

APPROVED

The first vice-rector for scientific and pedagogical work
Danylo Halytsky Lviv national medical university

Associate Professor Irina SOLONINKO

APPROVED

at a joint meeting of the Academic Councils of medical faculties No. 1, No. 2 and
Faculty of Foreign Students of Danylo Halytsky LNMU,
protocol No. 1/03-2024 of “13” March 2024

Head of the Medical Faculty No. 1 _____
Professor Marta KOLISHETSKA

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VARYVODA

APPROVED

at the meeting of the specialized methodical committee of the surgical disciplines
of the Danylo Halytsky Lviv National Medical University,
protocol No 24. dated February 22, 2024.

Head of the committee _____ Professor Victor ANDRYSHCHENKO

**ALGORITHMS OF PERFORMANCE OF CLINICAL
SITUATIONAL TASKS ON THE CLINICAL EXAMINING
STATION**

of the Objective Structured Practical (Clinical) Examination

Solving a clinical situational task

(working with a standardized patient in a surgical department)

Discipline «SURGERY»

«Liver Cirrhosis. esophageal bleeding»

The man of 47 is suffering from chronic alcoholism. He complains of periodic aching in the right hypochondriac region, distension of the abdomen. At night the massive vomiting of blood appeared, black tarry stools repeated three times. His chest is clear to auscultation, with no murmurs. Heart rate is 126 per minute, blood pressure is 80/50 mm Hg. The liver edge is just palpable under the costal margin and feels somewhat nodular. His spleen is enlarged. There is a fluid wave and shifting dullness to percussion. However, the patient has no abdominal tenderness. The level of red blood cells is $2,610^{12}/l$, of haemoglobin – 70 g/l, of haematocrit – 0,28.

Tasks for the student:

- 1. Conduct a survey, collect anamnesis from the imitator**
- 2. Conduct an inspection and physical examination of the simulator.**
- 3. Interpret the physical changes characteristic of the clinical situational task presented by the examiner.**
- 4. Establish a preliminary diagnosis.**
- 5. Appoint a clarifying method of additional research. Make a diagnostic program.**

The results of laboratory, radiation and instrumental research methods are attached

- 6. Establish and substantiate the final clinical diagnosis.**
- 7. Determine treatment tactics and determine the scope of emergency care.**

Answer standard: «Esophageal variceal bleeding as complication of the hepatic cirrhosis of alcoholic origin.»

Treatment tactics: «Esofibrogastroscopy with ligation of esophageal varices, in case of inefficiency, placing a Blackmore probe. Infusion therapy of somatostatin analogues, beta-blockers, diuretic therapy. Infusion of blood components.»

«Gastrointestinal bleeding. MWS»

The man of 34 began vomiting, at first, with food, and then – with fresh blood. He never complained of heartburn or epigastric pain earlier. He visited relatives the day before, where he ate a lot of food and drank a lot of alcohol.

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Answer standard: «Upper gastrointestinal bleeding. Mallory-Weiss syndrome.»

Treatment tactics: «Esofibrogastroscopy with stopping of bleeding. Infusion of proton pump blockers, antiemetics, hemostatics»

«Acute lower limb ischemia»

The patient of 39 y. o., suffering from mitral stenosis for many years, complained of sharp pain in the left shank and foot, which suddenly appeared two hours ago. The foot and the lower part of the shank are extremely pale and cold. Palpation of the shank is sharply painful, touching sensitivity is reduced. Femoral pulsation under the inguinal ligament is clear, increased. On the other arteries of the left leg pulsation is not determined.

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Answer standard: «Acute embolic popliteal occlusion on the background of the mitral stenosis. Acute lower limb ischemia of the IB degree»

Treatment tactics: «Indirect thromboembolism from popliteal artery. Anticoagulant therapy and vasodilator therapy. Consultation of a cardiac surgeon to solve the issue of mitral valve prosthetics»

«Acute mechanical bowel obstruction, ileocolic intussusception»

The patient of 65 admitted the hospital after 24 hours from the beginning of the disease complaining of cramping abdominal pain, vomiting. The condition is of middle hardness. Pulse rate is 92 beats per minute. Arterial pressure is 120/70 mm Hg. The abdomen is swollen, soft. The painful swelling of the soft-elastic consistence is palpated in the right ilioinguinal area. During auscultation inforced peristalsis. During percussion tympanic sound. On the plain abdominal films dilated bowel loops with air-fluid levels.

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Answer standard: ««Acute mechanical bowel obstruction, ileocolic intussusception.»

Treatment tactics: «Urgent laparotomy. Elimination of intestinal obstruction - intestinal desvagination, in the case of intestinal necrosis - resection of a non-viable segment with restoration of intestinal patency.»

