SECHENOV UNIVERSITY
LIFE SCIENCES

Azerbaijan Medical Simulation Education Association

SIMULATION CENTER SECHENOV UNIVERSITY BAKU

THE GUIDE TO THE OSCE

Therapeutics

Practical skills in therapeutics

Specialty:
General medicine

The duration of the station

The total time to complete the skill is 10 minutes.

Accredited person's time at the station is 8.5 minutes (in case of early performance of a practical skill, the accredited person stays inside the station until the voice command "Enter the station, say your ID number and listen to the assignment").

Timing of the practical skill

Time of the voice command	Voice Command	Action of the accredited person	Skill performance time
0’	Enter the station, say your ID number and listen to the assignment	Listen to the station assignment (briefing). Initiation of the work at the station	0,5'
8,0'	You have one minute left	Work continuing at the station	8,5'
9,0'	Time is up	Wait for the next command	1'

List of situations (scenarios)

№	Situation
1	Endocarditis
2	Exacerbation of COPD (Emphysematous form)
3	Dilated cardiomyopathy
4	B_{12}-deficiency anemia
5	Urosepsis

The choice and sequence of situations (scenarios) of the station is decided by a member of the commission on the exam day

Assessment of the patient's condition (ABCDE algorithm)

Algorithm stages		Actions
Introductory actions	1.	Communicate with the patient *(greeting, introduce yourself, state your role)*, identify the patient *(ask them to introduce themselves, tell their age, reconcile with medical documents)*
	2.	Inquire about how the patient is feeling
	3.	Collect anamnesis morbi and anamnesis vitae
	4.	Provision of laying
	5.	Put on gloves
A	6.	Assess upper airway patency/oral mucosa with a spatula
	7.	Perform aspiration of the contents of the oral cavity using aspirator (if necessary)
	8.	Provide pulse oximetry
	9.	Provide oxygen therapy ✓ maximum flow ✓ average flow ✓ minimum flow
B	10.	Perform comparative chest percussion
	11.	Perform comparative auscultation of the lungs with a phonendoscope
	12.	Evaluate the frequency of respiratory movements for at least 10 seconds
	13.	Assess the position of the trachea
	14.	Evaluate the refill of the neck veins
C	15.	Perform palpation of the pulse on the radial artery
	16.	Palpate the pulse on the carotid artery
	17.	Measure blood pressure using a cuff
	18.	Perform auscultation of the heart with a phonendoscope in 4 points
	19.	ECG: ✓ applying the electrodes correctly ✓ interpreting the ECG
	20.	Squeeze the pad of a finger to assess capillary refill
	21.	Provide venous access and blood sampling for analysis
	22.	Assess the condition of the skin by palpating hands and/or forehead, and/or cheeks, and/or ankles of thepatient
D	23.	Check the reaction of pupils to light
	24.	Provide glucometry
	25.	Evaluate muscle tone (by flexion and extension of each arm and each leg)
E	26.	Palpate the pulse on the femoral arteries from both sides
	27.	Examine the back with a turn to the side and release from clothes (imitation)
	28.	Conduct a rectal examination to find internal bleeding (if necessary)
	29.	Look at the lower legs and popliteal areas to find varicose veins
	30.	Perform palpation of the back of the foot and shins for determining swelling
	31.	Perform a superficial palpation of the abdomen on four sides of the navel
	32.	Temperature measurement

Scenario 1

Endocarditis

Sample texts of introductory informationas part of the dialogue between the member of the commission and the accredited person

No	Action of the accrediting	Introductory text
1	Specifying patient's full name and age	"Ali Aliev, 53 years"
2	When asked about the patient's complaints	"Shiver, pain in the heart, shortness of breath, temperature rising to 39°C, weakness"
3	When collecting life and/or disease history	"Angioplasty and stenting 2 months ago"

Reference information

(when assessing vital functions that are not independently reproduced by the simulator, the text will be read by a member of the commission)

A	*Upper respiratory tract patency*	Visually clear
	Saturation	92%
	When performing O2 insufflation	94%
B	*Frequency of respiratory rate*	22
	Lung percussion	Clear sound on both sides
	Lung auscultation	Vesicular breathing on both sides
	Trachea	Normal
	Neck veins	Normal
C	*Pulse, HR*	Weak on the periphery, 102 bpm
	BP	90/55
	Cardiac auscultation	Weakening of the I tone at the apex, the systolic murmur at the apex occupies 2/3 of the systole or the entire systole
	ECG	Left ventricular hypertrophy
	Capillary filling	4 s
	Intravenous access + tests	+
	Skin	Pale, warm, petechiae on conjunctiva, nodules on right hand, hemorrhages under big nails
D	*Pupil response*	Pupils are equal, photoreaction is preserved
	Muscle tone	Normal
	Blood glucose	5 mmol/L
E	*Abdominal palpation*	Soft, painless
	Femoral arteries	Pulse is symmetrical, filled
	Varicose	Not detected
	Edema	Not detected
	Back	No visible trauma or bleeding was detected
	Per rectum	Not required
	Body temperature	38°C

Required research:

Chest x-ray

Left ventricular hypertrophy

ECHO: Vegetations on the mitral valve (more than 2 mm), mitral regurgitation

ECG: Left ventricular hypertrophy.

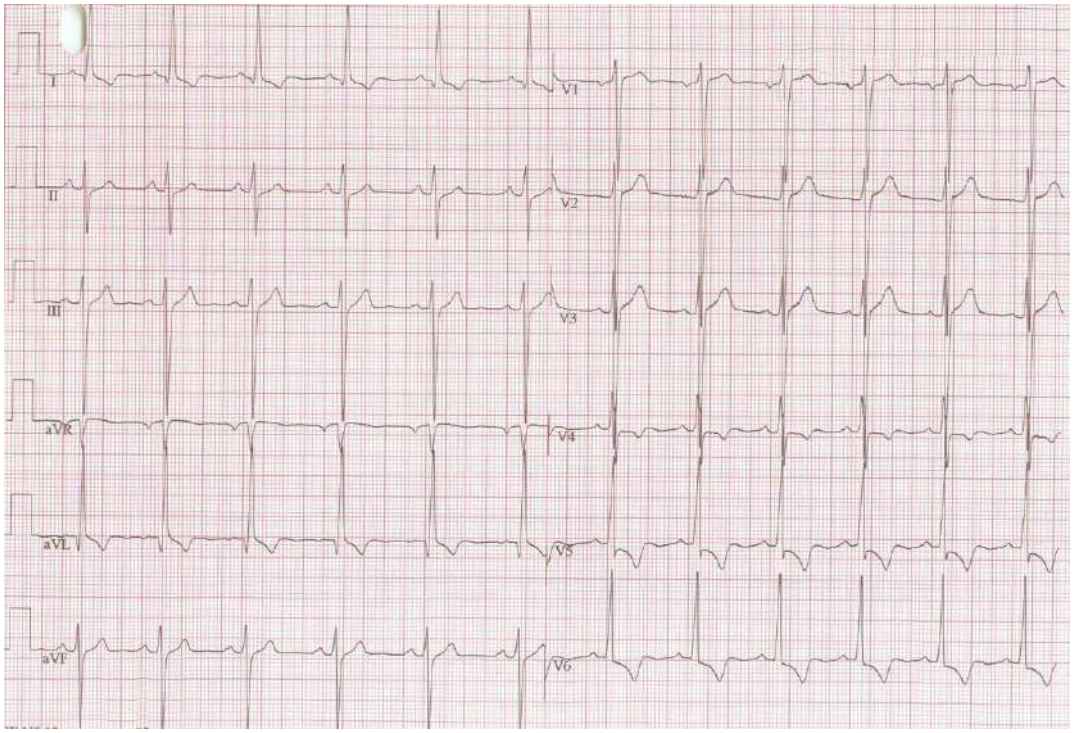
The main signs of left ventricular hypertrophy on the cardiogram:

- R wave increase in the left leads (I, aVL and V_4-V_6).
- Deep S waves in the right leads (III, aVF, V_1-V_3).

