

**MINISTRY OF HEALTH OF UKRAINE
ODESA NATIONAL MEDICAL UNIVERSITY**

Faculty Medical №1

Department of simulation medical technologies

CONFIRMED by
Vice-rector for scientific and pedagogical work



* Eduard BURYACHKIVSKY

September 1, 2023

**METHODICAL RECOMENDATION
FOR ACADEMIC DISCIPLINE**

«MEDICAL PRACTICE. SIMULATION TRAINING»

Faculty, course: International, 5 year

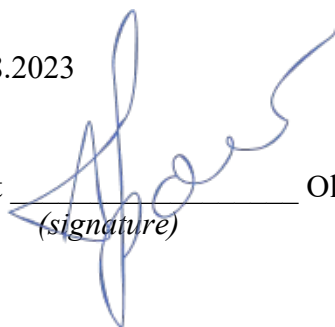
Educational Discipline: Medical practice. Simulation training

Approved:

The methodical recommendation was approved at the meeting of the department of simulation medical technologies

Protocol No. 1 of 28.08.2023

Head of the department



(signature)

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Practical class No. 1

Topic: Emergencies in obstetrics and gynecology. Practical obstetrics. The scenario is focused learning.

Purpose: Mastering the basic practical skills when conducting an examination in obstetrics and gynecology in order to identify the first signs of emergency conditions.

Familiarize with the consequences of complications in emergency conditions in obstetrics and gynecology, features of diagnosis and treatment.

Plan:

1. Organizational measures (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
2. Control of the reference level of knowledge (written work, written test, frontal survey on basic terminology, etc.) (if necessary).
3. Questions (test tasks) to check basic knowledge on the topic of the seminar:
 4. 4.1 The main types of gynecological diseases that require emergency care.
 - 4.2. Ectopic pregnancy: causes, classification, diagnosis, clinic, pre-medical emergency care.
 - 4.3. Ovarian apoplexy: causes, clinical forms, diagnosis, pre-medical emergency care.
 - 4.4. Torsion of the pedicle of an ovarian cyst: causes, clinic, diagnosis, emergency medical care.
 - 4.5. Injuries of the external genital organs, first medical aid for damage to the external genital organs, vagina, uterus.

Formation of professional skills and abilities.

Technical means: dolls, dummies, basins, phantoms, simulators, medical instruments, hystero-grams, ardiotocograms, ultrasound, tonometers, obstetric stethoscopes, obstetric forceps, mirrors, simulators, microscopes.

Equipment: multimedia projector, computers, cardiac monitors and an ultrasound machine.

Software: video protocols, algorithms of the doctor's actions.

Summary:

Current evaluation criteria in practical training

Evaluation	Evaluation criteria
Perfectly "5"	The applicant is fluent in the material, takes an active part in discussing and solving the situational clinical problem, confidently demonstrates practical skills during the examination of the patient simulator. Expresses his opinion on the topic of the lesson, demonstrates clinical thinking.
Fine "4"	The applicant has a good command of the material, participates in the discussion and solution of a situational clinical problem, demonstrates practical skills during the examination of a patient simulator with some errors, expresses his opinion on the subject of the lesson, demonstrates clinical thinking.
Satisfactorily "3"	The acquirer does not have sufficient knowledge of the material, is unsure of participating in the discussion and solution of the situational clinical problem, demonstrates practical skills during the examination of the patient simulator with significant errors.
Unsatisfactorily "2"	The acquirer does not possess the material, does not participate in the discussion and solution of the situational clinical problem, does not demonstrate practical skills during the examination of the patient simulator.

Questions (test tasks) to check basic knowledge on the topic of the seminar:

Acute abdomen in gynecology:

1. A 23-year-old female patient was brought urgently with complaints of pain in the lower abdomen, more intense in the right, with radiation to the rectum, dizziness. The above-mentioned complaints appeared suddenly at night. The last menstruation was 2 weeks ago. Objectively: the skin is pale, pulse - 92/min., body temperature - 36.6°C, blood pressure - 100/60 mm Hg. Abdomen somewhat tense, slightly painful in the lower parts, symptoms of irritation of the peritoneum are weakly positive. Hemoglobin - 98 g/l. What will be the preliminary diagnosis?

- A. Ovarian apoplexy
- B. Violated ectopic pregnancy
- C. Acute appendicitis
- D. Intestinal obstruction
- E. Renal colic

2. The patient was hospitalized in the gynecological department on the 3rd day after the artificial abortion in a serious condition with symptoms of intoxication, abdominal pain, purulent discharge from the vagina. Objectively: the woman's condition is serious, body temperature - 38.8°C, pulse - 100 beats per minute, blood pressure - 110/70 mm Hg., the uterus is soft, its bottom is at the level of the navel, the symptoms of peritoneal irritation are positive. What is the most likely diagnosis?

- A. Perforation of the uterus
- B. Pelvioperitonitis
- S. Ectopic pregnancy
- D. Acute metroendometritis
- E. Acute purulent salpingo-oophoritis

3. A 22-year-old patient complains of an increase in temperature to 39°C, pain in the lower abdomen, bloody and purulent discharge from the genital tract. From the anamnesis: an artificial abortion was performed 5 days ago at 8 weeks of pregnancy. During bi-manual examination: the uterus is enlarged, soft, painful. The attachments on both sides have not changed. What will be the diagnosis?

- A. Acute metroendometritis
- B. Spilled peritonitis
- C. Pelvioperitonitis
- D. Acute adnexitis
- E. Perforation of the uterus

4. A woman was delivered by ambulance with cramp-like pain in the right iliac region radiating into the rectum after a delay in menstruation. bloody discharge from the genital tract. Objectively: heart rate - 100/min., blood pressure - 90/60 mm Hg. The skin is pale. The abdomen is painful on palpation, a positive symptom of Shtokkin-Blumberg. During a gynecological examination, cervical dislocations are painful, the right appendages are enlarged, painful, the posterior vault overhangs, the discharge is bloody. Make a preliminary diagnosis:

- A. Acute right-sided adnexitis
- B. Appendicitis
- C. Abortion in progress
- D. Apoplexy of the right ovary
- E. Interrupted ectopic pregnancy

5. A woman was delivered by ambulance with a sharp pain in the right iliac region radiating into the rectum, bloody discharge from the genital tract, which arose after the delay of menstruation. Objectively: heart rate - 100/min., blood pressure - 90/60 mm Hg. The skin is crookedly pale. Abdomen painful on palpation, positive Shtokkin-Blumberg symptom. During a gynecological examination, cervical dislocation is painful, the right appendages are enlarged, painful, the posterior vault hangs down, and the discharge is bloody. Make a preliminary diagnosis:

- A. Interrupted ectopic pregnancy

- B. Acute right-sided adnexitis
- C. Apoplexy of the right ovary
- D. Appendicitis
- E. Abortion in progress

