 "Clinical task of emergency care in pediatrics (standardized patient)"

Situational tasks from the modules of pediatric cardiology, pulmonology, hematology, neonatology, pediatric infectious diseases and endocrinology are presented.

**An example of evaluating the response of a higher education applicant (HEA) to a practical (situational) task.**

Boy of 8 years old who is suffering from DM, accidentally injected higher dose of the insulin and was admitted to the emergency room with confused consciousness. During the objective examination: unconscious, without reaction on pain. Single breathing efforts, gasping, SpO<sub>2</sub> - 90%. Pulse cant be count on the central and peripheral arteries, but detectable. BP - 75/45 mmHg, capillary refill time – 4 sec. Pupils don't react on light. Body temperature 36°C, skin is pale and clear, with acrocyanosis.

1. Evaluate general condition of the patient.
2. Prescribe laboratory and instrumental investigations.
3. Stabilize the patient

Parameters for scoring	Answer of student	Score/ traditional grade
1. Evaluate general condition of the patient.	Critical condition of the patient, cardiac arrest.	1,5 («5») 1,25-1,4 («4») 1-1,24 («3»)
2. Prescribe laboratory and instrumental investigations	Cardiomonitor is attached and its values determined promptly, intravenous access and blood samples collection for CBC, electrolyte and glucose amount are provided, blood gases.	1,5 («5») 1,25-1,4 («4») 1-1,24 («3»)
3. Stabilize the patient	Emergency care according to AHA algorithm, 2016.	2 («5») 1,5-1,8 («4») 1-1,47 («3»)
<b>Maximum score for each station – 5</b>		

**List of situations:** various of childhood pathology (hypoglycemic coma; ketoacidotic coma, ventricular fibrillation, cardiac arrest, supraventricular paroxysmal tachycardia with narrow QRS; tachycardia with wide QRS; bradycardia, hypovolemic shock, anaphylaxis, neonatal asphyxia, hypocalcemia, hypoglycemia in a premature newborn, meningococcal infection, neonatal hypoglycemia, rotavirus infection (acute gastroenteritis), parainfluenza, acute stenotic laryngotracheitis, diphtheria, pertussis, bronchial asthma, hemophilia bleeding, febrile seizures, hemophilia, DIC syndrome).

### **CLINICAL CASE 1.**

Girl of 9 years old who is suffering from DM, accidentally injected higher dose of the insulin and was admitted to the emergency room with confused consciousness. During the objective examination: unconscious, without reaction on pain. Single breathing efforts, gasping, SpO<sub>2</sub> - 90%. Pulse can't be count on the central and peripheral arteries, but detectable. BP - 75/45 mmHg, capillary refill time – 4 sec. Pupils don't react on light. Body temperature 36°C, skin is pale and clear, with acrocyanosis.

#### **Task:**

1. Evaluate general condition of the patient.
2. Prescribe laboratory and instrumental investigations.
3. Stabilize the patient

### **CLINICAL CASE 2.**

Patient of 12 years old is getting chemotherapy due to ALL, with a lot of side effects. Suddenly condition worsened, patient became unconscious. The airway is maintainable, breathing rate - 2/min, superficial, SpO<sub>2</sub> - 88%. Pulse is not detectable, BP - 80/55 mmHg, capillary refill time 4 sec. Pupils don't react on light. Body temperature 36 °C, skin is clear, pale, acrocyanosis.

#### **Task:**

1. Evaluate general condition of the patient.
2. Prescribe laboratory and instrumental investigations.
3. Stabilize the patient

### **CLINICAL CASE 3.**

Boy of 11 years old was admitted to the emergency room with sudden onset of fatigue during PT lesson. Boy complains on palpitations, dizziness, pain at the region of the heart, malaise. The child is conscious, responding questions. The airway is maintainable, breathing rate is 42/min, SpO<sub>2</sub> - 93%. Pulse is on the central and peripheral arteries rhythmical, 200 – 220/min, BP 100/55 mmHg, capillary refill time - 2 sec. Pupils normal react on light, reaction of the child is adequate. Body temperature 36,4 °C, skin is clear, pale.