The most common criterion for left ventricular hypertrophy on the ECG is the Sokolov-Lyon index: the sum of the amplitude of the R_{V6} and S_{V1} waves.

If $S_{V1} + R_{V6} > 35$ mm, this is a sign of left ventricular hypertrophy. In cases where $R_{V5} > R_{V6}$, R_{V5} is used in the formula, i.e. $S_{V1} + R_{V5}$.

In this ECG: $S_{V1} = 24$ mm, $R_{V6} = 22$ mm, $S_{V1} + R_{V6} = 46$ mm.



General blood analysis

Test	Result	Unit	Reference
Leukocytes (WBC)	***17***	10^9/L	4,00 - 8,80
Erythrocytes (RBC)	***2.5***	10^12/L	3,80 - 5,30
Hemoglobin (HGB)	***110***	g/L	117,00 - 160,00
Hematocrit (HCT)		%	35,00 - 47,00
Mean corpuscular volume (MCV)		fL	81,00 - 101,00
Mean corpuscular hemoglobin (MCH)		pg	27,00 - 34,00
Mean corpuscular hemoglobin concentration (MCHC)		g/L	310,00 - 360,00
Erythrocyte sedimentation rate (ESR)	***68***	mm/s	Women: 10 – 50 years 0-20 > 50 years > 30 Men: 10 – 50 years 0-15 > 50 years > 20
Platelets (PLT)		10^9/L	150,00 - 400,00
Anisocytosis (RDW-SD)		fL	34,00 - 46,00
Anisocytosis (RDW-CV)		%	11,50 - 14,50
Platelet distribution width (PDW)		fL	9,00 - 17,00
Mean platelet volume (MPV)		fL	8,00 - 12,00
Platelet large cell ratio (P-LCR)		%	13,00 - 43,00
Thrombocrit PCT		%	0,15 - 0,40
Neutrophils	***17***	10^9/L	1,88 - 6,34
Lymphocytes		10^9/L	0,76 - 3,26
Monocytes		10^9/L	0,12 - 0,97
Eosinophils		10^9/L	0,02 - 0,44
Basophils		10^9/L	0,00 - 0,09
Neutrophils		%	47,00 - 72,00
Lymphocytes		%	19,00 - 37,00
Monocytes		%	3,00 - 11,00
Eosinophils		%	0,50 - 5,00
Basophils		%	0,00 - 1,00

General urine analysis			
Test	**Result**	**Unit**	**Reference**
Physical and chemical indicators of urine			
Color		-	
Transparency		-	transparent
Relative density		-	1010-1030
Urobilinogen		-	norm
Bilirubin		-	negative
Ketones		-	negative
Glucose		-	norm
PH		-	5 - 8
Nitrites		-	negative
Protein	***0,33***	g/L	negative
Microscopy of urine sediment			
Squamous epithelial cells		g/s	
Transitional epithelial cells		g/s	
Renal tubular epithelial cells		g/s	
Leukocytes		g/s	
Erythrocytes	***32***	g/s	
Hyaline casts			
Granular casts			
Waxy casts			
Epitelial casts			
Mucus			
Salts			
Fungus	---		
Bacteria			

Biochemical blood analysis

Test	Result	Unit	Reference
Blood glucose		mmol/L	4,1 - 6,6
Total bilirubin	***25***	mkmol/l	< 22
ALT		U/L	< 35
AST		U/L	14 - 36
Albumin	***26***	g/L	35 - 50
CRP	***138***	mg/L	0,00 - 5,00
Uric acid in the blood		umol/L	149 - 369
Magnesium (Mg)		mmol/L	0,7 - 1
Urea in the blood		mmol/L	2,5 - 6,1
Residual nitrogen (urea nitrogen)		mg/dl	7 - 17 5 - 18 children
Troponin T (hs-cTn)		mkg/L	0.4 - 2.3
Procalcitonin (PCT)		ng/mL	< 0.1

Blood culture

Result	
Staphylococcus aureus	10^2
Staphylococcus aureus	**Sensitivity**
Clarithromycin	S
Amikacin	S
Ampicillin	S
Methicillin	R

DİFFERENTİAL DİAGNOSİS	
DIAGNOSIS	**LEADİNG FEATURES**
Acute bacterial endocarditis	The picture of the disease is more severe, it is more often caused by microbes with obvious pathogenicity, combined with numerous septic focuses - in the lungs, kidneys, bones, etc., abscesses, hectic fever, loss of consciousness and other signs of a septic state, less severity of immune disorders and valves more destruction.
Rheumatic heart disease **Lupus erythematosus** **Systemic sclerosis** **Rheumatoid arthritis** **Fibroplastic endocarditis** **Thromboendocarditis**	There are no obvious signs of an infectious process (fever, increased erythrocyte sedimentation rate, neutrophilia, bacteremia, etc.) and a lower degree of destruction of valves

Treatment

1. The patient should be hospitalized and receive inpatient treatment.
2. Bacteriological examination.
3. Empiric treatment – **Vancomycin + Cefazolin.**
4. After receiving the result of bacteriological examination - correction of antibiotic therapy.

MRSA, native valve, right- or left-sided involvement:

- Preferred: vancomycin 15 mg/kg IV q12h
- Alternative: daptomycin ≥ 8 mg/kg IV daily
- Some experts recommend higher doses: 10-12 mg/kg daily.
- Duration: 6 wks, consider longer if complicated infection (osteomyelitis, etc.)

Consultation with a cardiovascular surgeon. The absence of positive dynamics within two weeks is an indication for **surgical treatment** - removal of the affected valve with subsequent prostheses.

Scenario 2

Exacerbation of COPD (Emphysematous form)

Sample texts of introductory informationas part of the dialogue between the member of the commission and the accredited person

No	Action of the accrediting	Introductory text
1	Specifying patient's full name and age	"Ali Aliev, 48 years"
2	When asked about the patient's complaints	"Feeling of suffocation, wet cough, shortness of breath"
3	When collecting life and/or disease history	"A week ago t° was 37.7°. I took paracetamol, the temperature was dropping. On the 3rd day, the cough first became dry, then with green sputum"
	When asked about bad habits	"I've been smoking since I was 19, one pack a day"

Reference information

(when assessing vital functions that are not independently reproduced by the simulator, the text will be read by a member of the commission)

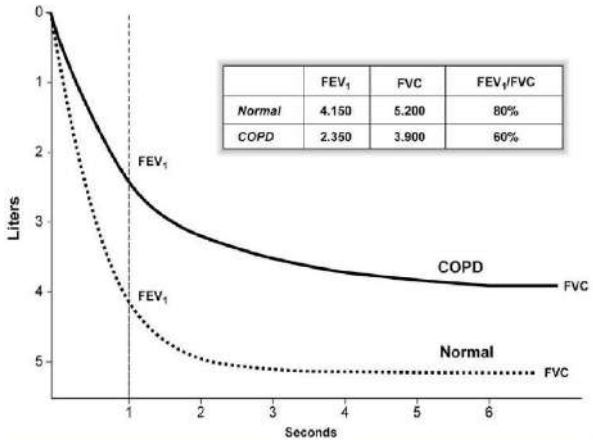
A	*Upper respiratory tract patency*	Visually clear
	Saturation	83%
	When performing O2 insufflation	90%
B	*Frequency of respiratory rate*	24
	Lung percussion	Hyperresonance over the entire surface of the lungs
	Lung auscultation	Dry wheezing over the entire surface of the lungs
	Trachea	Normal
	Neck veins	Normal
C	*Pulse, HR*	Symmetrical, regular, 100
	BP	100/60
	Cardiac auscultation	Deaf tones
	ECG	Signs of right ventricular hypertrophy
	Capillary filling	3 s
	Intravenous access + tests	+
	Skin	Pale, wet, acrocyanosis
D	*Pupil response*	Pupils are equal, photoreaction is preserved
	Muscle tone	Normal
	Blood glucose	5 mmol/L
E	*Abdominal palpation*	Soft, painless
	Femoral arteries	Pulse is symmetrical, filled
	Varicose	Not detected
	Edema	Not detected
	Back	No visible trauma or bleeding was detected
	Per rectum	Not required
	Body temperature	37,2°C