5. A woman was delivered by ambulance with a sharp pain in the right iliac region that appeared after the delay of menstruation, radiating into the rectum, and bloody secretions from the genital tract. Objectively: heart rate - 100/min., blood pressure - 90/60 mm Hg. The skin is crookedly pale. Abdomen painful on palpation, positive Shtokkin-Blumberg symptom. During a gynecological examination, cervical dislocation is painful, the right appendages are enlarged, painful, the posterior vault hangs down, and the discharge is bloody. Make a preliminary diagnosis:

- A. Interrupted ectopic pregnancy
- B. Acute right-sided adnexitis
- C. Apoplexy of the right ovary
- D. Appendicitis
- E. Abortion in progress

Topics of reports/abstracts, presentations:

- Ectopic pregnancy
- Ovarian apoplexy
- Twisting of the peduncle of an ovarian cyst.
- Injuries of external genitalia, first aid.
- Eclampsia
- Preeclampsia

Note. When preparing a report, essay, analytical review, etc., students of higher education can, along with this, prepare didactic visual materials in the form of tables, code diagrams, slides, drawings, drug schemes, etc.

Recommended sources of information

Basic literature:

9. Information resources on the Internet

1. Electronic protocols of the Ministry of Health of Ukraine:

• medstandart.net/browse – About improving ambulatory obstetric and gynecological care in Ukraine

- medstandart.net/browse – Methodological recommendations for the organization of outpatient obstetric and gynecological care.
- medstandart.net/browse – Norms for the provision of medical care to the female population in the specialty "Obstetrics and Gynecology" in outpatient clinics.
- medstandart.net/browse – Observation of the course of a normal pregnancy.
- medstandart.net/browse – Complications during pregnancy. Gestosis of pregnant women.
- medstandart.net/browse – Bleeding in early pregnancy.
- medstandart.net/browse – Abnormal products of fertilization and abortions.
- medstandart.net/browse – Multiple pregnancy and fetal malpositions.
- medstandart.net/browse/ – Anomalies of the bony pelvis and genitals.
- medstandart.net/browse – Pathology of the placenta, PFPN.
- medstandart.net/browse – Habitual miscarriage.
- medstandart.net/browse – Leiomyoma of the uterus and benign neoplasms of the genital organs.

Practical classes #2

TOPIC: Diseases of the organs of the digestive tract. The scenario is focused learning.

Purpose: Mastering the basic practical skills when conducting an examination of diseases of the organs of the digestive tract in order to identify the first manifestations of pathological conditions.

Plan:

1. Organizational measures (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
2. Control of the reference level of knowledge (written work, written test, frontal survey on basic terminology, etc.) (if necessary).
3. Questions (test tasks) to check basic knowledge on the topic of the seminar:
4. Main types of diseases of the organs of the digestive tract.

Formation of professional skills and abilities.

Technical means: phantoms, simulators, medical instruments, ultrasound apparatus.

Equipment: multimedia projector, computers, cardiac monitors and an ultrasound machine.

Software: video protocols, algorithms of the doctor's actions.

Current evaluation criteria in practical training

Evaluation	Evaluation criteria
Perfectly "5"	The applicant is fluent in the material, takes an active part in discussing and solving the situational clinical problem, confidently demonstrates practical skills during the examination of the patient simulator. Expresses his opinion on the topic of the lesson, demonstrates clinical thinking.
Fine "4"	The applicant has a good command of the material, participates in the discussion and solution of a situational clinical problem, demonstrates practical skills during the examination of a patient simulator with some errors, expresses his opinion on the subject of the lesson, demonstrates clinical thinking.
Satisfactorily "3"	The acquirer does not have sufficient knowledge of the material, is unsure of participating in the discussion and solution of the situational clinical problem, demonstrates practical skills during the examination of the patient simulator with significant errors.
Unsatisfactorily "2"	The acquirer does not possess the material, does not participate in the discussion and solution of the situational clinical problem, does not demonstrate practical skills during the examination of the patient simulator.

Questions (test tasks) to check basic knowledge on the topic of the seminar:

1. A patient was admitted to inpatient treatment with complaints of intense pain in the right hypochondrium with radiation to the right scapula, collarbone, shoulder, nausea and vomiting, abdominal distension, high temperature, chills. Which of the problems is a priority?

- A. Pain in the right hypochondrium
- B. Nausea, vomiting.
- S. Meteorism.
- D. Bitterness and dryness in the mouth.
- E. Fever

2. Patient A., 37 years old, was admitted to the department with complaints of nausea, vomiting, pain in the epigastrium, belching, diarrhea. This condition is associated with the consumption of poor-quality food. The diagnosis was established: "Acute gastritis". What are the nurse's first actions?

- A. Prescribe a diet.
- B. Prescribe bed rest
- C. Wash the stomach.
- D. Administer antispasmodic drugs.
- E. Prescribe anti-emetic drugs

3. Patient V., 52 years old, suffers from gallstone disease, in which intense pain in the right hypochondrium developed after a diet violation. What means of pre-medical care will help reduce pain?

- A. A blister with ice on the right hypochondrium.
- B. Mustard on the chest.

- C. Banks on the chest.
- D. Grill on the area of the right hypochondrium
- E. Foot baths

4. The patient, 25 years old, complains of nausea, belching air, a feeling of heaviness in the epigastrium, diarrhea. During the examination: the tongue is covered with a white coating, the stomach is painful in the epigastric region. Which study is most informative?

- A. Duodenal probing.
- B. pH-metry.
- C. Soprological research.
- D. General blood analysis.
- E. General analysis of urine

5. The patient, 39 years old, complains of sharp, "dagger" pain in the abdomen, sharp general weakness. She fell ill suddenly after physical exertion. In the anamnesis there is a duodenal ulcer. During the examination: the face is pale, the skin is covered with cold sweat, the stomach is flat. What complication developed in the patient?

- A. Perforation.
- B. Gastric bleeding.
- C. Penetration.
- D. Malignancy.
- E. Pylorostenosis

6. A 35-year-old man complains of nausea, vomiting, girdling pain, weakness. This condition developed after drinking alcohol and spicy, fatty food. During the examination: the skin is pale, the tongue is covered with a gray coating, the abdomen is painful in the epigastrium more on the left. What research is most informative for establishing a diagnosis?

- A. Coprological research.
- B. Blood sugar analysis.
- S. General analysis of urine.
- D. Analysis of urine and blood for diastasis.
- E. Fecal occult blood analysis

7. You participate in the examination of a patient for chronic pancreatitis. Specify for which examination it should be prepared?

- A. Urine analysis for diastasis.
- B. Fibrogastroscopy.
- C. Duodenal probing.
- D. Colonoscopy.
- E. Cholecystography

8. The patient is hospitalized with suspicion of peptic ulcer disease of the stomach and duodenum. What additional method of examination does the nurse need to prepare the patient for?