#### **Task:**

1. Evaluate general condition of the patient.
2. Prescribe laboratory and instrumental investigations.
3. Stabilize the patient

### **CLINICAL CASE 4.**

Girl of 8 years old, is getting treatment at the cardiological department due to nonrheumatic carditis. At the 5 day of the treatment it was a sudden onset of the tachycardia episode. Child is complaining on palpitation, discomfort at the region of the heart, difficulties with breathing. Girl is conscious , the airway is maintainable, breathing rate is 40/min, SpO<sub>2</sub> - 92%. Pulse is detectable on the central and peripheral arteries, 200-210/min, BP 95/55 mmHg, capillary refill time 2 sec. Pupils reaction on light is saved, child is adequately reacts on examination. Body temperature 36,3 °C, skin is pale, clear.

#### **Task:**

1. Evaluate general condition of the patient.
2. Prescribe laboratory and instrumental investigations.
3. Stabilize the patient

### **CLINICAL CASE 5**

Child of 4 years old after the injection of antibiotic at the department of the hospital developed sudden collapse. The child is lethargy, has swelling of the face, distant wheezing. The airway is maintainable, breathing rate is 44/min, SpO<sub>2</sub> - 92%. Pulse is rhythmical on the central and peripheral arteries, 100 – 110/min, capillary refill time 1 sec, BP 65/35 mmHg. Pupils reaction on light is saved. Body temperature 36,0 °C, skin is pale, clear.

#### **Task:**

1. Evaluate general condition of the patient.
2. Prescribe laboratory and instrumental investigations.
3. Stabilize the patient

### **CLINICAL CASE 6**

Child of 1 year old had been suffering from the profuse diarrhea for the passed 3 days, was admitted to the emergency room in severe condition. The child is sleepy and doesn't react on examination, urination is absent for the last 6 hours, frequent watery diarrhea – up to 20 times a day, vomiting. The airway is maintainable, breathing rate is 38/min, superficial, SpO<sub>2</sub> - 94%. Pulse is rhythmical detectable on central and peripheral arteries 110 – 120/min, capillary refill time 3 sec, BP 70/35 mmHg. Pupils reaction is saved, the child reacts just on loud voice. Body temperature is 36,0 °C, skin is dry, pale and clear.

**Task:**

1. Evaluate general condition of the patient.
2. Prescribe laboratory and instrumental investigations.
3. Stabilize the patient

**CLINICAL CASE 7**

Girl of 13 years old was admitted to the hospital by an ambulance after spraying at school of unknown substance. The child is answering questions with late reaction, complains on difficulties of breathing. The airway is maintainable, breathing movements with rate 9/min, superficial, SpO<sub>2</sub> - 91%. Pulse on the central and peripheral arteries is rhythmical, 44 – 50/min, capillary refill time 2 sec, BP 85/55 mmHg. Pupils reaction on light is normal, child is lethargy. Body temperature 36,8 °C, skin is pale, clear.

**Task:**

1. Evaluate general condition of the patient.
2. Prescribe laboratory and instrumental investigations.
3. Stabilize the patient

**CLINICAL CASE 8**

Child of 8 years old was admitted to the emergency room due to sudden appearance of the skin rash and difficulties of breathing that developed after the child had eaten peanut butter. Child reacts on examination adequately, confused, complains on feeling of breathing difficulties. The airway is maintainable, breathing rate 40/min, wheezing, SpO<sub>2</sub> - 93%. Pulse is detectable on the central and peripheral arteries, 110 - 120/min, capillary refill time 1 sec, BP 70/50 mmHg. Pupils reaction on light is normal. Body temperature 36,5 °C, single urticaria are observed on the trunk, paleness of the skin.