Required research:

Chest x-ray

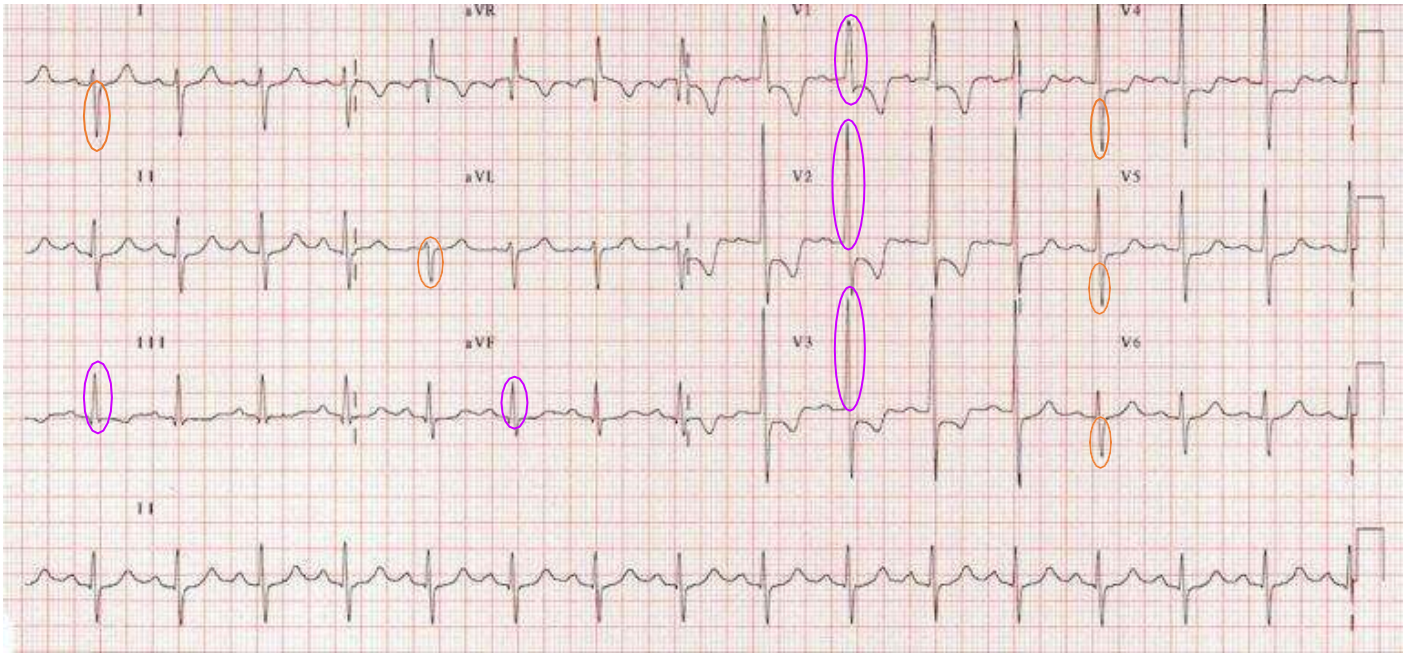
Emphysema and pneumosclerosis

Spirometry - to clarify the diagnosis (obstruction) and stage - Tifno test <70% and FEV1=37% (Stage III).



	FEV_1	FVC	FEV_1/FVC
Normal	4.150	5.200	80%
COPD	2.350	3.900	60%

ECG: Right ventricular hypertrophy - increased amplitude of R waves in right leads (III, aVF, V1-V3) and increased depth of S in left leads (I, aVL and V4-V6).



General blood analysis

Test	Result	Unit	Reference
Leukocytes (WBC)	***12***	10^9/L	4,00 - 8,80
Erythrocytes (RBC)		10^12/L	3,80 - 5,30
Hemoglobin (HGB)		g/L	117,00 - 160,00
Hematocrit (HCT)		%	35,00 - 47,00
Mean corpuscular volume (MCV)		FL	81,00 - 101,00
Mean corpuscular hemoglobin (MCH)		pg	27,00 - 34,00
Mean corpuscular hemoglobin concentration (MCHC)		g/L	310,00 - 360,00
Erythrocyte sedimentation rate (ESR)	***15***	mm/s	Women: 10 – 50 years 0-20 > 50 years > 30 Men: 10 – 50 years 0-15 > 50 years > 20
Platelets (PLT)	***405***	10^9/L	150,00 - 400,00
Anisocytosis (RDW-SD)		FL	34,00 - 46,00
Anisocytosis (RDW-CV)		%	11,50 - 14,50
Platelet distribution width (PDW)		FL	9,00 - 17,00
Mean platelet volume (MPV)		FL	8,00 - 12,00
Platelet large cell ratio (P-LCR)		%	13,00 - 43,00
Thrombocrit PCT		%	0,15 - 0,40
Neutrophils		10^9/L	1,88 - 6,34
Lymphocytes		10^9/L	0,76 - 3,26
Monocytes		10^9/L	0,12 - 0,97
Eosinophils		10^9/L	0,02 - 0,44
Basophils		10^9/L	0,00 - 0,09
Neutrophils		%	47,00 - 72,00
Lymphocytes		%	19,00 - 37,00
Monocytes		%	3,00 - 11,00
Eosinophils		%	0,50 - 5,00
Basophils		%	0,00 - 1,00

Biochemical blood analysis

Test	Result	Unit	Reference
Blood glucose		mmol/L	4,1 - 6,6
Total bilirubin		mkmol/l	< 22
ALT		U/L	< 35
AST		U/L	14 - 36
Albumin		g/L	35 - 50
CRP	***30***	mg/L	0,00 - 5,00
Uric acid in the blood		umol/L	149 - 369
Magnesium (Mg)		mmol/L	0,7 - 1
Urea in the blood		mmol/L	2,5 - 6,1
Residual nitrogen (urea nitrogen)		mg/dl	7 - 17 5 - 18 children
Procalcitonin (PCT)		ng/mL	< 0.1

Blood gases

Test	Result	Unit	Reference
pH	***7,30***	-	7,35 - 7,45
PaO2	***68***	mmHg	> 75
PaCO2	***75***	mmHg	35 - 45
Bicarbonates	**28,0**	mmol/L	22,0 - 30,0
SpO2	***85***	%	95 - 100
Sodium (Na)	**140**	mmol/L	135 - 145
Potassium (K)	**4,2**	mmol/L	3,5 - 5,5
Chlorine (Cl)	**106**	mmol/L	95 - 110
Phosphorus (P)	**1,28**	mmol/L	0,81 - 1,45
Calcium (Ca)	**2,40**	mmol/L	2,1 - 2,55
Anion deficiency	**13**	mmol/L	8 - 16
BE	***12***		-2 +2
Lactate	**1,1**	mmol/L	0,5 - 2,2
HCO3	***34***		18 - 24