- A. Ultrasound of abdominal organs.
- B. Colonoscopy.

- C. Rectomanoscopy.
- D. Irigoscopy.
- E. Gastroduodenoscopy

9. Patient K., 59 years old, is in dispensary registration due to gastric ulcer. He complains about the deterioration of his condition - he lost 10 kilograms in 3 months, notes immediately before meat food. What method of additional research will be planned?

- A. Fibrogastrosocopy.
- B. General blood analysis.
- C. Gastric probing.
- D. Roentgenoscopy of the stomach.
- E. General analysis of urine

10. Patient L., 54 years old, is being treated in the gastroenterology department with a diagnosis of gallstone disease. He complains of frequent pains in the right hypochondrium. What examination should the patient be prepared for?

- A. Irigoscopy.
- B. Fibrogastroduodenoscopy.
- C. Ultrasound.
- D. Colonoscopy.
- E. Radiography

Topics of reports/abstracts, presentations:

Risk factors for diseases of the digestive organs. Tactics of the doctor in their detection

- gastritis
- stomach and duodenal ulcer
- cirrhosis
- cholecystitis and gallstone disease
- pancreatitis
- irritable bowel syndrome
- violation of peristalsis
- Colitis

Note. When preparing a report, essay, analytical review, etc., students of higher education can, along with this, prepare didactic visual materials in the form of tables, code diagrams, slides, drawings, drug schemes, etc.

LIST OF REFERENCES

Electronic resources

1. Ministry of Health of Ukraine <https://moz.gov.ua/>
2. Public Health Center of Ukraine <https://www.phc.org.ua/>
3. European Center for Disease Prevention and Control [https://www .ecdc.europa.eu/en](https://www.ecdc.europa.eu/en)

4. Journal of "Clinical and Preventive Medicine"
<http://cp-medical.com/index.php/journal/>
5. Journal of "Health of Society" [http://health-society.zaslavsky.com.ua/issue/ archive](http://health-society.zaslavsky.com.ua/issue/archive)

Practical classes No. 3

TOPIC: Cardiovascular diseases. The scenario is focused learning

Purpose: Mastering the basic practical skills when conducting an examination of cardiovascular diseases of the organs of the digestive tract in order to identify the first manifestations of pathological conditions.

Plan:

1. Organizational measures (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
2. Control of the reference level of knowledge (written work, written test, frontal survey on basic terminology, etc.) (if necessary).
3. Questions (test tasks) to check basic knowledge on the topic of the seminar:

Formation of professional skills and abilities.

Technical means: phantoms, simulators, medical instruments, ultrasound, tonometers, electrocardiograph.

Equipment: multimedia projector, computers, cardiac monitors and an ultrasound machine.

Software: video protocols, algorithms of the doctor's actions.

Current evaluation criteria in practical training

Evaluation	Evaluation criteria
Perfectly "5"	The applicant is fluent in the material, takes an active part in discussing and solving the situational clinical problem, confidently demonstrates practical skills during the examination of the patient simulator. Expresses his opinion on the topic of the lesson, demonstrates clinical thinking.
Fine "4"	The applicant has a good command of the material, participates in the discussion and solution of a situational clinical problem, demonstrates practical skills during the examination of a patient simulator with some errors, expresses his opinion on the subject of the lesson, demonstrates clinical thinking.
Satisfactorily "3"	The acquirer does not have sufficient knowledge of the material, is unsure of participating in the discussion and solution of the situational clinical problem, demonstrates practical skills during the examination of the patient simulator with significant errors.
Unsatisfactorily "2"	The acquirer does not possess the material, does not participate in the discussion and solution of the situational clinical problem, does not demonstrate practical skills during the examination of the patient simulator.

Questions (test tasks) to check basic knowledge on the topic of the seminar:

1. The "therapeutic window" for thrombolysis in acute myocardial infarction consists of:
 - 1) *Up to 12 hours after the onset of symptoms
 - 2) Up to 6 hours after the onset of symptoms
 - 3) Up to 8 hours after the onset of symptoms
 - 4) Up to 10 hours after the onset of symptoms

2. In case of a lower myocardial infarction, the following changes are observed on the ECG:
 - A) *Pathological Q waves in leads II, III,
 - B) Pathological Q waves in leads I, aVL, V5-6

- B) aVF ST segment elevation in leads V1-4
- D) Depression of the ST segment in leads V1-2
- D) Elevation of the ST segment in leads I, aVL, V5-6

3. ECG manifestations of the acute stage of a large focal myocardial infarction are:

- A) * Pathological Q waves, ST segment elevation
- B) Isoelectric ST segment, T wave inversion
- C) Elevation of the ST segment, high pointed T wave
- D) High pointed T wave
- D) T wave inversion

4. Name acute forms of coronary heart disease:

- A) *Progressive angina pectoris
- B) Variant angina pectoris
- C) Stable angina pectoris
- D) Coronary syndrome X
- D) Painless form

5. In a patient with episodes of chest pain during a pain attack, ST segment elevation was recorded on the ECG. What is the optimal drug that can be used for treatment?

- A) * Amlodipine
- B) Metoprolol
- B) Thiotriazoline
- D) Ivabradin
- D) Trimetazidine

6. Name the pharmacological features of organic nitrates:

- A) * Emergence of tolerance
- B) Physical dependence
- C) Withdrawal syndrome
- D) Tachyphylaxis
- D) Mental dependence

7. Name the characteristic features of the pain syndrome in stable angina pectoris:

- A) *A, B and B
- B) Duration of pain - up to 15 minutes
- C) The pain radiates to the left hand
- D) The pain goes away 20-30 minutes after taking nitroglycerin
- D) Pain is provoke by physical or psychoemotional stress

8. Regarding ventricular extrasystoles, the following is true:

- A) *Accompanied by a complete (compensatory) pause
- B) Extrasystolic QRS complexes are always less than 0.12 seconds
- C) Affect the regularity of the sinus rhythm
- D) Extrasystole is associated with a deformed P wave

9. Select conduction disorders in which an irregular pulse is observed:

- A) *AV-blockade of the 2nd degree. type Mobitz-1.

- B) AV-blockade of the 1st century
- C) D) AV-blockade of the 3rd century.
- D) Complete blockade of the right leg of the bundle of His
- D) Complete blockade of the left leg of the bundle of His

10. Choose the correct statement:

- A) *Atrial fibrillation is characterized by the absence of P waves on the ECG
- B) Atrial fibrillation is characterized by the correct alternation of long and short R-R intervals on the ECG
- C) Atrial fibrillation is characterized by the presence of F waves on the ECG
- D) Atrial fibrillation is characterized by the correct ratio of F waves and QRS complexes on the ECG
- D) Atrial fibrillation is characterized by the same R-R intervals on the ECG

11. Describe the characteristics of the pulse in atrial fibrillation:

- A) *Arrhythmic, deficient
- B) Small
- C) Uniform tension and filling
- D) Solid
- D) High

12. Acute myocarditis is characterized by the following changes in laboratory parameters:

- A) *Increase in cardiac troponins
- B) Increase in serum ALT/AST ratio
- C) Growth of ALT
- D) Normal level of CFC-MV
- D) Significant leukocytosis

Topics of reports/abstracts, presentations:

- Heart attack
- Varicose veins.
- Hypertonic disease.
- Heart - vascular resuscitation.
- Cardio-pulmonary resuscitation.

