ENGLISH VERSION: COMMUNITY-ACQUIRED PNEUMONIA COMPLICATED BY SEPSIS CAUSED BY KLEBSIELLA PNEUMONIAE: A CASE REPORT*

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The actuality of the problem of sepsis is currently determined by several causes: a significant frequency of the disease, high lethality and, consequently, significant economic damage caused by this disease in economically developed countries. The clinical picture is systematized and outlined, questions of laboratory diagnostics, the principles of treatment are defined. Analyzed pathological changes that occur in sepsis on the part of various organs and systems . Shown the diagnostic algorithm, which is acceptable both in the presence and in the absence of laboratory verification of the disease. Starting antibacterial therapy is recommended as an empirical therapy, depending on the localization of the primary focus and systemic manifestations of infection. Thus, considering the clinical case of sepsis, one should emphasize that it is important to collect detailed medical history (especially if broncho-pulmonary system is involved), to consider where the patient works and his/her profession (especially for health-care workers, and other categories of people who work with organized groups of population). It is advisable to assume a nosocomial infection as a pathogen.

Keywords: sepsis, microorganisms, antibiotics, community-acquired pneumonia.

Sepsis is a leading cause of death and disability worldwide, especially if it is not detected and treated in a timely manner [1]. Initiatives, aimed at early detection and management of sepsis in the in-patient setting, led to a reduction in sepsis mortality and an increase in the number of surviving patients [2].

Early pathogen detection in sepsis is an extremely important and responsible task of the clinician in view of the effectiveness and timeliness of prescribing adequate antibiotic therapy (ABT). It is clear that in most cases the physician is not able to obtain information about the pathogen of infection in the first hours and even days from the onset of the disease, therefore, ABT should be prescribed empirically. It should be noted that an empirical ABT does not mean the prescription of an antibacterial drug "at random": when choosing an antibiotic, the physician should take into account the probability of a potential pathogen or pathogens depending on the conditions of the disease (hospital-acquired or community-acquired infection), localization of the primary focus, duration of the disease, pre-administration of antibacterial drugs, concomitant pathology, etc.

In sepsis, the outcome of patient's treatment largely depends on the correct choice and timely application of antibacterial drug. It has been shown that 1 hour delay in the prescription of adequate antibacterial drug to patients with sepsis and septic shock (SS) increases the risk of patient's death by 7.6% [3]. Most researchers point out the crucial importance of choosing an adequate antibacterial drug for the survival of patients with sepsis and SS.

In the "community-acquired" sepsis, it is highly probable that pathogens will be the strains of opportunistic microorganisms, which in many cases are susceptible to most antibacterial drugs (protected penicillins, fluoroquinolones, cephalosporins, etc.). In case of "nosocomial" sepsis, the role of pathogens most often belongs to strains of multiresistant hospital microorganisms; in this case, when choosing an antibacterial drug, it is necessary to focus on the microbial landscape and the results of previous bacteriological studies, taking into account the primary location of the inflammatory focus. Quite often the clinician has to prescribe a combination of antibacterial drugs to "overlap" all probable pathogens, followed by correction of ABT in accordance with the results of antibiogram.

We present a clinical case of sepsis, disguised with pneumonia, and discuss its complexity for diagnostic process and choice of rational antibiotic therapy in patients with septic condition.

A 59-year-old patient, a health-care provider by profession, was delivered by emergency team on 08.09.2017 to the admission department of the city clinical hospital with complaints of increased body temperature to 39.50C, sweating, shortness of breath with slight physical activity, nausea, and manifested general weakness.

From the history of the disease it is known that since the last summer, after having worked at a summer camp with adolescents, the patient periodically developed subfebrile temperature. About 2 weeks ago, constant subfebrile body temperature of 37.30C developed, and the abovementioned complaints increased. The patient took paracetamol and nimesil. From the history of life it is known that the patient underwent endoprosthetics of the left hip joint in 2014.

On examination: general condition of the patient is severe. The patient is conscious, adequate; productive contact is possible. The skin is clean, pale pink. Peripheral lymph nodes are not enlarged. No edema.

Respiratory rate – 20 per min, SaO2 – 88%. On percussion: dullness of pulmonary sound in the lower parts on both sides. On auscultation: breathing is rigid, weakened in the lower parts, dry rales on both sides.

Pulse: 89 per min, BP – 140/90 mm Hg. The limits of relative heart dullness are enlarged to the left by 2.0 cm. Tones of the heart are rhythmic, weakened, accent of tone II on the aorta.