**Task:**

1. Evaluate general condition of the patient.
2. Prescribe laboratory and instrumental investigations.
3. Stabilize the patient

**CLINICAL CASE 9**

To the emergency room was admitted 13 years old boy, who suddenly developed palpitations during athletics training. The patient is conscious, lethargy, complains on a chest pain, dizziness, air insufficiency while breathing. The airway is maintainable; breathing rate is 46/min, superficial, SpO<sub>2</sub> - 91%. Pulse is detectable on the central and peripheral arteries, rhythmical, 190 - 210/min, capillary refill time 3 sec, BP 80/50 mmHg. Pupil's reaction is normal. Body temperature 36,9 °C, skin is clear and pale.

**Task:**

1. Evaluate general condition of the patient.
2. Prescribe laboratory and instrumental investigations.
3. Stabilize the patient

**CLINICAL CASE 10**

To the emergency room was admitted 5 years old girl in confused mental status. From the mothers explanation – she left child home alone approximately for an hour, once returned back home found her sleepy, girl didn't react on toys, conversation. During the examination airway is maintainable, breathing rate 16/min, superficial, SpO<sub>2</sub> - 91%. Pulse is detectable on the central and peripheral arteries, 48 – 54/min, capillary refill time 3 sec, BP 75/40 mmHg. Pupil's reaction is saved, during examination child reacts just on pain. Body temperature 36,9 °C, skin is clear and pale.

**Task:**

1. Evaluate general condition of the patient.

2. Prescribe laboratory and instrumental investigations.
3. Stabilize the patient

### CLINICAL CASE 11

Boy is 16 y.o. was treated by the cardiologist with primarily estimated diagnose of dilated cardiomyopathy. During the passed couple of months got progression of the clinical symptoms of heart failure. Suddenly boy felt palpitation, dyspnoea and became unconscious. The airway is maintainable, breathing – is absent, SpO<sub>2</sub> - 79 %. Pulse is not detectable on the peripheral arteries, on the central – weak pulse wave that's impossible to count, BP 75/45 mmHg, capillary refill time – 4 sec. Pupilar reaction is saved, weak. The child doesn't react on examination. Body temperature 36,1 °C, marble skin, grey, cyanosis of the lips.

#### Task:

1. Evaluate general condition of the patient.
2. Prescribe the list of obligatory laboratory and instrumental investigations.
3. Stabilize the patient

### CLINICAL CASE 12

To the emergency department boy of 8 y.o. was submitted in unconscious condition. According to mothers' comment, boy developed convulses not for the first time. Routinely receives anticonvulsants, prescribed by neurologist. After seizures usually child wakes up. This time boy presents acutely altered mental status, doesn't react on parents, answer the questions. Airway is maintainable. BR – 6/min, superficial, SpO<sub>2</sub> - 71%. Pulse on the central and peripheral arteries is weak, rhythmical, 45/min, capillary refill time 3-4 sec, BP 85/50 mmHg. Pupilar reaction is saved, weak. The child reacts on pain. Body temperature 37,9 °C, pale skin.

#### Task:

1. Evaluate general condition of the patient.
2. Prescribe laboratory and instrumental investigations.
3. Stabilize the patient

### CLINICAL CASE 13

Girl of 8 y.o. was submitted to the emergence department by her parents. Its known that child attended birthday party in one of the centres. She ate pizza with chicken and seafood, exotic fruits and drank fresh juice. Suddenly she became pale and collapsed. During the primary assessment – the child is lethargy, delayed in interaction with a doctor, answers with separate words, tachypnoea, extremely pale. Objectively: airway is maintainable, RR – 30/min, wheezing, SpO<sub>2</sub> - 88 %, during the lung auscultation – wheezes from the both sides. Pulse on the central and peripheral arteries is rhythmical, capillary refile time is 1 sec, BP 75/30 mmHg, heart tones are rhythmical. Pupilar reaction is normal. During examination reacts on pain. Body temperature - 35,9 °C, skin is pale, urticaria on the chest and upper extremities.