LIST OF REFERENCES

Electronic resources

- 6. Ministry of Health of Ukraine <https://moz.gov.ua/>
- 7. Public Health Center of Ukraine <https://www.phc.org.ua/>
- 8. European Center for Disease Prevention and Control <https://www.ecdc.europa.eu/en>
- 9. Journal of "Clinical and Preventive Medicine"
<http://cp-medical.com/index.php/journal/>
- 10. Journal of "Health of Society" <http://health-society.zaslavsky.com.ua/issue/> archive

Practical class No. 4

Topic: Respiratory diseases. The scenario is focused learning

Purpose: Mastering the basic practical skills when conducting an examination of patients with respiratory diseases, mastering the practical skills of providing emergency care in emergency situations.

A student of higher education must:

- **to know:** the technique of artificial lung ventilation.
- **be able to:** perform on a mannequin.
- conicotomy;

Plan:

1. Organizational measures (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
2. Control of the reference level of knowledge (written work, written test, frontal survey on basic terminology, etc.) (if necessary).
3. Questions (test tasks) to check basic knowledge on the topic of the seminar.
4. Possession of first aid skills for the birth of respiratory organs.

Formation of professional skills and abilities.

Technical means: phantoms, simulators, medical instruments, AB bag, instruments for tracheotomy.

Equipment: multimedia projector, computers, mannequins.

Software: video protocols, algorithms of the doctor's actions.

Current evaluation criteria in practical training

Evaluation	Evaluation criteria
Perfectly "5"	The applicant is fluent in the material, takes an active part in discussing and solving the situational clinical problem, confidently demonstrates practical skills during the examination of the patient simulator. Expresses his opinion on the topic of the lesson, demonstrates clinical thinking.
Fine "4"	The applicant has a good command of the material, participates in the discussion and solution of a situational clinical problem, demonstrates practical skills during the examination of a patient simulator with some errors, expresses his opinion on the subject of the lesson, demonstrates

	clinical thinking.
Satisfactorily "3"	The acquirer does not have sufficient knowledge of the material, is unsure of participating in the discussion and solution of the situational clinical problem, demonstrates practical skills during the examination of the patient simulator with significant errors.
Unsatisfactorily "2"	The acquirer does not possess the material, does not participate in the discussion and solution of the situational clinical problem, does not demonstrate practical skills during the examination of the patient simulator.

Questions (test tasks) to check basic knowledge on the topic of the seminar:

Tracheal obstruction occurred as a result of the accident. Which stage of breathing is disturbed first?

- A. Tissue respiration
- B. Gas exchange in the lungs
- C. Transport of oxygen and carbon dioxide by blood
- D. Gas exchange in tissues

2. The patient was found to have pulmonary ventilation disorders of the obstructive type. What technique can be used to confirm the diagnosis?

- A. Bronchoscopy
- B. Determination of respiratory reserve
- C. Radiography
- D. Spirography
- E. Typhoon test

3. Indicate what real problems are inherent in stenosing laryngotracheitis, the stage of compensation:

A. hoarseness of voice, inspiratory shortness of breath at rest, acrocyanosis;

B. hoarseness of the voice, inspiratory shortness of breath during restlessness, "obsessive" cough;

S. frequent, superficial arrhythmic breathing, bradycardia, pupil dilation.

4. A patient with mitral stenosis complains of severe shortness of breath, cyanosis, cough. What respiratory insufficiency is observed in this case?

1. Ventilation restrictive

2. Ventilation obstructive

3. Ventilation dysregulatory

4. Perfusion

5. Diffusion

5. Against the background of an allergic reaction, the child developed swelling of the larynx. What type of respiratory failure developed in this case?

1. Disregulatory

2. Diffusion

3. Obstructive

4. Restrictive

5. Perfusion

6. A patient with diphtheria developed swelling of the larynx. At the same time, shallow and deep breathing with difficulty in breathing is observed. What is this breathing called?

1. Gasping-breathing.

2. Stenotic.

3. Apneistic.

4. Cheyne-Stokes.

5. Kussmaul

7. In the pathogenesis of which respiratory disorder, the main link is a decrease in the sensitivity of the respiratory center to carbon dioxide as a result of its hypoxia?

1. Inspiratory shortness of breath

2. Periodic breathing

3. Mixed shortness of breath

4. Expiratory shortness of breath

5. Frequent and deep breathing

Topics of reports/abstracts, presentations:

1. Airway obstruction

2. Pulmonary and vascular resuscitation

3. Quincke's edema

4. Bronchial asthma.

LIST OF REFERENCES

1. European Respiratory Society – e-learning : Spirometry /: <https://spirxpert.ers-education.org/en/spirometry/welcome-to-spirxpert/>
2. **K. McCarthy.** Pulmonary Function Testing: Medscape Education /: <https://emedicine.medscape.com/article/303239-overview>
3. Miller M.R., Hankinson J., Brusasco V. et al. Standardisation of spirometry. «Series ATS/ERS task force: standardisation of lung function testing». Edited by V. Brusasco, R. Grapo and G. Viegi. Number 2 in this Series // Eur. Respir. J. 2005. V. 26. P. 319-338
4. Brian L. Graham, Irene Steenbruggen Martin R. and others. Standardization of Spirometry 2019 Update. An Official ATS and ERS Technical Statement / Brian L. – <https://www.thoracic.org/statements/pulmonary-function.php>
5. Quanjer, P. Become an Expert in Spirometry. 2012 / P. Quanjer. – <http://www.spirxpert.com/indices7.htm>

Information resources

- http://www.knmu.kharkov.ua/index.php?option=com_content&view=frontpage&Itemid=1&lang=uk
- <http://repo.knmu.edu.ua/>
- http://knmu.kharkov.ua/index.php?option=com_content&view=article&id=498&Itemid=42&lang=uk
- <http://www.moz.gov.ua/ua/portal/>

Practical class No. 5

TOPIC: Diseases of the organs of the urinary system. The scenario is focused learning

Purpose: Mastering the basic practical skills when conducting an examination of patients with diseases of the urinary system, mastering the practical skills of providing emergency care for acute urinary retention.

A student of higher education must:

- to know: the technique of catheterization of the urinary bladder.
- be able to: perform on a mannequin.

Plan:

1. Organizational measures (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
2. Control of the reference level of knowledge (written work, written test, frontal survey on basic terminology, etc.) (if necessary).