The tongue is covered with white coating. Abdomen is soft and painless. The liver and spleen are not enlarged. Costovertebral angle tenderness is negative on both sides.

Diagnosis on hospitalization: community-acquired bilateral multisegmental pneumonia, clinical group III, respiratory failure II. Given the severity of the condition, the patient was hospitalized in the intensive care unit (ICU).

On examination 08.09.17: CBC: Hb – 146 g/l, erythrocytes – 4.8 x 1012/l, color index – 0.91, platelets – 150x109/l, leukocytes – 17.0x109/l, ESR – 12 mm/g, leukocyte count: stab – 8%, segmentated – 74%, eosinocytes – 1%, lymphocytes – 14%, monocytes – 3%; blood sugar – 4.9 mmol/l; biochemical blood assay: bilirubin – 16.2 mmol/l, conjugated – 2.4 mmol/l, unconjugated – 13.8 mmol/l, creatinine – 108.3 mmol/l, urea – 6.2 μmol/l, total nitrogen – 29 g/l, total protein – 59 g/l,

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potassium concentration in serum – 3.93 mmol/l, chlorine – 103.1 mmol/l, calcium – 1.28 mmol/l. Urinalysis: color – yellow, reaction – neutral, specific gravity – 1018, transparency – transparent, bile pigments – negative, protein – traces, sugar – nil, microscopy: mucus – normal, epithelium – rarely, leukocytes – 2-4 per HPF, erythrocytes – 20-25 per HPF, cylinders – nil; ECG: heart rate – 90 per 1 minute, sinus rhythm. Electrical axis of the heart is not deviated. Disrupted processes of repolarization of the posterior side of the left ventricle. Chest X-ray: local amplification in the lower lobe to the right, condensation of the pulmonary figure. Roots are dense, the heart is structurally enlarged to the left.

The following treatment was prescribed: levofloxacin 1000 mg – 100.0 ml i.v., cefepime 1000 mg i.v., azithromycin 0.5 per os, dexamethasone 8 mg – 2 ml i.v., analgin 50% – 4.0 i.v., lysine acetylsalicylate 1.0 i.m., ambroxol hydrochloride 2.0 ml i.v., rheosorbilact 200.0 ml i.v., 10% glucose – 400.0 ml, 10 units of insulin, sodium chloride 10% – 30.0 ml, potassium chloride 7.5% – 30.0 ml, eufillin 2.4% – 10.0 ml, strophanthin 0.25 mg – 1.0 ml i.v., heparin 2.5 thous. i.v. In the intensive care unit on 09.09.17, there were complaints of increased body temperature to 39.00C, sweating, shortness of breath with slight physical exertion, nausea, and manifested general weakness. The patient's condition is steadily severe. Hemodynamics is stable. Treatment has not been changed.

On 10.09.17, the patient's previous complaints are joined by pain in the epigastrium, right hypochondrium, nausea and biliary vomiting. On examination: no acute surgical pathology was detected.

GP on duty diagnosed acute pancreatitis. The treatment was supplemented with pantoprazole 40 mg i.v., No-SPA 2.0 ml i.v., metoclopramide hydrochloride 2.0 ml i.m., magnicor 75 mg, liprazidum 10 mg per os (taking into account the accompanying hypertension in the anamnesis). At 19:00, the patient developed a reaction to cefepime administering, manifested by chills, fever up to 39.50C, headache. This reaction was evaluated as endotoxemia (Yarysh-Herxheimer's reaction), which occurs several hours after the start of treatment with specific antibacterials, associated with rapid release of antigens, endotoxins in the mass death of bacteria – causative agents, leading to uncontrolled immune response. In a day, the patient's condition stabilized. Cefepim administering was withdrawn.

On 11.09.17 at 09:30 the patient was transferred to the pulmonology department. On examination by the pulmonologist, the patient began to complain of severe pain in the lumbar spine, which did not occur before, and increase in body temperature up to 390C. On objective examination: pain in the pyloroduodenal area, increased liver by 4 cm below the costal arch 13x11x8 cm and spleen by 3 cm 14x9 cm Examination by the gastroenterologist and urologist: duodenal ulcer? Chronic hepatitis in the stage of exacerbation. Chronic pancreatitis in the stage of exacerbation. Salt diathesis. Microhematuria. Additional methods of examination are assigned: fibrogastroduodenoscopy (FGDS), prostate-specific antigen.