#### Task:

1. Evaluate general condition of the patient.
2. Prescribe the list of obligatory laboratory and instrumental investigations.
3. Stabilize the patient

### CLINICAL CASE 14

To the emergency room girl of 12 y.o. was admitted. During the primary assessment the child is lethargy, shows tachypnoea, paleness of the skin. Its known, that condition had acute onset, after developed episode of the dizziness and palpitation. Objective courses of the event are absent. During examination: airway is maintainable, RR – 34/min, SpO<sub>2</sub> - 92 %, during lung auscultation – fine end crackles from the both sides. Pulse is weak on the central arteries, not palpable on the peripheral arteries, HR – 236/min, capillary refile time – 6 sec, BP 75/35 mmHg. Pupilar reaction at light is saved, child shows reaction on loud voice – opens its eyes. Body temperature 35,9 °C, skin is marble, extremely pale. Elements of the exanths, external bleeding, major trauma – are absent.

#### Task:

1. Evaluate general condition of the patient.
2. Prescribe the list of obligatory laboratory and instrumental investigations.
3. Stabilize the patient

### CLINICAL CASE 15

To the emergency department child of 9 y.o. was admitted. The child was admitted by the firefighters after fire accident at the house. During the primary assessment: the child is unresponsive, critically slow spontaneous breathing, pale skin, cyanotic lips. During examination: airway is maintainable, snoring during breathing. Spontaneous RR – 6/min, superficial, SpO<sub>2</sub> - 73%, during pulmonary auscultation breathing is symmetrical from both sides of the chest. Pulse is detectable on the central and peripheral arteries, HR - 42/min, capillary refile time – 4 sec, BP - 80/30 mmHg. Pupilar reaction on light is saved, the child doesn't react on voice, spontaneous movements on pain are present. Body temperature 37,9 °C, skin is clear, pale, without signs of thermal damage.

#### Task:

1. Evaluate general condition of the patient.
2. Prescribe the list of obligatory laboratory and instrumental investigations.
3. Stabilize the patient

### CLINICAL CASE 16

In a 10-month-old child, body temperature 39.8°C, restlessness, convulsive readiness. On objective examination: the skin of the buttocks and lower extremities is covered with a stellate hemorrhagic rash of various diameters with necrosis in the center. Signs of meningeal irritation (occipital muscle rigidity, Kernig's and Brudzinski's symptoms) are negative.

#### Task:

1. Specify a preliminary diagnosis.
2. Which antibacterial drug is contraindicated at the stage of primary emergency care? Why?
3. Provide emergency care in the prehospital stage.

### CLINICAL CASE 17

A child of 1 year 6 months was sick for 2 days. The disease began with a dry cough, mucous secretions from the nose. On the 2nd day of the disease, the cough became rough, "barking", there was hoarseness and shortness of breath of an inspiratory nature at rest. At hospitalization the condition was moderate, t-38°C, the child is capricious. The skin is pale. Involvement of the fossa jugularis, regio epigastrica and intercostal spaces during breathing is noted. Heart tones are rhythmic, sonorous. At auscultation of lungs - hard breathing, leading rales.

#### Task:

1. Formulate the diagnosis.
2. Which laboratory method is an express method to confirm the etiology of this disease? What is the most common causative agent of this disease?
3. Algorithm for providing emergency care for this pathology.

### CLINICAL CASE 18

The child of 1 year 6 months was admitted to the hospital with complaints of fever up to 39°C, vomiting 7 times a day, liquid watery stools of yellow color without pathological impurities 10 times a day, runny nose, cough.

On objective examination: the child is lethargic, severe symptoms of dehydration: weight loss of 8 %, dry skin and mucous membranes, decreased urine output, flatulence, rumbling in the intestines. Biochemical blood test is presented in the table.