3. Questions (test tasks) to check basic knowledge on the topic of the seminar.

4. Possession of first aid skills for acute urinary retention.

Formation of professional skills and abilities.

Technical means: phantoms, simulators, medical instruments, ultrasound device.

Equipment: multimedia projector, computers, mannequins.

Software: video protocols, algorithms of the doctor's actions.

Current evaluation criteria in practical training

Evaluation	Evaluation criteria
Perfectly "5"	The applicant is fluent in the material, takes an active part in discussing and solving the situational clinical problem, confidently demonstrates practical skills during the examination of the patient simulator. Expresses his opinion on the topic of the lesson, demonstrates clinical thinking.
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Questions (test tasks) to check basic knowledge on the topic of the seminar:

1. When performing a retrograde cystography in case of suspected rupture of the urinary bladder, it is necessary:

A - introduction of up to 50 ml of contrast material

B - introduction of up to 150 ml of contrast material

C - tight filling of the bladder*

2. Kidney injuries are characterized by:

A - heavy breathing

B - symptoms of irritation of the peritoneum

C - pain in the lumbar region*

3. Kidney injuries are characterized by:

A - heavy breathing

B - symptoms of irritation of the peritoneum

C - pain in the lumbar region

5. If a bladder rupture is suspected, the following is shown:

A - outpatient supervision.

B - outpatient treatment in a polyclinic

C - planned hospitalization in a hospital

D - immediate hospitalization in a hospital

6. Data of a digital examination for prostate cancer:

A - the presence of softening in the prostate

B - tenderness during palpation

C - reduction of the prostate gland in size

D - dense areas of cartilaginous consistency without clear boundaries

7. A 46-year-old patient with benign prostatic hyperplasia developed acute urinary retention. For differential diagnosis between anuria and acute urinary retention, the patient must undergo:

A. Ultrasound examination of kidneys.

B. Bladder catheterization.

C. Excretory urography.

D. Cystoscopy.

E. Cystography.

8. Patient K., 24 years old, complains of severe pain and swelling of the penis. It is known from the anamnesis that when the narrowed foreskin was removed behind the head of the penis, it could not be moved back. Objectively: there is swelling of the head of the penis, hyperemia. Your diagnosis?

A. Paraphimosis.

B. Phimoz.

C. Contusion of the penis

D. Sharp cavernite.

E. Acute balanoposthitis.

Topics of reports/abstracts, presentations:

1. Acute retention of urine.
2. Urinary stone disease.
3. Acute kidney failure.
4. Injury to the organs of the urinary system.

LIST OF REFERENCES

- European Respiratory Society – e-learning : Spirometry /: <https://spirxpert.ers-education.org/en/spirometry/welcome-to-spirxpert/>
- K. McCarthy. Pulmonary Function Testing: Medscape Education /: <https://emedicine.medscape.com/article/303239-overview>
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- <http://www.moz.gov.ua/ua/portal/>

Practical lesson No. 6

Topic: Pneumothorax. Hemothorax. Pleural puncture. The scenario is focused learning

Purpose: Mastering the basic practical skills when conducting an examination of patients with injuries of the chest cavity, mastering the practical skills of providing emergency care for pneumothorax, hemothorax

A student of higher education must:

- *know:*

- methods of diagnosis of chest organs in case of injuries

- pleural puncture technique.

to be able to:

- recognize an injury of the chest cavity from an X-ray, CT scan

- perform a pleural puncture on the dummy.

Plan:

1. Organizational measures (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).

2. Control of the reference level of knowledge (written work, written test, frontal survey on basic terminology, etc.) (if necessary).

3. Questions (test tasks) to check basic knowledge on the topic of the seminar.

4. Possession of first aid skills for acute urinary retention.

Formation of professional skills and abilities.

Technical means: phantoms, simulators, medical instruments, ultrasound device, x-ray images of the chest cavity.

Equipment: multimedia projector, computers, mannequins.

Software: video protocols, algorithms of the doctor's actions.

Current evaluation criteria in practical training

Evaluation	Evaluation criteria
Perfectly	The applicant is fluent in the material, takes an active part in discussing and

"5"	solving the situational clinical problem, confidently demonstrates practical skills during the examination of the patient simulator. Expresses his opinion on the topic of the lesson, demonstrates clinical thinking.
Fine "4"	The applicant has a good command of the material, participates in the discussion and solution of a situational clinical problem, demonstrates practical skills during the examination of a patient simulator with some errors, expresses his opinion on the subject of the lesson, demonstrates clinical thinking.
Satisfactorily "3"	The acquirer does not have sufficient knowledge of the material, is unsure of participating in the discussion and solution of the situational clinical problem, demonstrates practical skills during the examination of the patient simulator with significant errors.
Unsatisfactorily "2"	The acquirer does not possess the material, does not participate in the discussion and solution of the situational clinical problem, does not demonstrate practical skills during the examination of the patient simulator.

Questions (test tasks) to check basic knowledge on the topic of the seminar:

Control questions:

1. What are the main causes of the syndrome of the presence of fluid in the pleural cavity?
2. The main complaints of patients in the presence of fluid in the pleural cavity.
3. What are the data of palpation, percussion and auscultation of the lungs in the presence of fluid in the pleural cavity?
4. The main clinical signs of exudative pleurisy.
5. How to distinguish exudate from transudate?
6. Voice tremor and bronchophonia in pneumothorax.
7. Percussion and auscultation data in the presence of air in the pleural cavity. 8. What diseases lead to cavity syndrome in the lungs?

9. Percussion and auscultation data in patients with lung cavity syndrome. 10. What triangles are determined during percussion of the lungs of patients with exudative pleurisy?

11. Pleural puncture technique.

12. What can the hemorrhagic nature of pleural effusion indicate?

13. Emergency care in case of valvular pneumothorax.

Questions (test tasks) to check basic knowledge on the topic of the seminar:

X-ray examination before thoracoscopy is shown:

1. * In all cases

2. Only if changes in the lung are suspected on the opposite side

3. Only in case of suspicion of pneumothorax

4. Thoracoscopy is performed without a preliminary X-ray examination.

2. With tense pneumothorax before thoracoscopy, it is necessary:

1.* Perform decompression of the pleural cavity and eliminate breathing disorders

2. Start thoracentesis and apply artificial ventilation

3. Start thoracentesis immediately

4. Prescribe cardiac drugs, oxygen inhalation to eliminate cardiac disorders.

3. The most dangerous and severe form of pneumothorax:

1.* Valve, with total collapse of the lung as a result of rupture of the cavern

2. Closed

3. Open

4. Which of the named groups of symptoms are considered reliable symptoms of chest injuries?

- 1.* Hemoptysis, pneumothorax, hemothorax, emphysema of soft tissues
2. Cough, shortness of breath, chest pain, cyanosis of mucous membranes
3. Difficulty breathing, feeling of tightness in the chest, acrocyanosis, smoothing of the contours of the neck or chest