General analysis of sputum		
Test	**Result**	**Unit**
Amount	**4.0**	ml
Colour	**Green**	-
Smell	-	-
Character	**Purulent**	-
Consistency	**Liquid**	-
Impurities	-	-
Epithelium (n/zr)	**0**	-
Alveolar macrophages (n/sp)	+	-
Leukocytes (n/zr)	++	-
Erythrocytes (n/sr)	**0**	-
Eosinophils (n/zr)	**0**	-
Elastic fibers	-	-
Calcified fibers	-	
Fungus	-	
Other flora	-	
Curschmann's spirals	-	
Charcot-Leyden crystals	-	
Cells with signs of atypia	-	

DİFFERENTİAL DİAGNOSİS	
DIAGNOSIS	**LEADİNG FEATURES**
COPD	Onset: middle age Symptoms develop slowly In history: exposure to tobacco or other types of smoking
Asthma	Onset: early childhood (especially at an early age) Symptoms vary widely from day to day Symptoms worsen at night/early morning The presence of allergies, rhinitis and/or eczema Family history of asthma Accompanied by obesity
Chronic heart failure	Chest X-ray showing enlarged heart, pulmonary edema Functional breathing tests show volume limitation, not airflow limitation
Bronchiectasis	A large amount of purulent sputum It is usually associated with a bacterial infection Chest X-ray/CT shows dilation of the bronchi and thickening of the bronchial wall
Tuberculosis	Onset: at any age Chest X-Ray shows pulmonary infiltrate Microbiological confirmation High local prevalence of tuberculosis
Obliterating bronchiolitis	Onset: at an early age, non-smokers History may include rheumatoid arthritis or exposure to secondhand smoke Seen after lung or bone marrow transplantation Expiratory CT shows areas of hypotension
Diffuse panbronchiolitis	Mostly in Asian patients Most patients are non-smokers Almost everyone has chronic sinusitis Chest X-Ray shows diffuse small centrilobular nodular opacities and hyperinflation.

Management

Non-invasive positive pressure ventilation (improves respiratory acidosis and reduces respiratory rate, dyspnea, need for intubation, mortality and length of hospital stay)

Inhaled B2 agonists (relieve shortness of breath and improve exercise capacity in patients with COPD)

Short-acting: Fenoterol, Levalbuterol, Salbutamol (albuterol), Terbutaline

Anticholinergics

Short-acting (SAMA): Ipratporium bromide, Oxitropium bromide

Short courses of systemic corticosteroids (prolongs time after exacerbation, reduces treatment failure rates, shortens hospital stay, improves FEV1 and hypoxemia)

Antibiotics should be used in patients with moderate or severe exacerbations of COPD, especially those with increased purulent sputum or hospitalization

Mucolytic agents

Smoking cessation reduces mortality and the likelihood of future exacerbations in patients with COPD

Scenario 3

Dilated cardiomyopathy

Sample texts of introductory informationas part of the dialogue between the member of the commission and the accredited person

No	Action of the accrediting	Introductory text
1	Specifying patient's full name and age	"Ali Aliev, 38 years"
2	When asked about the patient's complaints	"Shortness of breath, fatigue, swelling in the legs, disappear in the morning, increase in the evening. The amount of urine has decreased"
3	When collecting life and/or disease history	"The dyspnea first appeared 6 months ago while playing tennis, and was so unusual and obvious that the game had to be stopped. Since then, shortness of breath occurs even with minor exertion, and there is a feeling of arrhythmia. Until recently, I was completely healthy. Father suffered from a "heart" disease and died suddenly at the age of 45"
	When asked about bad habits	"I don't smoke, but sometimes I drink beer"

Reference information

(when assessing vital functions that are not independently reproduced by the simulator, the text will be read by a member of the commission)

A	*Upper respiratory tract patency*	Visually clear
	Saturation	87%
	When performing O2 insufflation	92%
B	*Frequency of respiratory rate*	22
	Lung percussion	Dull sound in the lower parts
	Lung auscultation	Respiration is not heard in the lower parts, wet crackles
	Trachea	Normal
	Neck veins	Swollen
C	*Pulse, HR*	Rapid, 110 bpm
	BP	135/90
	Cardiac auscultation	No murmur, pathological additional S3 on mitral valve
	ECG	Signs of enlargement of all heart chambers
	Capillary filling	3 s
	Intravenous access + tests	+
	Skin	Pale
D	*Pupil response*	Pupils are equal, photoreaction is preserved
	Muscle tone	Normal
	Blood glucose	5 mmol/L
E	*Abdominal palpation*	Soft, painless
	Femoral arteries	Pulse is rapid
	Varicose	Not detected
	Edema	Yes
	Back	No visible trauma or bleeding was detected
	Per rectum	Not required
	Body temperature	36,6°C

Required research:

Chest x-ray

Signs of cardiomegaly, ballooning of the heart, signs of venous congestion in the lungs, presence of effusion in the pleural cavity

ECHO: dilatation of the left ventricle, hypokinesia of the walls of the left ventricle, low ejection fraction of the left ventricle. Systolic dysfunction, a sign of regurgitation in the bicuspid and tricuspid valves.

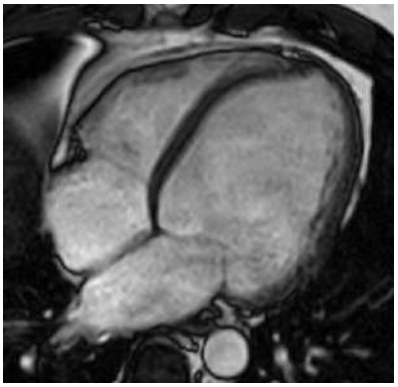
ECG:

Nonspecific changes in dilated and restrictive cardiomyopathy:

- Block signs of the right or left leg of the bundle of His.
- Decreased progression of the R wave in chest leads (possible appearance of QS complexes in V1-V4). Dilatated cardiomyopathy occurs.
- Decreased amplitude of QRS complexes. It occurs in restrictive cardiomyopathy.
- Disturbance of the ventricular rhythm.

On this ECG: Resting sinus tachycardia, left and right atrial enlargement (P-mitrale + P-pulmonale), T wave inversion in lateral limb leads (I and aVL) and precordial leads (V5-V6), deep S waves in leads V1-V3.

MRI of the heart: Dilatation of the left parts of the heart



General blood analysis

Test	Result	Unit	Reference
Leukocytes (WBC)	**7,7**	10^9/L	4,00 - 8,80
Erythrocytes (RBC)	**4,50**	10^12/L	3,80 - 5,30
Hemoglobin (HGB)	**160**	g/L	117,00 - 160,00
Hematocrit (HCT)	**45,00**	%	35,00 - 47,00
Mean corpuscular volume (MCV)	**90,2**	FL	81,00 - 101,00
Mean corpuscular hemoglobin (MCH)	**28,2**	pg	27,00 - 34,00
Mean corpuscular hemoglobin concentration (MCHC)	**328,00**	g/L	310,00 - 360,00
Erythrocyte sedimentation rate (ESR)	**9**	mm/s	Women: 10 – 50 years 0-20 > 50 years > 30 Men: 10 – 50 years 0-15 > 50 years > 20
Platelets (PLT)	**200**	10^9/L	150,00 - 400,00
Anisocytosis (RDW-SD)		FL	34,00 - 46,00
Anisocytosis (RDW-CV)		%	11,50 - 14,50
Platelet distribution width (PDW)		FL	9,00 - 17,00
Mean platelet volume (MPV)		FL	8,00 - 12,00
Platelet large cell ratio (P-LCR)		%	13,00 - 43,00
Thrombocrit PCT		%	0,15 - 0,40
Neutrophils		10^9/L	1,88 - 6,34
Lymphocytes		10^9/L	0,76 - 3,26
Monocytes		10^9/L	0,12 - 0,97
Eosinophils		10^9/L	0,02 - 0,44
Basophils	**0,6**	10^9/L	0,00 - 0,09