Indexes	Value	Reference values
Potassium (K <sup>+</sup> ) mmol / l	4.4	3.3 - 5.5
Sodium (Na <sup>+</sup> ) mmol / liter	138	136 - 145
Chlorides (Cl <sup>-</sup> ) mmol / l	104	98 - 107

#### Task:

1. Formulate a preliminary diagnosis according to the classification.

2. Assign the necessary list of laboratory and instrumental studies.
3. Specify the emergency algorithm.

### CLINICAL CASE 19

The child's age is 2 days. Male infant was born at 34 weeks' gestation weighing 2000 grams after third pregnancy, third uncomplicated preterm delivery. His Apgar scores were 7 and 8 points at 1 and 5 minutes, respectively.

**Clinical history:** child's condition is noted to be worsen due to the appearance facial jerking, convulsions of the upper and lower extremities. The tension or bulging of the anterior fontanelle has not been revealed. On the view, an anterior frontanelle without tension.

**Biochemical blood test:** total blood Calcium – 1,6 mmol/l, ionized calcium – 0,9 mmol/l, blood sugar – 3,1 mmol/l.

**Neurosonography:** brain parenchyma is normal, pulsation of the basal vessels of the brain is not broken. The lateral ventricles are not enlarged.

#### Task:

1. Assess the patient's condition.
2. Make an investigation plan.
3. Stabilize the patient's condition.

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#### Task:

1. Assess the patient's condition.
2. Make an investigation plan.
3. Stabilize the patient's condition.

### CLINICAL CASE 20

A newborn girl from the 3 pregnancy, 3 labour, complicated by an umbilical cord entanglement around the neck and acute fetal distress at 39 weeks gestation, birth weight 3000 g. Apgar score - 1 point on the first minute of life. The child does not breathe, the skin is pale, the muscle tone is reduced. Amniotic fluid is clean.

#### Primary resuscitation has begun.

The child's condition 30 seconds after initial resuscitation: adequate breathing is not restored, heart rate <100 beats/min.

#### Indications for the next step were determined, resuscitation was continued.

The child's condition after 30 seconds: no spontaneous breathing, heart rate <60 beats/min.

#### Indications for the next step were determined, resuscitation was continued.

Despite of mechanical ventilation and chest compressions, the heart rate remains <60 beats/min, a positive "white spot" symptom, heart sounds are weakened.

#### Tasks:



1. Determine the emergency condition and severity.
2. Establish indications for resuscitation (step A, B, C), the necessary technical equipment and principles of actions.
3. Diagnose the indications for the use of drugs during the resuscitation of a newborn child in the delivery room, indicate which drugs should be used, the way of administration, dose of drugs (b.w. 3000 g).

### CLINICAL CASE 21

A premature boy from the 3 pregnancy complicated by the threat of premature birth at 32 weeks. Third birth, premature at 33 weeks of gestation. Birth weight 1900, Apgar score 6-8 points. 5 hours after birth the child is very lethargic, pale, blood sugar 2.1 mmol/l.

#### Tasks:

1. Assess the patient's condition. What syndrome disturbed the child's adaptation?
2. Make an examination plan
3. What urgent measures need to be taken.

### CLINICAL CASE 22

14 year old girl was brought to the emergency department. The girl has diabetes mellitus for the past 6 years and is on Insulin.

History of present illness: had upper respiratory infection few days ago. There was no Insulin dose adjustment when she had URI. Child's condition worsened, thirst and polyuria increased. Has been complaining of nausea, abdominal pain, vomiting, "lethargy". During physical exam the girl lost the consciousness.

On physical exam: unconscious, skin is dry, face is flushed. Pupils pinpoint. Muscle tone decreased. Smell of acetone. Breathing is distantly loud. Pulses 130 per minute, weak. BP 80/50 mm. Hg. Heart sounds are quiet. Abdomen is distended, liver +3cm below the costal margin.