On chest X-ray: local enhancement of the pulmonary pattern in the lower parts. The roots are thickened, enlarged. Sinuses are loose. The heart is enlarged to the left.

The treatment at pulmonology department was prescribed: ceftazidime 1.0 g i.v. once a day and 1.0 g i.m. once a day, amikacin 0.5 g/m 2 once a day, ornidazole 500 mg – 100.0 ml i.v. once a day, prednisone 30 mg, analgin 50% – 2.0 ml i.m. once a day, erdosteine 1 tab. 2 times a day, acetylcysteine 600 mg 1 tab. once a day, biodeval 2 doses 3 times a day, vitamin C 5% 4.0 ml i.v. once a day, sodium chloride 0.9 % – 800.0 ml, panangin 10.0 ml, metoclopramide hydrochloride 2.0 ml i.m. 2 times a day, reopolyglucin 200.0 ml i.v. once a day, famotidine 40 mg i.v. once a day, arginine glutamate 40% – 10.0 ml i.v. once a day, platyphyllin 0.2% – 1.0 s/c once a day, pantoprazole 40 mg i.v. once a day.

On 12.09.17 at 09:30 the patient's condition deteriorated: nausea and vomiting re-appeared; epigastric pain intensified, red papules appeared in the area of head and lower extremities. Concilium was conducted, diagnosis: acute pancreatitis. Pancreatonecrosis? Duodenal ulcer in the stage of exacerbation. Intoxication syndrome. DIC-syndrome. Community-acquired right-sided lower lobe pneumonia, RFo. Myocardial dystrophy. Hepatolienal syndrome. Varix dilatation of the lower extremities.

Examination by the surgeon – no acute surgical pathology was found.

Approximately at 13:00, the patient developed pain in the muscles and joints. The patient was examined by the neuropathologist: on assessing the neurological status, the stiffness of the muscles in the neck is absent, strength and muscle tone are preserved. Computer tomography of the brain was recommended. The infectiologist assigned a blood test for leptospirosis, brucellosis, pseudotuberculosis, intestinal yersiniosis, blood sterility for three times, to clarify the diagnosis. At 2:00 pm the patient's condition deteriorated, the patient was transferred to ICU.

On examination: blood sugar 11.0 mmol/L; urine diastase – 64 units; blood α-amylase – 36 units/l; blood group and Rh factor 0 (I) Rh – negative; ECG: heart rate – 165 per 1 min., atrial flutter with regular conduction 2:1. Ventricular arrhythmia. Electrical axis of the heart is horizontal. Disrupted processes of repolarization of the posterior – lateral area of the left ventricle. Ultrasonography of the abdominal cavity organs: signs of diffuse changes in the liver, hepato-spleenomegaly, chronic cholecystitis with congestive events, chronic pancreatitis. Nephropathy, urine acid diathesis. Aneurysm of the supra-renal aorta. Intestinal meteorism. CT of the abdominal cavity organs: CT signs of hepatosplenomegaly, hepatosis; congestive gallbladder, chronic cholecystitis, chronic pancreatitis; salt diathesis; increased mediastinal and ileac left lymph nodes; atherosclerosis of the aorta and ileac arteries; deforming spondylosis, spondylarthrosis, supposedly spondilodiscitis in L5 – S1; CT of the brain: CT signs of cerebral atherosclerosis, dyscirculatory encephalopathy with the phenomena of moderate cerebral atrophy, cysts of the right sinus of the nose.

Treatment with detoxification drugs was continued, amikacin 0.5 g / i.m. 2 times a day, sodium chloride 0.9% – 400.0 ml, arginine glutamate 40% – 10.0 ml i.v. once a day, pantoprazole 40 mg i.v. once a day, meropenem 1.0 g i.v. once a day, enoxaparin sodium 0.4 s/c once a day.

On 13.09.17, in the objective status of patient, neurological symptoms began to increase: pain in muscles, joint, lower extremities intensified. Re-examination by the neurologist: stiffness of neck muscles (++), Kernig's symptom (++) on both sides. Re-examination by the hospital infectiologist and regional infectious disease doctor. Diagnostic lumbar puncture, analysis of blood and liquor for herpes virus 1 and 2 types, cytomegalovirus, Epstein–

Barr virus were assigned. Examination by the surgeon due to varicose veins of the lower limbs: acute surgical pathology not found. Varicose veins of the lower extremities without manifestations of thrombosis. Consultation of the otorhinolaryngologist: distortion of the nasal septum with nasal breathing disorder. A lumbar puncture was performed, 1.0 ml of whitish cloudy substance was taken.