Neutrophils	**45,00**	%	47,00 - 72,00
Lymphocytes	**36,00**	%	19,00 - 37,00
Monocytes	**7,2**	%	3,00 - 11,00
Eosinophils	**2,9**	%	0,50 - 5,00
Basophils		%	0,00 - 1,00

Biochemical analysis of blood

Test	Result	Unit	Reference
Blood glucose		mmol/L	4,1 - 5,9
Total bilirubin		mkmol/l	< 22
ALT		U/L	< 35
AST		U/L	14 - 36
Albumin		g/L	35 - 50
CRP		mg/L	0,00 - 5,00
Uric acid in the blood		umol/L	149 - 369
Magnesium (Mg)		mmol/L	0,7 - 1
Urea in the blood		mmol/L	2,5 - 6,1
Residual nitrogen (urea nitrogen)		mg/dl	7 - 17 5 – 18 children
Troponin T (hs-cTn)		mkg/L	0.4 - 2.3
Procalcitonin (PCT)		ng/mL	< 0.1
NT-proBNP (B-type natriuretic peptide)*	***5000***	pq/mL	0-125 0-75 years 0-450 > 75 years
Creatinine	***117***	mkmol/L	44,0 - 80,0 women 62,0 - 106,0 men

**a protein produced in the heart. Blood levels of BNP may be elevated in heart failure, a common complication of cardiomyopathy.*

Blood gases

Test	Result	Unit	Reference
pH		-	7,35 - 7,45
PaO2		mmHg	> 75
PaCO2		mmHg	35 - 45
Bicarbonates		mmol/L	22,0 - 30,0
SpO2		%	95 - 100

Sodium (Na)	***150***	mmol/L	135 - 145
Potassium (K)	***6,0***	mmol/L	3,5 - 5,5
Calcium (Ca)		mmol/L	2,1 - 2,55
Anion deficiency		mmol/L	8 - 16
BE		-	-2 +2
Lactate		mmol/L	0,5 - 2,2
HCO3		-	18 - 24

DİFFERENTİAL DİAGNOSİS

Cardiomyopathy of various etiologies
Severe myocarditis
Heart defects
Postinfarction cardiosclerosis
Pericarditis

Management

YUPERIO - angiotensin II receptor antagonist together with neprilysin inhibitor.
Indications:

- chronic heart failure to reduce the risk of cardiovascular death and hospitalization due to heart failure. The maximum risk reduction occurs in patients with subnormal LVEF.
- essential arterial hypertension.

*If patient have diabetes, **YUPERIO + Forsiga**

Selective beta-blockers: Carvedilol, Bisoprolol. Treatment begins with minimal doses only after compensating heart failure with other drugs.

Diuretics

ACE inhibitors

Angiotensin II receptor antagonists are prescribed not only in cases of intolerance to angiotensin-converting enzyme inhibitors, but also in severe decompensation in combination with inhibitors

Antiplatelet agents and **indirect anticoagulants**

Prevention of sudden cardiac death: **antiarrhythmics - Amiodarone**

Scenario 4

B_{12}-deficiency anemia

Sample texts of introductory informationas part of the dialogue between the member of the commission and the accredited person

No	Action of the accrediting	Introductory text
1	Specifying patient's full name and age	"Ali Aliev, 56 years"
2	When asked about the patient's complaints	"Shortness of breath. Visible at rest, more apparent when climbing to the 3rd floor. Increased sweating, headache, increased fatigue"
3	When collecting life and/or disease history	"Chronic gastritis"

Reference information

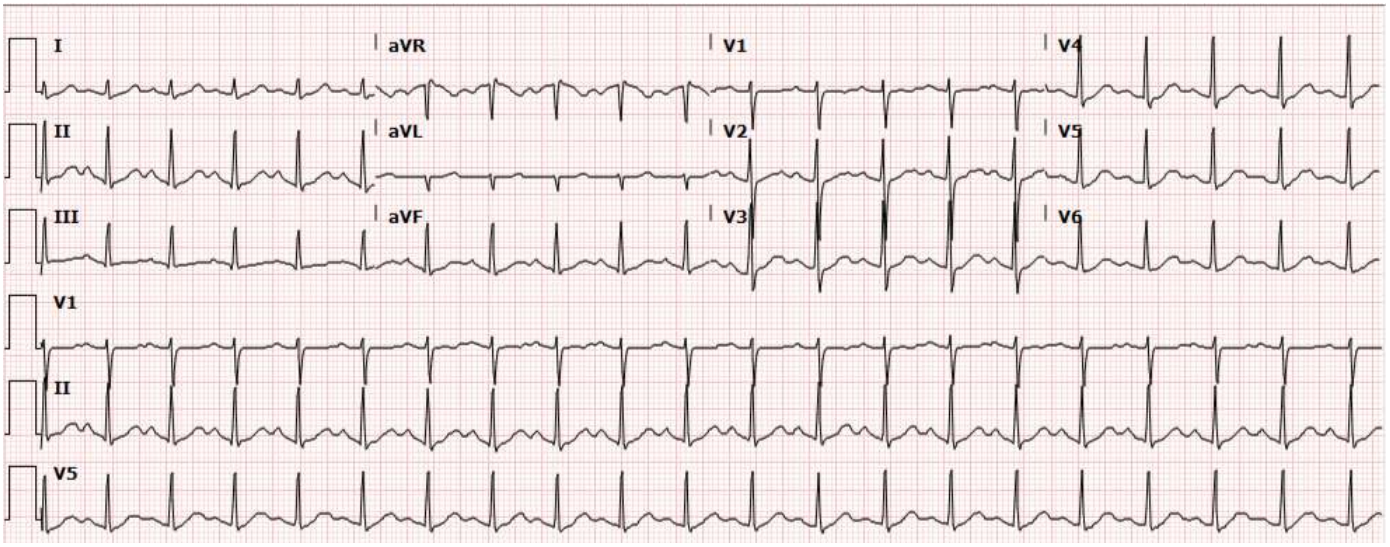
(when assessing vital functions that are not independently reproduced by the simulator, the text will be read by a member of the commission)

A	*Upper respiratory tract patency*	Visually clear
	Saturation	98%
	When performing O2 insufflation	-
B	*Frequency of respiratory rate*	22
	Lung percussion	Clear sound on both sides
	Lung auscultation	Vesicular breathing on both sides
	Trachea	Normal
	Neck veins	Normal
C	*Pulse, HR*	Symmetrical, weak, 118
	BP	90/60
	Cardiac auscultation	There is no murmur, heart tones are accelerated
	ECG	Sinus tachycardia
	Capillary filling	4 s
	Intravenous access + tests	+
	Skin	Pale
D	*Pupil response*	Pupils are equal, photoreaction is preserved
	Muscle tone	Normal
	Blood glucose	5 mmol/L
E	*Abdominal palpation*	Soft, painless
	Femoral arteries	Pulse is weak
	Varicose	Not detected
	Edema	Not detected
	Back	No visible trauma or bleeding was detected
	Per rectum	Not required
	Body temperature	36,6°C

Required research:

ECG

Sinus tachycardia



Biochemical blood analysis

Test	Result	Unit	Reference
Blood glucose	**5,3**	mmol/L	4,1 - 5,9
Total bilirubin	***24***	mkmol/l	< 22
Albumin	**45**	g/L	35 - 50
CRP	**0,01**	mg/L	0,00 - 5,00
Ferritin	**68**	mkg/L	60 - 70
Transferrin	**27**	mkmol/l	23 - 45
Transferrin saturation (TSAT)	**36**	%	20 - 55
Total iron-binding capacity (TIBC)	**70**	mkmol/l	46 - 90
Serum Fe	**21,73**	mkmol/l	9,0 - 30,0 men 7,0 - 27,0 women
Vitamin B12 (cyanocobalamin)	***89***	pg/ml	191,00 - 663,00
Vitamin B9 (folic acid)	**14,60**	ng/ml	4,60 - 18,70
Procalcitonin (PCT)	***0,0***	ng/mL	< 0,1
NT-proBNP (B-type natriuretic peptide)*	***97***	pg/mL	0-125 0-75 years 0-450 > 75 years