**Additional examination:** blood glucose 17 mmol/L, glucose in urine 5%.

Acetone in urine (+++).

#### Tasks:

1. Evaluate general condition of the patient.
2. Interpret the results of paraclinical methods of examination
3. Stabilize the patient.

### CLINICAL CASE 23

12 year old patient with 4 years history of diabetes mellitus is being admitted to the hospital. Patient is on insulin. After physical activity, patient became hungry, diaphoretic, irritable, complained of headache followed by lightheadedness, loss of consciousness, seizures.

On physical exam: skin is pale, moist. Muscle tone increased, pupils dilated, normal breathing. No smell of acetone at the mouth. There is trisms of facial muscles. Pulses 90/min, of normal qualities. BP 125/75 mm.hg. Regular heart rate, weak, tachycardia.

**Additional examination:**

Blood sugar 2.8 mmol/l.

Blood K<sup>+</sup> 5.3 mmol/L, blood Na<sup>+</sup> 140 mmol/L.

Blood pH 7.4.

Sugar and acetone in urine is not defined.

#### Tasks:

1. Evaluate general condition of the patient.
2. Interpret the results of paraclinical methods of examination
3. Stabilize the patient.

### CLINICAL CASE 24

A mother with a baby of 11 months (body weight 10 kg) approached the pediatrician's appointment with the pediatrician about the increase in body temperature to 39,9°C, the presence of rhinitis, dry cough, moodiness, decreased appetite, and refusal from liquid. From the anamnesis it is known that the girl is sick for the third day. The disease began acutely with the appearance of the above complaints.

The father of the child and the elder brother suffer from acute respiratory viral infection.

**Objectively:** the child is lethargic. The skin is pale, with a "marble shade", cold to the touch. Nasal breathing is difficult. The back wall of the pharynx is grainy, hyperemic. Above the lungs vesicular breathing, BH 48 / min. Rhythmic heart sounds, tachycardia.

During the examination by the doctor, the child suddenly developed a twitching of the facial muscles, followed by the appearance of tonic-clonic convulsions of the limbs.

**Complete blood count:** Hb 126 г/л, red blood cells  $3,5 \times 10^{12}/л$ , CI 0,9, white blood cells  $3,9 \times 10^9/л$ . Leukocyte formula: stab 2%, segmental 27%, monocytes 1%, lymphocytes 70%. ESR 12 mm / hour.

**Tasks:**

1. Evaluate general condition of the patient.
2. Interpret the results of paraclinical methods of examination
3. Stabilize the patient.

### CLINICAL CASE 25

A boy 6 years old was hospitalized in a hematologic department with complaints of pallor of the skin and mucous membranes, poor appetite, bleeding from a well of a milk tooth. Bleeding continues for 2 days.

From the history of the patient it is known that the grandfather from the mother's side suffered from hemophilia B.

**Complete blood count:** Hb 102 g/l. Erythrocytes  $3.4 \times 10^{12}/л$ . Color index 0.9. Leukocytes  $8.5 \times 10^9/л$ . Leukocytes formula: neutrophils: stabs 6%, segmented neutrophils 44%, lymphocytes 37%, eosinophils 1%, monocytes 12%, ESR 10 mm/h. Reticulocytes 10%.

Peripheral clotting time: after 10 min not completed.

Lee-White clotting time: after 22 min not completed.

Prothrombin time: 25 sec, APPT 52 sec

Factor IX level – less than 1%.

**Tasks:**

1. Evaluate general condition of the patient.
2. Interpret the results of paraclinical methods of examination
3. Stabilize the patient.

### CLINICAL CASE 26

Boy, 4 years old, hospitalized with complaints of wheezing, shortness of breath, which appeared the day before. Earlier this child had atopic dermatitis, household allergies (rhinoconjunctivitis), frequent obstructive bronchitis.