«Thoracic trauma. Cardiac tamponade»

The patient is delivered by the ambulance to the hospital from the place of the accident in a shock condition. His consciousness is darkened, skin is expressively pale, neck veins are distended, breathing is heard from both sides. Heart sounds are faint and distant. Heart rate is 120/min., blood pressure is 60/40 mm Hg, being supported with infusion of sympathomimetics. The deep stab wound of the chest without signs of external bleeding is revealed in the third intercostal space along the left sternal border.

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Answer standard: «Penetrated thoracic trauma: stab wound of the chest with injury of the heart. Cardiac tamponade.»

Treatment tactics: «Provision of emergency care violated the protocol ATLS. Pericardial puncture and drainage at Larey's point. Drainage of the pleural cavity. Infusion, anti-shock therapy, blood transfusions.»

«Emergency conditions in surgery. Shock»

The patient of 36 with anamnesis of allergic reactions on sulfonilamides, antibiotics of penicillin group admitted to the hospital with suspicion on bowel obstruction. During performing of paranephral blockade, after injection of 7,0 ml of 0,5 % solution of novocaine the breathlessness, acrocyanosis, hypersalivation have been developed. Peripheral pulse is weakened, heart rate is 128 / min. Blood pressure is 70/40 mm Hg. There are a lot whistling rattles on auscultation of his lungs.

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Answer standard: «Anaphylactic shock.»

Treatment tactics: «Emergency injection of norepinephrine (Epipen) intramuscular, Oxygen therapy, Infusion of hydrocortisone in physiological solution IV, Antihistamines, Diuretics, Adrenomimetics and cardiotonics.»

«Perforation of a hollow organ»

The technical school student of 20 felt pain in the abdomen accompanied by nausea and dizziness 30 minutes ago which made him sit and then lay down. He had been treated four times of hyperacid gastritis before his studying in the technical school. During examination: the abdomen is sunken, rigid, does not take part in the breathing, sharply painful in the epigastric and the right hypochondriac regions, the symptoms of peritoneal irritation are present. The liver dullness is not determined. The pulse rate is 68 per minute, arterial pressure is 110/70 mm Hg.

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Answer standard: «Perforated peptic ulcer»

Treatment tactics: ««Urgent laparotomy. Excision of peptic ulcer with suturing of gastric/duodenal defect. Sanitation and drainage of the abdominal cavity. In the postoperative period: proton pump inhibitors, prokinetics, antibiotics, infusion therapy...»

«Postoperative intraabdominal bleeding after appendectomy»

The patient of 22 who was operated on 16 hours ago because of acute appendicitis feels weakness and dizziness. The patient is pale, the pulse rate is 110 per minute. Blood pressure is 80/50 mm Hg. The abdominal wall is soft, painful in the area of the operation wound; during percussion the dullness is discovered in the sloping places of the abdomen.

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Answer standard: «Postoperative intraabdominal bleeding after appendectomy.»

Treatment tactics: «Relaparotomy/laparoscopy. Stoppage of bleeding from the mesentery of the appendicular process. Infusion, hemostatic therapy. Blood transfusion»

«Traumatic shock»

The patient of 47 was admitted to the adult traumatology department. Consciousness is not changed, the skin is pale, cold to touch. Pulse is rhythmic, 88/min., blood pressure is 85/45 mm Hg. The patient is lying in the forced position of "toad", the pain syndrome is expressed in the right half of the pelvis. He cannot raise his legs. The increasing pain is marked in the anterior parts of the pelvis and in the lumbar area on anteroposterior and lateral compression of the pelvis.

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Answer standard: «Complex fractures of the pelvic ring, traumatic shock.»

Treatment tactics: «Provision of emergency care according to the ATLS protocol. Pelvic splint and stabilization of pelvic bones. Infusion anti-shock therapy, analgesia, blood transfusion.»

«Pulmonary embolism»

Woman of 69 was operated on the acute calculous cholecystitis a day before, cholecystectomy was performed. The sharp pain behind the sternum, increasing on inspiration, suddenly appeared at the attempt to get up. The skin is pale with grayish tint, the neck veins are distended, the upper part of the body is cyanotic. Respiratory rate is 40/min., pulse 128/min., blood pressure is 70/40 mm Hg. Gallop rhythm, inforcing of the second sound upon the sternum and sharply expressed systolic murmur are revealed.

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Answer standard: «Postoperative massive pulmonary embolism.»