General blood analysis			
Test	**Result**	**Unit**	**Reference**
Leukocytes (WBC)		10^9/L	4,00 - 8,80
Erythrocytes (RBC)	***2,50***	10^12/L	3,80 - 5,30
Hemoglobin (HGB)	***85,00***	g/L	117,00 - 160,00
Hematocrit (HCT)		%	35,00 - 47,00
Mean corpuscular volume (MCV)	***150,00***	FL	81,00 - 101,00
Mean corpuscular hemoglobin (MCH)	***70,00***	pg	27,00 - 34,00
Mean corpuscular hemoglobin concentration (MCHC)	***295,00***	g/L	310,00 - 360,00
Erythrocyte sedimentation rate (ESR)		mm/s	Women: 10 – 50 years 0-20 > 50 years > 30 Men: 10 – 50 years 0-15 > 50 years > 20
Platelets (PLT)		10^9/L	150,00 - 400,00
Anisocytosis (RDW-SD)		FL	34,00 - 46,00
Anisocytosis (RDW-CV)		%	11,50 - 14,50
Platelet distribution width (PDW)		FL	9,00 - 17,00
Mean platelet volume (MPV)		FL	8,00 - 12,00
Platelet large cell ratio (P-LCR)		%	13,00 - 43,00
Thrombocrit PCT		%	0,15 - 0,40
Neutrophils		10^9/L	1,88 - 6,34
Lymphocytes		10^9/L	0,76 - 3,26
Monocytes		10^9/L	0,12 - 0,97
Eosinophils		10^9/L	0,02 - 0,44
Basophils		10^9/L	0,00 - 0,09
Neutrophils		%	47,00 - 72,00
Lymphocytes		%	19,00 - 37,00
Monocytes		%	3,00 - 11,00
Eosinophils		%	0,50 - 5,00
Basophils		%	0,00 - 1,00
Reticulocytes		%	0,5 – 2,5

DİFFERENTİAL DİAGNOSİS

Iron deficiency anemia
Foldeficitanemia
Myelodysplastic syndrome - a group of hematological diseases in which the bone marrow does not produce enough of one or more types of blood cells (platelets, leukocytes, erythrocytes).
Aplastic anemia - anemia caused by insufficient production of erythrocytes due to a decrease in the number of hematopoietic stem cells.

Management

The first stage of therapy is saturation: **vitamin B12 (cyanocobalamin)** 500 mcg injection 1 time per day i/m 4-6 weeks.
Signs of improvement are observed after the first 3-5 injections of the drug.

The first laboratory sign of the effectiveness of therapy is a reticular crisis - a 2-3 times increase in the level of reticulocytes in the blood compared to the baseline level on the 4-7th day after the start of therapy. Normalization of hemoglobin level occurs after 1-2 months.

The second stage is fixation therapy: vitamin B12 is given in the same dose, but the frequency of administration is reduced.

The third stage is maintenance therapy. Persists for life

Scenario 5

Urosepsis

Sample texts of introductory informationas part of the dialogue between the member of the commission and the accredited person

No	Action of the accrediting	Introductory text
1	Specifying patient's full name and age	"Ali Aliev, 65 years"
2	When asked about the patient's complaints	"Shivering, nausea, shortness of breath, fever"
3	When collecting life and/or disease history	"Percutaneous stents were placed in both ureters 2 weeks ago"

Reference information

(when assessing vital functions that are not independently reproduced by the simulator, the text will be read by a member of the commission)

A	*Upper respiratory tract patency*	Visually clear
	Saturation	92%
	When performing O2 insufflation	94%
B	*Frequency of respiratory rate*	25
	Lung percussion	Clear sound on both sides
	Lung auscultation	Weakened vesicular breathing
	Trachea	Normal
	Neck veins	Collapsed
C	*Pulse, HR*	Good filling in peripheral arteries, 113
	BP	100/60
	Cardiac auscultation	Clear heart tones
	ECG	Sinus tachycardia
	Capillary filling	3 s
	Intravenous access + tests	+
	Skin	Dry, pale
D	*Pupil response*	Pupils are equal, photoreaction is preserved
	Muscle tone	Normal
	Blood glucose	5 mmol/L
E	*Abdominal palpation*	Soft, painless
	Femoral arteries	Pulse is symmetrical, filled
	Varicose	Not detected
	Edema	Not detected
	Back	The lower back is painful
	Per rectum	Not required
	Body temperature	39°C

Required research:

ECG

Sinus tachycardia

Biochemical blood analysis			
Test	**Result**	**Unit**	**Reference**
Blood glucose		mmol/L	4,1 - 5,9
Total bilirubin		mkmol/l	< 22
ALT		U/L	< 35
AST		U/L	14 - 36
Albumin		g/L	35 - 50
CRP	***115***	mg/L	0,00 - 5,00
Uric acid in the blood		umol/L	149 - 369
Magnesium (Mg)		mmol/L	0,7 - 1
Urea in the blood		mmol/L	2,5 - 6,1
Residual nitrogen (urea nitrogen)		mg/dl	7 - 17 5 - 18 children
Troponin T (hs-cTn)		mkg/L	0,4 - 2,3
Procalcitonin (PCT)	***1***	ng/mL	< 0.1
NT-proBNP (B-type natriuretic peptide)*		pq/mL	0 - 125 0-75 years 0 - 450 > 75 years

General blood analysis

Test	Result	Unit	Reference
Leukocytes (WBC)	***20***	10^9/L	4,00 - 8,80
Erythrocytes (RBC)		10^12/L	3,80 - 5,30
Hemoglobin (HGB)		g/L	117,00 - 160,00
Hematocrit (HCT)		%	35,00 - 47,00
Mean corpuscular volume (MCV)		FL	81,00 - 101,00
Mean corpuscular hemoglobin (MCH)		pg	27,00 - 34,00
Mean corpuscular hemoglobin concentration (MCHC)		g/L	310,00 - 360,00
Erythrocyte sedimentation rate (ESR)	***43***	mm/h	Women: 10 – 50 years 0-20 > 50 years 0-30 Men: 10 – 50 years 0-15 > 50 years 0-20
Platelets (PLT)		10^9/L	150,00 - 400,00
Anisocytosis (RDW-SD)		FL	34,00 - 46,00
Anisocytosis (RDW-CV)		%	11,50 - 14,50
Platelet distribution width (PDW)		FL	9,00 - 17,00
Mean platelet volume (MPV)		FL	8,00 - 12,00
Platelet large cell ratio (P-LCR)		%	13,00 - 43,00
Thrombocrit PCT		%	0,15 - 0,40
Neutrophils	***15***	10^9/L	1,88 - 6,34
Lymphocytes	***0.5***	10^9/L	0,76 - 3,26
Monocytes		10^9/L	0,12 - 0,97
Eosinophils		10^9/L	0,02 - 0,44
Basophils		10^9/L	0,00 - 0,09
Neutrophils		%	47,00 - 72,00
Lymphocytes		%	19,00 - 37,00
Monocytes		%	3,00 - 11,00
Eosinophils		%	0,50 - 5,00
Basophils		%	0,00 - 1,00
Reticulocytes		%	0,5 - 2,5