5. Characteristic physical signs of pneumothorax are:

- 1.* High percussive tone, weakening or absence of breath sounds, weakening of voice tremor
2. Dulling of percussive tone, hard breathing, weakening of voice tremor
3. Clear percussive tone, hard breathing, increased vocal tremor

6. Which of the hemothoraxes is classified as average in volume?

- 1.* From 500 to 1500 ml
2. More than 2000 ml
3. Up to 500 ml

7. Which of the hemothoraxes is classified as small in terms of volume:

- 1.* If on the X-ray there is a shadowing of the lung field below the posterior part of the 6th - 7th rib
2. If the shadowing of the lung field reaches the middle of the body of the scapula on the X-ray

3. If on the X-ray the shadowing of the lung field reaches the level of the shadow of the front part of the second rib

8. When developing a pneumothorax with a lung abscess, the following is primarily indicated:

- 1.* Drainage of the pleural cavity
2. Endobronchial introduction of proteolytic enzymes
3. Antibiotics
4. X-ray therapy
5. administration of cytostatics

9. Chylothorax occurs:

- 1.* In case of injury to the thoracic lymphatic duct
2. With spontaneous rupture of the duct
3. In case of non-cancerous lung diseases

10. Thoracoscopy allows you to examine the lumen of the main bronchi

- 1.* Incorrect
2. That's right

Topics of reports/abstracts, presentations:

1. Pneumothorax.
2. Hemothorax.

3. Pleural puncture.
4. Trauma of the organs of the chest cavity, diagnosis.

LIST OF REFERENCES

- European Respiratory Society – e-learning : Spirometry /: <https://spirxpert.ers-education.org/en/spirometry/welcome-to-spirxpert/>
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Practical class No. 7

Topic: Chronic surgical diseases. The scenario is focused learning.

PURPOSE: To acquaint students with etiology, pathogenesis, compensatory and adaptive reactions of the body during infections, methods of diagnosis and treatment.

Plan:

1. Organizational measures (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
2. Control of the reference level of knowledge (written work, written test, frontal survey on basic terminology, etc.) (if necessary).

3. Questions (test tasks) to check basic knowledge on the topic of the seminar.

4. Possession of first aid skills for acute urinary retention.

Formation of professional skills and abilities.

Technical means: phantoms, simulators, medical instruments.

Equipment: multimedia projector, computers, mannequins.

Software: video protocols, algorithms of the doctor's actions.

Current evaluation criteria in practical training

Evaluation	Evaluation criteria
Perfectly "5"	The applicant is fluent in the material, takes an active part in discussing and solving the situational clinical problem, confidently demonstrates practical skills during the examination of the patient simulator. Expresses his opinion on the topic of the lesson, demonstrates clinical thinking.
Fine "4"	The applicant has a good command of the material, participates in the discussion and solution of a situational clinical problem, demonstrates practical skills during the examination of a patient simulator with some errors, expresses his opinion on the subject of the lesson, demonstrates clinical thinking.
Satisfactorily "3"	The acquirer does not have sufficient knowledge of the material, is unsure of participating in the discussion and solution of the situational clinical problem, demonstrates practical skills during the examination of the patient simulator with significant errors.
Unsatisfactorily "2"	The acquirer does not possess the material, does not participate in the discussion and solution of the situational clinical problem, does not demonstrate practical skills during the examination of the patient simulator.

2. Formation of professional skills.

Content of tasks:

Know:

1. Specificity of the causative agents of tetanus and gas gangrene.
2. Causes of tetanus and anaerobic gas gangrene.
3. Definition of tetanus and gas gangrene.
4. Clinical symptoms of tetanus and gas gangrene.
5. Methods of diagnosis of tetanus and gas gangrene.
6. Conservative and operative treatment of tetanus and gas gangrene.
7. Sanitary and hygienic regime in the care of patients with tetanus and gas gangrene.
8. Specific and non-specific prevention of tetanus and gas gangrene.
9. Chronic specific infection - definition, difference between acute nonspecific surgical infection and chronic surgical specific infection.
10. Diagnosis and differential diagnosis of bone and joint tuberculosis and chronic non-specific surgical infection (chronic osteomyelitis).

Learn:

1. Features of the course of gas gangrene, tetanus, anthrax, diphtheria of wounds.
2. Principles of diagnosis and differential diagnosis of gas gangrene, tetanus, anthrax, diphtheria of wounds.
3. Features of operative treatment of gas gangrene, tetanus, anthrax and diphtheria of wounds.
4. Features of conservative treatment of gas gangrene, tetanus, anthrax and diphtheria of wounds.
5. Basic methods of prevention of gas gangrene, tetanus, anthrax and diphtheria of wounds.

Practical skills:

1. Master the technique of applying a bandage.
2. Apply an aseptic bandage, prescribe chemical and biological antiseptics.

3. Provide first aid to patients with local surgical infection.
4. Prepare the patient for surgery.
5. Take care of patients in the postoperative period.

QUESTIONS FOR CONTROL

List of theoretical questions

1. Features of the course of gas gangrene, tetanus, anthrax, diphtheria of wounds.
2. Principles of diagnosis and differential diagnosis of gas gangrene, tetanus, anthrax, diphtheria of wounds.
3. Features of operative treatment of gas gangrene, tetanus, anthrax and diphtheria of wounds.
4. Features of conservative treatment of gas gangrene, tetanus, anthrax and diphtheria of wounds.
5. Basic methods of prevention of gas gangrene, tetanus, anthrax and diphtheria of wounds.
6. Peculiarities of the course of a chronic specific infection.
7. Principles of diagnosis and differential diagnosis of chronic specific infection.
8. Features of conservative treatment of chronic specific infection.
9. The main types of surgical interventions in the surgical treatment of chronic specific infection.
10. Basic methods of prevention of chronic specific surgical infections.

Questions (test tasks) to check basic knowledge on the topic of the seminar:

1. Three patients were brought to the district hospital from the scene of the road traffic accident with fractures of the bones of the lower leg and significant contamination with soil and pieces of clothing, torn wounds of the lower limbs. Your actions?

Answer: primary surgical treatment of the wound, application of antibiotic therapy, introduction of polyvalent anti-gangrenous serum 30,000 IU after Bezredko's test, tetanus toxoid, anti-tetanus serum or anti-tetanus human immunoglobulin according to the scheme.

2. After administration of anti-gangrenous serum to the patient for prophylactic purposes, fever, tightness in the chest, sharp pains in the abdomen, vomiting, drop in blood pressure, cold sweat, cyanosis, clouding of consciousness appeared. What complication occurred? What are your actions?

Answer: the patient has anaphylactic shock, which requires anti-shock therapy.