On examination: results of serological blood tests, antibodies to pathogens of leptospirosis, brucellosis, pseudotuberculosis, intestinal yersiniosis – not found. In blood analysis, malarial plasmodium is not detected. Analysis of feces and urine for salmonella is negative. PCR Herpes simplex virus 1 and 2 types (blood, qualitative definition) – not detected. Herpes simplex virus 1 and 2 types (liquor, qualitative definition) – not detected. Herpes virus type 6 (blood, quantitative determination) –not detected. Cytomegalovirus (blood, qualitative definition): cytomegalovirus not detected. Cytomegalovirus (liquor, quantitative determination) – not detected. Epstein-Barr virus (blood, quantitative determination): Epstein-Barr virus (Lg) – 3.59, Epstein-Barr virus (copies) – 3.92x10^3. Epstein-Barr virus (liquor, quantitative determination) – not detected. Blood test for sterility – aerobic bacterial flora has not been detected. Ultrasound of the great vessels of the lower extremities: varicose enlargement of the subcutaneous veins of both lower extremities, postthrombophlebitic syndrome of the subcutaneous veins of the left leg, chronic venous insufficiency. FGDS: erythematous gastropathy. Echocardiological study: US – signs of decreased contractility of the myocardium, left ventricular enlargement, moderate fibrosis of the MV and AV, additional chord in the left ventricle (ejection fraction – 49%). Concilium was conducted; preliminary diagnosis: Sepsis. Community-acquired bilateral polysegmental pneumonia, RF 0 – I. Secondary bacterial meningitis. Hepatolienal syndrome. Aneurysm of the abdominal aorta. Varicose veins of both lower extremities. Postthrombophlebitic syndrome of the veins of the left shin. Chronic venous insufficiency.

The patient continues to receive detoxification therapy, it is recommended to add levomycetin succinate 1.0 g 3 times a day i.v., metronidazole 500 mg – 100.0 ml once a day i.v., fluconazole 200 mg 1 once a day i.v.

As of 14.09.17, the patient's condition is severe. Hemodynamics is stable. The lumbar puncture is reconducted. Examination by the otorhinolaryngologist: taking into account the CT of 12.09.17, and the neoplasm in the right maxillary sinus, the diagnostic puncture is recommended. The content of the sinus is fluid 1.5 ml, no pathological secretions. After the puncture in the sinuses of the nose, a solution of dioxidine 1%-2.0 ml was administered. Consultation by the neurologist: rigidity of the neck muscles increases (+++), Kernig's symptom (+++) on both sides, upper and lower Brudzinski's symptom.

Consultation by the traumatologist to exclude the source of infection in the joint. Diagnosis: endoprosthetic condition of the left hip joint, no pathological changes were detected.

On examination: CBC: Hb – 127 g/l, erythrocytes – 4.0x1012/l, platelets – 220x109/l, color index – 0.95, leukocytes – 34.1x109/l, ESR – 38 mm/g, leukocyte count: stab – 19%, segmented – 70%, lymphocytes – 8%, monocytes – 2%, toxic granular neutrophils, Ht – 40%; ECG: heart rate – 105 per 1 minute, sinus rhythm resumed. Electrical axis of the heart is horizontal. Disrupted processes of repolarization on the posterior-lateral side of the left ventricle. CSF smear by Ziehl-Nielsen: acid-resistant bacilli were not found. CSF clinical analysis: 1.0 ml of whitish turbid substance, protein – 1.47 g/l, cytosis – 950 in 1 mm 3 (mostly neutrophils), after centrifugation, supernatant fluid – clear, without color; precipitate – white; microscopic sediment – leukocytes on ½ per HPF, erythrocytes – 4-6 per HPF, endothelium – occasionally, NA reaction – positive (+++), glucose – 6.9 mmol/l. Oncologic panel (oncologic oncomarkers) total prostate-specific antigen – 2.86 ng/ml (norm up to 4, 0 ng/ml). Blood test for IgG and IgM antibodies: Borrelia burdorferi, IgG antibodies – 0.29 (negative), Borrelia burdorferi IgM antibodies – 0.12 (negative). Analysis of excretions from the right sinus of the nose for the microflora sensitivity to antibiotics – Acinetobacter 2.5 x 104 sensitive only to piperacillin/tazobactam, not sensitive to other antibiotics. Blood test for sterility – aerobic bacterial flora has not been detected. The patient's treatment has not been changed.