General urine analysis

Test	Result	Unit	Reference
Physical and chemical indicators of urine			
Colour	**yellow**	-	from pale yellow to amber
Appearance	**cloudy**	-	clear
Smell	**normal**	-	weak, typical
Relative density	***1042***	-	1010-1030
Urobilinogen		µmol/l	< 34
Bilirubin	**-**	-	negative
Ketones	**-**	-	negative
Glucose		mmol/L	< 0,8
PH	***8,6***	-	5,0 – 8,0 (In children up to 1 month – 5,0 - 7,0)
Nitrites	**positive**	-	negative
Protein	-	g/L	< 0,033
Microscopy of urine sediment			
Squamous epithelial cells		g/s	< 5
Transitional epithelial cells	***3***	g/s	< 1
Renal tubular epithelial cells		g/s	negative
Leukocytes	***45***	g/s	0 - 3 men 0 - 6 women
Erythrocytes	-	g/s	0 - 1 men 0 - 3 women
Hyaline casts			< 1-2
Granular casts			negative
Waxy casts			negative
Epitelial casts			negative
Mucus	+		negative
Salts			negative
Fungus	-		negative
Bacteria	++		negative

Culture of urine	
Result	
E. coli	10^5 /ml
E. coli	**Sensitivity**
Ceftriaxone	R
Meropenem	S
Amikacin	S
Cefixime	R
Colistin	R

DİFFERENTİAL DİAGNOSİS

Surgical, obstetric septic conditions
Peritonitis
Severe forms of pyelonephritis, pyonephrosis, paranephritis
Carbuncle and kidney abscess
Endogenous intoxications (uremic, cancerous)

Management

1. **Bacteriological examination (culture)**
2. **Empiric antibacterial therapy**: Fluoroquinolones (ciprofloxacin and levofloxacin), Amoxicillin + Gentamicin
3. **Specific urological treatment**
4. **Infusion therapy**

Correction of antibiotic therapy after receiving the result of bacteriological examination.

Check-list

Scenario 1

№	Action of the accredited	Evaluation Criteria	
1	Communicated with the patient (greeted, introduced himself/herself, noted his/her role), identified the patient (asked them to introduce themselves, tell their age)	☐ *yes*	☐ *no*
2	Asked about the patient's condition	☐ *yes*	☐ *no*
3	Collected anamnesis morbi and anamnesis vitae	☐ *yes*	☐ *no*
4	A – assessed upper airway patency/oral mucosa with a spatula	☐ *yes*	☐ *no*
5	B – assessed saturation, assessed respiratory rate	☐ *yes*	☐ *no*
6	B – provided oxygen therapy according to indications	☐ *yes*	☐ *no*
7	B – examined the trachea and neck veins	☐ *yes*	☐ *no*
8	B – performed comparative percussion, auscultation of the lungs and correctly interpreted the result	☐ *yes*	☐ *no*
9	C – correctly and fully assessed the pulse in the periphery, heart rate	☐ *yes*	☐ *no*
10	C – measured blood pressure	☐ *yes*	☐ *no*
11	C – performed auscultation of the heart and correctly interpreted the result	☐ *yes*	☐ *no*
12	C – ECG: placed the electrodes correctly	☐ *yes*	☐ *no*
13	C – correctly interpreted the ECG result	☐ *yes*	☐ *no*
14	C – provided intravenous (IV) access, took blood for the necessary tests (listed them)	☐ *yes*	☐ *no*
15	C – checked the capillary refill time, assessed the skin	☐ *yes*	☐ *no*
16	D – correctly and fully assessed the reaction of the pupils using a flashlight	☐ *yes*	☐ *no*
17	D – assessed the level of glucose in capillary blood, assessed muscle tone	☐ *yes*	☐ *no*
18	E – performed palpation of the abdomen	☐ *yes*	☐ *no*
19	E – examined the legs and feet for the presence of edema and varicose veins	☐ *yes*	☐ *no*
20	E – palpated the pulse in the femoral arteries and measured body temperature	☐ *yes*	☐ *no*
21	E – turning the patient, examined the back, performed rectal examination (if necessary)	☐ *yes*	☐ *no*
22	Followed the sequence of ABCDE approach	☐ *yes*	☐ *no*
23	Assigned an ECHO and correctly interpreted the result	☐ *yes*	☐ *no*
24	Ordered an X-ray examination and correctly interpreted the result	☐ *yes*	☐ *no*
25	Interpreted test results correctly	☐ *yes*	☐ *no*
26	Made the correct diagnosis	☐ *yes*	☐ *no*
27	Performed the differential diagnosis correctly	☐ *yes*	☐ *no*
28	Prescribed the correct treatment	☐ *yes*	☐ *no*

Check-list

Scenario 31

№	Action of the accredited	Evaluation Criteria	
1	Communicated with the patient (greeted, introduced himself/herself, noted his/her role), identified the patient (asked them to introduce themselves, tell their age)	☐ *yes*	☐ *no*
2	Asked about the patient's condition	☐ *yes*	☐ *no*
3	Collected anamnesis morbi and anamnesis vitae	☐ *yes*	☐ *no*
4	A – assessed upper airway patency/oral mucosa with a spatula	☐ *yes*	☐ *no*
5	B – assessed saturation, assessed respiratory rate	☐ *yes*	☐ *no*
6	B – provided oxygen therapy according to indications	☐ *yes*	☐ *no*
7	B – examined the trachea and neck veins	☐ *yes*	☐ *no*
8	B – performed comparative percussion, auscultation of the lungs and correctly interpreted the result	☐ *yes*	☐ *no*
9	C – correctly and fully assessed the pulse in the periphery, heart rate	☐ *yes*	☐ *no*
10	C – measured blood pressure	☐ *yes*	☐ *no*
11	C – performed auscultation of the heart and correctly interpreted the result	☐ *yes*	☐ *no*
12	C – ECG: placed the electrodes correctly	☐ *yes*	☐ *no*
13	C – correctly interpreted the ECG result	☐ *yes*	☐ *no*
14	C – provided intravenous (IV) access, took blood for the necessary tests (listed them)	☐ *yes*	☐ *no*
15	C – checked the capillary refill time, assessed the skin	☐ *yes*	☐ *no*
16	D – correctly and fully assessed the reaction of the pupils using a flashlight	☐ *yes*	☐ *no*
17	D – assessed the level of glucose in capillary blood, assessed muscle tone	☐ *yes*	☐ *no*
18	E – performed palpation of the abdomen	☐ *yes*	☐ *no*
19	E – examined the legs and feet for the presence of edema and varicose veins	☐ *yes*	☐ *no*
20	E – palpated the pulse in the femoral arteries and measured body temperature	☐ *yes*	☐ *no*
21	E – turning the patient, examined the back, performed rectal examination (if necessary)	☐ *yes*	☐ *no*
22	Followed the sequence of ABCDE approach	☐ *yes*	☐ *no*
23	Ordered an X-ray examination and correctly interpreted the result	☐ *yes*	☐ *no*
24	Interpreted test results correctly	☐ *yes*	☐ *no*
25	Appointed spirometry	☐ *yes*	☐ *no*
26	Made the correct diagnosis	☐ *yes*	☐ *no*
27	Performed the differential diagnosis correctly	☐ *yes*	☐ *no*
28	Prescribed the correct treatment	☐ *yes*	☐ *no*