3. A serviceman with multiple injuries of soft tissues of both lower limbs, buttocks, and back developed symptoms of anaerobic clostridial infection during treatment. When anti-tetanus serum was administered, a papule up to 1.4 cm in diameter appeared on the forearm after 20 minutes. What is the next tactic in such a situation?

Answer: in the case of a positive reaction, the serum is not administered or the administration is performed under anesthesia with the necessary provision for assistance in case of anaphylactic shock.

4. A patient with gas gangrene of the lower leg was admitted to the department. Given the high contagiousness of anaerobic clostridial infection, it is necessary to organize and monitor compliance with the sanitary-epidemiological regime in the department. What does it consist of?

Answer: sanitization in the reception department, hospitalization in a separate ward. For the purpose of disinfection, a 6% solution of hydrogen peroxide and a 0.5% solution of detergent are used.

Topics of reports/abstracts, presentations:

1. Gas gangrene.

2. Tetanus.

3. Diphtheria of wounds.

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- European Respiratory Society – e-learning : Spirometry /: <https://spirxpert.ers-education.org/en/spirometry/welcome-to-spirxpert/>
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Practical lesson #8

Topic: Emergencies. The scenario is focused learning

PURPOSE: Emergency and urgent medical care as an educational discipline:

a) is based on the students' study of biology, human anatomy and physiology, pharmacology, hygiene, pathological anatomy, pathological physiology, emergency medicine, therapy, surgery, and other clinical disciplines and is integrated with these disciplines;

b) lays the foundations of theoretical knowledge and practical skills for the organization and provision of emergency medical care to patients in emergency conditions at the pre-hospital and early hospital stages, including during peacetime emergencies.

Plan:

1. Organizational measures (greetings, verification of those present, announcement of the topic, purpose of the lesson, motivation of higher education seekers to study the topic).
2. Control of the reference level of knowledge (written work, written test, frontal survey on basic terminology, etc.) (if necessary).
3. Questions (test tasks) to check basic knowledge on the topic of the seminar.
4. Possession of first aid skills for acute urinary retention.

Formation of professional skills and abilities.

Technical means: phantoms, simulators, medical instruments.

Equipment: multimedia projector, computers, mannequins.

Software: video protocols, algorithms of the doctor's actions.

2. Current assessment criteria in practical training

Evaluation	Evaluation criteria
Perfectly "5"	The applicant is fluent in the material, takes an active part in discussing and solving the situational clinical problem, confidently demonstrates practical skills during the examination of the patient simulator. Expresses his opinion on the topic of the lesson, demonstrates clinical thinking.
Fine "4"	The applicant has a good command of the material, participates in the discussion and solution of a situational clinical problem, demonstrates practical skills during the examination of a patient simulator with some errors, expresses his opinion on the subject of the lesson, demonstrates clinical thinking.
Satisfactorily "3"	The acquirer does not have sufficient knowledge of the material, is unsure of participating in the discussion and solution of the situational clinical problem, demonstrates practical skills during the examination of the patient simulator with significant errors.
Unsatisfactorily "2"	The acquirer does not possess the material, does not participate in the discussion and solution of the situational clinical problem, does not demonstrate practical skills during the examination of the patient simulator.

3. Organizational activities: greetings, verification of those present, notification of the topic, purpose of the lesson, motivation of higher education seekers to study the topic.

4. Control of the reference level of knowledge: a frontal survey of applicants for higher education with the aim of determining the level of theoretical readiness of applicants to perform practical classes:

Questions (test tasks) to check basic knowledge on the topic of the seminar:

1. A 55-year-old man fell off a motorcycle. The victim is unconscious. A bone protrudes from the right thigh, massive bleeding is observed.

1. What type of injury can be suspected in the victim?
2. Indicate the sequence of providing traffic police for this injury.
3. Specify the rules for applying a Dieterichs transport splint for hip fractures.

2. When examining the victim after a road accident, cyanosis and difficulty breathing are observed. The patient's condition is severe, the right half of the chest lags behind in the act of breathing, the intercostal spaces are widened on the right, a box sound is made on percussion, there is no breathing on auscultation. Your diagnosis:

- A. Open pneumothorax.
- B. Pneumoperitoneum.
- C. Acute purulent pleurisy
- D. Tension pneumothorax
- E. Total hemothorax on the right

3. What is the first medical aid in case of diagnosis of "Acute abdomen"?

- A. In relieving pain with painkillers;
- B. In reducing inflammation by introducing antibiotics;
- C. In relieving pain with the help of antispasmodics;
- D. In reducing inflammation with the help of cold (an ice pack).
- E. Wash the stomach and give an enema.

4. What is the most specific sign in a patient with acute appendicitis?

- A. Pain in the lower abdomen;
- B. When turning to the right side, the pain in the abdomen increases;
- C. Multiple vomiting, nausea;
- D. Enhanced intestinal peristalsis;

E. Sitkovsky's positive symptom.

5. The patient, 60 years old, complains of pain in the lower abdomen, frequent urination is difficult. Previous diagnosis? What research is necessary to clarify the diagnosis?

Topics of reports/abstracts, presentations:

1. Types of vascular insufficiency (fainting, collapse), causes, clinic, diagnosis, first aid.
2. Acute respiratory failure, causes, diagnosis, first aid.
3. Mechanical asphyxia - causes, clinic, first aid techniques.
4. Types of drowning - diagnosis, first aid according to clinical protocols.
5. The concept of trauma, its types. Syndrome of mutual aggravation.
6. Traumatic shock and traumatic disease, stages of shock and periods of illness, first medical aid and pre-hospital medical aid.
7. Principles of providing emergency medical aid to victims in a state of shock.

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- European Respiratory Society – e-learning : Spirometry /: <https://spirxpert.ers-education.org/en/spirometry/welcome-to-spirxpert/>
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Practical class No. 9

Topic: Emergency conditions in pediatrics. Lumbar puncture in children of different ages. The scenario is focused learning

Purpose: Mastering the basic practical skills of diagnosis and providing emergency care in pediatric emergencies.

A student of higher education must:

- **to know:** algorithms for actions in the event of an emergency in children of different ages.
- **wash:** perform a lumbar puncture in children of various ages.

Technical means: phantoms, simulators, medical instruments.

Equipment: multimedia projector, computers, mannequins.

Software: video protocols, algorithms of the doctor's actions.