15.09.17: The patient's condition is severe. Level of consciousness: deep sopor. Persisting increase of body temperature up to 38.50C, papules on the skin of the trunk, the lower limbs, positive Kernig's and Brudzinski's symptoms. Re-examination by the regional infectiologist after lumbar puncture results, diagnosis of sepsis, with damage to the lungs (bilateral segmental pneumonia, RF II), secondary purulent meningoencephalitis. After concilium, the diagnosis was made: Sepsis. Community-acquired bilateral polysegmental pneumonia, RF I. Secondary bacterial meningitis. Hepatolienal syndrome. Multiple organ failure syndrome. Aneurysm of the abdominal aorta. Varicose veins of both lower extremities. Postthrombophlebitic syndrome of the veins of the left shin. Chronic venous insufficiency. Endoprosthetic condition of the left hip joint. It was recommended to repeat lumbar puncture and conduct dermatologist's consultation. Diagnosis of the dermatologist: toxicoallergic dermatitis.

On examination 15.09.17: CBC: Hb – 131 g/l, erythrocytes – 4.0 x 1012/l, platelets – 200 x 109/l, color index – 0.98, leukocytes – 31.7 x 109/ l, ESR – 47 mm/g, leukocyte count: stab – 8%, segmented – 83%, lymphocytes – 6%, monocytes – 2%, toxic granular neutrophils, hypersegmented neutrophils, Ht – 39%; blood sugar – 6.6 mmol/l. Urine analysis: color – light yellow, reaction – acidic, specific gravity – 1023, transparency – cloudy, bile pigments – negative, protein – 0.183 g/l, sugar – nil, microscopy: mucus – elevated, epithelium – rarely, leukocytes – 10-12 per HPF, red blood cells – 6-8 per HPF, cylinders – 0-2 per HPF. Bacterioscopy of fauces material – m/f – insignificant coccal, gram-negative. CSF analysis by gram staining: m/f – insignificant coccal, gram-negative. ECG: heart rate – 171 per 1 minute, atrial flutter with regular conduction 2:1. Blood sterility analysis for aerobic bacterial flora was not detected. Ventricular arrhythmia. Electrical axis of the heart is horizontal. Diffuse disturbance of repolarization processes in posterior-lateral area of the left ventricle. Ultrasound of the abdominal cavity: US signs of diffuse changes in the liver and hepato-splenomegaly, chronic cholecystopancreatitis. Nephropathy, uratic diathesis. Bilateral hydrothorax. Aneurysm of the abdominal aorta. Intestinal flatulence.

It was recommended to amplify the treatment with vancomycin hydrochloride 1.0 g 2 times a day i.v., fresh-frozen plasma 300.0 ml i.v. once a day, albumin 100.0 ml, linex (drops) 2 ml 3 times daily, sodium chlorine 0.9%

– 200.0 ml, lioliv 1 vial (containing lecithin – standard 320 mg, antral – 4.2 mg) i.v. once a day.

16.09.17: The patient's condition is severe. Level of consciousness: deep sopor. Productive contact is not available. On ECG: atrial flutter, heart rate 150-160 per minute. Consultation by the cardiologist: Sepsis. Secondary infectious myocarditis, pericarditis. Paroxysmal form of atrial fibrillation (12.09. – 14.09.17, from 15.09.17) 2:1 HF II A with reduced left ventricular systolic function. Aneurysm of the suprarenal aorta (ultrasound study as of 12.09.17). The treatment was supplemented with glucose 5% – 200.0 ml, cordaron 30 0 mg i.v.

17.09.17: The patient's condition is severe. The patient is conscious, contact is available. Hemodynamics is stable. Re-examination by the neurologist: stiff neck muscles (++), Kernig's symptom is negative. I/M antistaphylococcal immunoglobulin 200 IU was administered. Treatment has not been changed.

18.09.17: The patient's condition is severe. The patient is conscious, contact is available. The patient developed swellings of the upper and lower limbs, stiffness of the neck muscles decreased (+ –). Concilium was conducted: Sepsis. Community-acquired bilateral polysegmental pneumonia, RF I. Secondary bacterial meningitis. Hepatolienal syndrome. Multiple organ failure. Aneurysm of the abdominal aorta. Secondary infectious myocarditis, pericarditis. Paroxysmal atrial fibrillation form (12.09. – 14.09.17, from 15.09.17) 2:1 HFIIA with reduced left ventricular systolic function. Aneurysm of the suprarenal aorta. (US of 12.09.17). Varicose veins of both lower extremities. Postthrombophlebitic syndrome of the left leg. Chronic venous insufficiency. Condition after the left hip joint endoprosthetics. Deflected nasal septum with nasal breathing disorder. Cysts of the maxillary right sinus. Diagnostic puncture of the right maxillary sinus (14.09.17). Toxicoallergic dermatitis.