Check-list

Scenario 32

№	Action of the accredited	Evaluation Criteria	
1	Communicated with the patient (greeted, introduced himself/herself, noted his/her role), identified the patient (asked them to introduce themselves, tell their age)	☐ *yes*	☐ *no*
2	Asked about the patient's condition	☐ *yes*	☐ *no*
3	Collected anamnesis morbi and anamnesis vitae	☐ *yes*	☐ *no*
4	A – assessed upper airway patency/oral mucosa with a spatula	☐ *yes*	☐ *no*
5	B – assessed saturation, assessed respiratory rate	☐ *yes*	☐ *no*
6	B – provided oxygen therapy according to indications	☐ *yes*	☐ *no*
7	B – examined the trachea and neck veins	☐ *yes*	☐ *no*
8	B – performed comparative percussion, auscultation of the lungs and correctly interpreted the result	☐ *yes*	☐ *no*
9	C – correctly and fully assessed the pulse in the periphery, heart rate	☐ *yes*	☐ *no*
10	C – measured blood pressure	☐ *yes*	☐ *no*
11	C – performed auscultation of the heart and correctly interpreted the result	☐ *yes*	☐ *no*
12	C – ECG: placed the electrodes correctly	☐ *yes*	☐ *no*
13	C – correctly interpreted the ECG result	☐ *yes*	☐ *no*
14	C – provided intravenous (IV) access, took blood for the necessary tests (listed them)	☐ *yes*	☐ *no*
15	C – checked the capillary refill time, assessed the skin	☐ *yes*	☐ *no*
16	D – correctly and fully assessed the reaction of the pupils using a flashlight	☐ *yes*	☐ *no*
17	D – assessed the level of glucose in capillary blood, assessed muscle tone	☐ *yes*	☐ *no*
18	E – performed palpation of the abdomen	☐ *yes*	☐ *no*
19	E – examined the legs and feet for the presence of edema and varicose veins	☐ *yes*	☐ *no*
20	E – palpated the pulse in the femoral arteries and measured body temperature	☐ *yes*	☐ *no*
21	E – turning the patient, examined the back, performed rectal examination (if necessary)	☐ *yes*	☐ *no*
22	Followed the sequence of ABCDE approach	☐ *yes*	☐ *no*
23	Assigned an ECHO and correctly interpreted the result	☐ *yes*	☐ *no*
24	Ordered an X-ray examination and correctly interpreted the result	☐ *yes*	☐ *no*
25	Interpreted test results correctly	☐ *yes*	☐ *no*
26	Made the correct diagnosis	☐ *yes*	☐ *no*
27	Performed the differential diagnosis correctly	☐ *yes*	☐ *no*
28	Prescribed the correct treatment	☐ *yes*	☐ *no*

Check-list

Scenario 33

№	Action of the accredited	Evaluation Criteria	
1	Communicated with the patient (greeted, introduced himself/herself, noted his/her role), identified the patient (asked them to introduce themselves, tell their age)	☐ *yes*	☐ *no*
2	Asked about the patient's condition	☐ *yes*	☐ *no*
3	Collected anamnesis morbi and anamnesis vitae	☐ *yes*	☐ *no*
4	A – assessed upper airway patency/oral mucosa with a spatula	☐ *yes*	☐ *no*
5	B – assessed saturation, assessed respiratory rate	☐ *yes*	☐ *no*
6	B – provided oxygen therapy according to indications	☐ *yes*	☐ *no*
7	B – examined the trachea and neck veins	☐ *yes*	☐ *no*
8	B – performed comparative percussion, auscultation of the lungs and correctly interpreted the result	☐ *yes*	☐ *no*
9	C – correctly and fully assessed the pulse in the periphery, heart rate	☐ *yes*	☐ *no*
10	C – measured blood pressure	☐ *yes*	☐ *no*
11	C – performed auscultation of the heart and correctly interpreted the result	☐ *yes*	☐ *no*
12	C – ECG: placed the electrodes correctly	☐ *yes*	☐ *no*
13	C – correctly interpreted the ECG result	☐ *yes*	☐ *no*
14	C – provided intravenous (IV) access, took blood for the necessary tests (listed them)	☐ *yes*	☐ *no*
15	C – checked the capillary refill time, assessed the skin	☐ *yes*	☐ *no*
16	D – correctly and fully assessed the reaction of the pupils using a flashlight	☐ *yes*	☐ *no*
17	D – assessed the level of glucose in capillary blood, assessed muscle tone	☐ *yes*	☐ *no*
18	E – performed palpation of the abdomen	☐ *yes*	☐ *no*
19	E – examined the legs and feet for the presence of edema and varicose veins	☐ *yes*	☐ *no*
20	E – palpated the pulse in the femoral arteries and measured body temperature	☐ *yes*	☐ *no*
21	E – turning the patient, examined the back, performed rectal examination (if necessary)	☐ *yes*	☐ *no*
22	Followed the sequence of ABCDE approach	☐ *yes*	☐ *no*
23	Interpreted test results correctly	☐ *yes*	☐ *no*
24	Made the correct diagnosis	☐ *yes*	☐ *no*
25	Performed the differential diagnosis correctly	☐ *yes*	☐ *no*
26	Prescribed the correct treatment	☐ *yes*	☐ *no*

Check-list

Scenario 5

№	Action of the accredited	Evaluation Criteria	
1	Communicated with the patient (greeted, introduced himself/herself, noted his/her role), identified the patient (asked them to introduce themselves, tell their age)	☐ *yes*	☐ *no*
2	Asked about the patient's condition	☐ *yes*	☐ *no*
3	Collected anamnesis morbi and anamnesis vitae	☐ *yes*	☐ *no*
4	A – assessed upper airway patency/oral mucosa with a spatula	☐ *yes*	☐ *no*
5	B – assessed saturation, assessed respiratory rate	☐ *yes*	☐ *no*
6	B – provided oxygen therapy according to indications	☐ *yes*	☐ *no*
7	B – examined the trachea and neck veins	☐ *yes*	☐ *no*
8	B – performed comparative percussion, auscultation of the lungs and correctly interpreted the result	☐ *yes*	☐ *no*
9	C – correctly and fully assessed the pulse in the periphery, heart rate	☐ *yes*	☐ *no*
10	C – measured blood pressure	☐ *yes*	☐ *no*
11	C – performed auscultation of the heart and correctly interpreted the result	☐ *yes*	☐ *no*
12	C – ECG: placed the electrodes correctly	☐ *yes*	☐ *no*
13	C – correctly interpreted the ECG result	☐ *yes*	☐ *no*
14	C – provided intravenous (IV) access, took blood for the necessary tests (listed them)	☐ *yes*	☐ *no*
15	C – checked the capillary refill time, assessed the skin	☐ *yes*	☐ *no*
16	D – correctly and fully assessed the reaction of the pupils using a flashlight	☐ *yes*	☐ *no*
17	D – assessed the level of glucose in capillary blood, assessed muscle tone	☐ *yes*	☐ *no*
18	E – performed palpation of the abdomen	☐ *yes*	☐ *no*
19	E – examined the legs and feet for the presence of edema and varicose veins	☐ *yes*	☐ *no*
20	E – palpated the pulse in the femoral arteries and measured body temperature	☐ *yes*	☐ *no*
21	E – turning the patient, examined the back, performed rectal examination (if necessary)	☐ *yes*	☐ *no*
22	Followed the sequence of ABCDE approach	☐ *yes*	☐ *no*
23	Interpreted test results correctly	☐ *yes*	☐ *no*
24	Made the correct diagnosis	☐ *yes*	☐ *no*
25	Performed the differential diagnosis correctly	☐ *yes*	☐ *no*
26	Prescribed the correct treatment	☐ *yes*	☐ *no*

Regulatory and methodological support for the passport

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2. Infective Endocarditis in Adults: Diagnosis, Antimicrobial Therapy, and Management of Complications. A Scientific Statement for Healthcare Professionals from the American Heart Association https://www.ahajournals.org/doi/10.1161/cir.0000000000000296#d1e1521
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4. Кардиология, второе издание. Б. Гриффин, Э. Тополь. Lippincott Williams & Wilkins 2004.
5. Clinical Cases in Cardiology. A Guide to Learning and Practice. Alessandro Capucci. Springer 2015.
6. UpToDate. Treatment of vitamin B12 deficiency in adults 2022 https://www.uptodate.com/contents/image?imageKey=HEME%2F131424
7. Internet Book of Critical Care (IBCC): Community acquired urosepsis. https://emcrit.org/ibcc/urosepsis/