Objectively: the general condition is severe; the child does not speak. The skin is pale, acrocyanosis, heart rate-54 per minute, the fall of supraclavicular fossa, paradoxical movements of the chest and abdominal wall, PEF cannot be measured. SaO<sub>2</sub> (when breathing air) - 85%.

**Complete blood count:** RBC  $3.0 \times 10^{12}/л$ , Hb 105 g/l, CI - 0.85, WBC -  $7.5 \times 10^9/л$ , leucogram: segmental 17%, e 12%, m 8%, l 63%. ESR - 5 mm/h.

**Tasks:**

1. Evaluate general condition of the patient.
2. Interpret the results of paraclinical methods of examination
3. Stabilize the patient.

### CLINICAL CASE 27

The child was born from II pregnancy, I delivery at 27 weeks of gestation with body weight 1000 g. The previous pregnancy ended in a spontaneous abortion. In childbirth - a long anhydrous period. At birth, the child's condition is severe, estimation by Apgar score 2-4 points, by Downes score 8 points. Resuscitation measures were performed in the delivery room, and early neonatal sepsis was diagnosed on the 4th day of life.

**Objective status:** The child's condition is severe, the skin is pale, there is hemorrhagic skin rash, perioral and acrocyanosis. Congenital reflexes are suppressed, muscular hypotension. A newborn child developed umbilical wound bleeding.

**CBC:** Hb - 134 g / L, Er -  $4.0 \times 10^{12}$  / L, Pl -  $105 \times 10^9$  / L.

#### Tasks:

1. Assess the patient's emergency condition.
2. Make an investigation plan.
3. Stabilize the patient's condition.

### CLINICAL CASE 28

Childbirth II in women 35 years of age at 38 weeks of gestation was complicated by partial detachment of the placenta, acute fetal distress. The condition of the newborn boy is very severe: there is no independent breathing, muscle atony. Body weight at birth 2600g. Amniotic fluid is clear.

#### Initial resuscitation has begun.

The child's condition 30 seconds after initial resuscitation: adequate breathing is not restored, heart rate <100 beats/minute.

#### Indications for the next step have been determined, resuscitation is continued.

The child's condition after 30 seconds: no self-breathing, heart rate <60 beats/minute.

#### Indications for the next step have been determined, resuscitation is continued.

On the background of cardiopulmonary resuscitation, the heart rate remains 58 beats/minute, a positive symptom of "white spot", pronounced pallor of the skin.

#### Tasks:

1. Determine the emergency conditions and severity.
2. Set the indications for resuscitation (step A, B, C), the necessary technical equipment and principles.
3. Diagnose indications for the use of drugs in the resuscitation of a newborn child in the delivery room, specify which drugs should be used, the route of administration, the dose of drugs (body mass 2600g).

### CLINICAL CASE 29

A 3-year-old girl, not vaccinated, is ill on the 2nd day, when there was a barking cough, hoarseness of the voice with the subsequent development of aphonia. In the morning the child became difficult to breathe, there was perioral and periorbital cyanosis. They went to the clinic, was examined by an otolaryngologist. During indirect laryngoscopy were visualized a congestive hyperemia of a larynx, grayish patches on vocal cords.

#### Tasks:

1. Specify a preliminary diagnosis.
2. What diseases should be differentially diagnosed?
3. Provide emergency care

### CLINICAL CASE 30

A 5-month-old girl, who had not been vaccinated according to the schedule, fell ill 2 weeks ago, with a cough, which had appeared on the background of subfebrile body temperature, the frequency of it had been

increasing in dynamics. On the 8th day of the disease, the cough became paroxysmal, mostly at night, up to 8-10 attacks. Auscultatory: broncho-vesicular respiration, additional respiratory noises were not heard. During examination of a mucous membrane of oropharynx, the child had an episode of apnea.

**Tasks:**

1. Specify a preliminary diagnosis.
2. Name the causative agent of the disease. Which methods of laboratory diagnosis can be used to confirm the etiology of the disease?
3. Provide emergency care.