Treatment tactics: «Oxygen therapy. Morphine. Thrombolysis with heparin therapy. Cardiotonics. Consultation of a cardiac surgeon regarding indications for thrombectomy with PA»

«Pneumothorax»

A 23-year-old man presents to the emergency department complaining of the sudden onset of left-sided pleuritic chest pain and dyspnea about 20 min ago while he was lifting a heavy object. On physical examination he appears to be in distress, diaphoretic, and tachypneic. His blood pressure is 88/50, and his heart rate is 140 beats/min. He has markedly diminished breath sounds on the left with hyperresonance to percussion over his left hemithorax.

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Answer standard: «Spontaneous total left-sided pneumothorax.»

Treatment tactics: «Oxygen therapy. Analgesia. Drainage of the left pleural cavity according to Bilau. If ineffective, perform a thoracoscopy»

«Acute pancreatitis»

The patient of 35 admitted to the hospital complaining of intensive upper abdominal pain, irradiating to the back, repeated vomiting, abdominal distention and weakness. During examination – general condition is hard, the temperature is 38,4C. Heart rate is 132 per minute, blood pressure is 80/40 mm Hg. The skin is pale. The abdomen is distended, moderately tensed, painful at palpation. The pulsation of the abdominal aorta in the epigastrium is not determined. Peristalsis is not heard. White blood cells count 13109/L. Amylase level in the urine – 512 units.

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Answer standard: «Acute pancreatitis.»

Treatment tactics: «Hospitalization in the intensive care unit. Infusion therapy, forced diuresis, somatostatin analogues, spinal anesthesia, proton pump inhibitors, nasogastric tube.»

«Purulent Mediastinitis»

The patient was operated on the penetrated stab abdominal wound with injuries of the stomach and diaphragm. During laparotomy the stomach and diaphragmatic wounds were sutured. On the fourth day after operation the general condition of the patient is extremely hard. Obnubilation is present. The tissues of the neck and face are swollen, on palpation crepitation is revealed. The pulse rate is 136/min., respiratory rate is 34/min. On the X-ray examination of the chest the shadow of the mediastinum is widened, there are small bulbs of the gas on its background, the lung fields are of usual volume and airiness.

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Answer standard: «Purulent mediastinitis.»

Treatment tactics: «Sternotomy/thoracotomy. Sanitation and drainage of the mediastinum. Antibiotic therapy, detoxification and infusion therapy.»

«Acute mesenteric vascular occlusion»

The patient, 72 years old, complains of the sharp pain in the abdomen, nausea, stoppage of gases and feces. He has been suffering for 18 hours, he hasn't been operated on. He had myocardial infarction and ischemic stroke in the past. Pulse rate is 88 beats per minute, ciliary arrhythmia. Arterial pressure is 90/60 mm Hg. The tongue is dry. The abdomen is sharply distended and painful in all regions. The symptoms of irritation of peritoneum are determined not exactly. Peristalsis is not heard. The pneumatosis of the bowel was revealed on the X-ray examination of the abdominal cavity. During rectal examination – admixtures of blood in the feces.

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Answer standard: «Acute mesenteric vascular occlusion, bowel infarction.»

Treatment tactics: «Urgent laparotomy. Thrombectomy/shunting of mesenteric vessels. In the case of intestinal necrosis, resection of a segment of the intestine with programmed relaparotomy – «Second look»

«Blunt chest trauma: traumatic asphyxia»

The worker of 46 underwent compression of the trunk by the lorry during several minutes. The fractures of the bones were not found out on examination. Cyanosis, edema of the head and neck, petechiae of the mucous membranes and discoloration of the skin are remarkable.

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Answer standard: «Blunt chest trauma: traumatic asphyxia»

Treatment tactics: «Provision of emergency care according to the ATLS protocol. Oxygen therapy, analgesia, steroids, diagnostic bronchoscopy, artificial lung ventilation as needed»

«Blunt trunk trauma, intraabdominal bleeding»

The man of 48 complaining of the general weakness, dizziness, moderate pain in the left hypochondriac area was delivered by the ambulance to the emergency room. It is known from anamnesis that he fell from the ladder and hit left costal arch. There was a short fainting before his delivering. On examination: the patient is lying in the forced position. The changes in the body position increase the abdominal pain. The skin is pale. Pulse rate is 120/min., blood pressure is 90/50 mm Hg. The breathing is superficial. A moderate tension of muscles of the abdominal wall on palpation and dullness of percussion sound in the left hypochondriac area sloping places of the abdomen are determined. Hemoglobin is 98 g/L.

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Answer standard: «Traumatic spleen laceration, intraabdominal bleeding, hemoperitoneum.»

Treatment tactics: «Urgent laparotomy. Damage control. Splenectomy. Abdominal packing. Sanitation and drainage. Infusion therapy. Hemostatic therapy. Blood Transfusion. Antishock therapy.»