Current evaluation criteria in practical training

Evaluation	Evaluation criteria
Perfectly "5"	The applicant is fluent in the material, takes an active part in discussing and solving the situational clinical problem, confidently demonstrates practical skills during the examination of the patient simulator. Expresses his opinion on the topic of the lesson, demonstrates clinical thinking.
Fine "4"	The applicant has a good command of the material, participates in the discussion and solution of a situational clinical problem, demonstrates practical skills during the examination of a patient simulator with some errors, expresses his opinion on the subject of the lesson, demonstrates clinical thinking.
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Unsatisfactorily "2"	The acquirer does not possess the material, does not participate in the discussion and solution of the situational clinical problem, does not

	demonstrate practical skills during the examination of the patient simulator.
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Questions (test tasks) to check basic knowledge on the topic of the seminar:

Emergency conditions in pediatrics

1. The child had a nosebleed. At the pre-hospital stage, to stop bleeding, it is necessary to apply:

A *Cold on bridge of nose

B Cold on the chin

C Warmth on the bridge of the nose

D Cold on the heels

E Cold on the sternum

2. A 5-year-old child went numb when blood was taken from a finger. What position should the nurse give the child?

A *Lying down, head lower than the body

B Lying down, head at the level of the body

C Lying down, the head is higher than the body

D Sitting, head thrown back

E Sitting, head bent forward

3. The ambulance team left for a call to a 7-year-old child. Objectively: the child is unconscious, breathing and heartbeat are absent, the skin is cyanotic. What measures should be taken first?

A * Place on a hard, flat surface

B Carry out artificial ventilation of the lungs

C Clear the airway

D Perform indirect heart massage

E Administer medications

4. An 11-month-old child was admitted to the intensive care unit with severe dehydration and acrocyanosis. What infusion solution can be administered before finding out the cause and establishing the type of dehydration?

A *0.9% sodium chloride solution

B 10% glucose solution

C 5% glucose solution

D 5% sodium chloride

E 3% solution of potassium chloride

5. The child is 12 months old and is undergoing inpatient treatment for SARS. In the evening, there was restlessness, a dry obsessive "barking" cough, hoarseness of voice, abundant mucous discharge from the nose. Objectively: the skin is clean, the mucous membranes are hyperemic, temperature - 38.5°C. Primary actions of the nurse:

A *Soothe the child, take him in his arms

B Wipe the skin with a semi-alcohol solution

C Put mustard seeds

D Massage the chest

E Administer antibiotics

6. A 12-month-old child has rickets. During the game, the following suddenly appeared: sedation, fear on the face, cyanosis around the mouth and nose, breathing stopped. After a few seconds, there was a loud intake of breath - a "rooster's cry". What primary emergency care should be given to the child?

A *Immediately press on the root of the tongue and sprinkle cold water on the face

B Hospitalize the patient

C Prescribe vitamin Dz

D Administer anticonvulsant drugs

E Use hormonal drugs

7. A 10-year-old child suffers from type I diabetes. After the insulin injection, the child did not eat. In the second lesson, a feeling of hunger suddenly appeared, trembling in the limbs, the skin became moist. Where should you start providing emergency care to a child at the pre-hospital stage?

A *Give the child candy, sweet tea

B Hospitalize

C Administer subcutaneously a 0.1% adrenaline solution

D Administer intravenous prednisone

E Administer intramuscularly a 25% solution of magnesium sulfate

8. After a bee bite, a three-year-old child experienced sharp pain in the area of the bite, a feeling of heat, lack of air, and dizziness. On examination: pale skin, cold extremities, cold sticky sweat on the body. Where should emergency care be started at the pre-hospital stage?

A *Remove the stinger, apply an ice pack, immediately inject 0.1% adrenaline solution (0.3-0.5 ml) subcutaneously

B Hospitalize to a hospital

C Apply lotion to the bite site

D The bite site is covered with 0.3 ml of 0.1% adrenaline solution in 3 ml of 0.9% sodium chloride solution

E Administer intravenous prednisone

9. To what depth is it necessary to press the chest when conducting an indirect heart massage for a 2-year-old child?

A *By 1-2 cm

B Up to 1 cm

C By 3-4 cm

D By 5-6 cm

E At 7-8 cm

10. A 14-year-old girl with diabetes developed sweating, increased muscle tone, general tremors, a weak pulse, and a decrease in blood pressure during a test at school. Which actions by the nurse are of primary importance in this case?

A *Give to drink sweet tea

B Carry out oxygen therapy

C Use cardiac glycosides

D Enter 0.5% glucagon 0.1 ml

E Enter a 0.5% solution of seduxen 1 mg/kg

11. A 9-year-old child with a diagnosis of SARS. Hyperthermic syndrome, a lytic mixture was administered. After 40 minutes, the child suddenly got up from the bed and fell. Objectively: t° -35.2°C, skin is pale, covered with cold sticky sweat, tachycardia, BP- 70/40 mm Hg. Assess the child's condition and the effectiveness of the care provided.

A *Acute vascular insufficiency, collapse; violation of bed rest

B Acute vascular insufficiency, crushing; lack of physical cooling methods

C Anaphylactic shock; rapid administration of drugs

D Drug poisoning; violation of bed rest

E Hypoglycemic coma; diet disorder

12. The remedy of first choice in the strategy of treatment of convulsive syndrome in children is:

A *Seduxen

B Luminal

C Diphenhydramine

D Calcium chloride

E Magnesium sulfate

13. The child is 1 year old and has SARS. On the second day, against the background of t° -38.5°C catarrhal phenomena, the child became restless, could not find a comfortable position in bed, periodically noted inspiratory shortness of breath, barking cough, hoarse voice. What should the nurse do in the emergency plan?

A *Alkaline inhalations alternate with lasolvan

B Conducting Heimlich reception

C Exclude food allergens from the diet

D Mustard Wraps

E Inhalation with berodual

Topics of reports/abstracts, presentations:

- cardiopulmonary resuscitation in children of various ages;
- perform artificial lung ventilation and indirect heart massage; - measure blood pressure in children of different ages.
- lumbar puncture indication of the method of conducting

LIST OF REFERENCES

- European Respiratory Society – e-learning : Spirometry /: <https://spirxpert.ers-education.org/en/spirometry/welcome-to-spirxpert/>
- K. McCarthy. Pulmonary Function Testing: Medscape Education /: <https://emedicine.medscape.com/article/303239-overview>
- Miller M.R., Hankinson J., Brusasco V. et al. Standardisation of spirometry. «Series ATS/ERS task force: standardisation of lung function testing». Edited by V. Brusasco, R. Grapo and G. Viegi. Number 2 in this Series // Eur. Respir. J. 2005. V. 26. P. 319-338
- Brian L. Graham, Irene Steenbruggen Martin R. and others. Standardization of Spirometry 2019 Update. An Official ATS and ERS Technical Statement / Brian L. – <https://www.thoracic.org/statements/pulmonary-function.php>
- Quanjer, P. Become an Expert in Spirometry. 2012 / P. Quanjer. – <http://www.spirxpert.com/indices7.htm>

Information resources

- http://www.knmu.kharkov.ua/index.php?option=com_content&view=frontpage&Itemid=1&lang=uk
- <http://repo.knmu.edu.ua/>
- http://knmu.kharkov.ua/index.php?option=com_content&view=article&id=498&Itemid=42&lang=uk
- <http://www.moz.gov.ua/ua/portal/>