On examination: echocardiography – reduced myocardial contractility, increased left portions of heart, fibrosis of MV and AV cusps, hypokinesis of interventricular septum, additional chord in the left ventricle, hydrothorax to the left (ejection fraction – 47%). On chest radiograph in horizontal position: non–standard projection with dynamic frequency, as compared to 08.09.17, negative dynamics. In the projection of both lung fields from level II of intercostal space to the bottom right - decreased pneumatization of lung tissue. The roots are not differentiated. The heart is enlarged in cross section. Bacterial inoculation from the nose for sensitivity to antibiotics: pathogenic bacterial flora was not found; coagulogram: prothrombin – 61.0%, fibrinogen – 2.78 g/l.

I/M antistaphylococcal immunoglobulin 200 IU was administered. Treatment has not been changed.

19.09.17: The patient's condition is severe. The patient began to develop respiratory and cardiovascular failure. Hemodynamic instability.

On examination: CBC: Hb – 120 g / l erythrocytes – 3.8 x 1012/l, tr. – 360 x 109/l, color index – 0.94, leukocytes – 21.3x109/l, ESR – 40 mm/h, leukocyte count: stab – 5%, segmented – 85%, lymphocytes – 7%, monocytes – 8%, Ht – 37%; blood sugar – 11.2 mmol/l; biochemical blood assay: bilirubin – 24.0 mg/dL, conjugated – 4.0 mmol / l., unconjugated – 20.0 mmol/l., ALT – 22 U/L, AST – 26 U/L, creatinine – 70 mmol/l., urea – 8.7 mmol/l. Total protein – 42 g/l, potassium – 3.83 mmol/l, chlorine – 108.7 mg/dL, calcium – 1.18 mmol/l. Urine microflora for the sensitivity to antibiotics – aerobic bacterial flora was not found. Analysis of CSF for microscopy – m/f insignificant coccal gram (negative). Clinical analysis of CSF: 0.5 Ml of slightly xanthochromic substance, protein – 0.37 g/l, cytosis – 300 in 1 mm3 (mainly neutrophils), after centrifugation supernatant fluid – transparent, slightly xanthochromic; sediment – red color; microscopic sediment – leukocytes 10 – 12 per HPF, erythrocytes – throughout per HPF (not changed), endothelium – occasionally. Analysis of stool microflora – pathogenic microflora was not found. Blood tests for sterility – aerobic bacterial flora not found. ECG: heart rate – 161 per 1 min. Atrial tachyarrhythmia, ventricular arrhythmia. Electrical axis of the heart is not deviated. Diffuse disturbance of myocardium repolarization. Spiral CT of the pelvis and feet. In a series of CT scans in axial projection and images obtained by multiplanar and 3D reconstruction, against the background of diffuse osteoporosis there is a condition after surgical treatment (artificial hip joint on the left). There are sclerosing processes and cystic transformation of the right acetabular roof (coxarthrosis phenomenon). In the soft tissues: diffuse infiltrative changes. In the pelvis – a small amount of effusion. Ileac lymph nodes to the left up to 17 mm, inguinal – up to 12 mm, to the right – not enlarged. Against the background of diffuse osteoporosis, there are sclerosis and cystic transformation of the subchondral plates of the left talocalcaneus joint (deforming arthrosis phenomenon), in the rest – bones of feet with no apparent destruction, correct proportion. In the soft tissues: diffuse infiltrative changes.

20.09.17: Against the background of sepsis, septic pancarditis with arrhythmias by the atrial fibrillation type 2:1 HF II A – B with reduced contractility of the myocardium, the patient developed cardiac arrest, and sustained clinical death. Resuscitation activities were carried out for 30 minutes, unsuccessfully. At 5:00, natural death was pronounced. The final diagnosis: Sepsis. Community-acquired bilateral polysegmental pneumonia, clinical group III RF I. Secondary bacterial meningitis secondary infectious myocarditis, pericarditis. Tachysystolic form of atrial fibrillation (12.09 – 14.09.17 from 15.09.17) 2:1 HF II A with reduction of left ventricular systolic function. Aneurysm of the abdominal aorta (ultrasound study as of 12.09.17) with abdominal ischemia syndrome, and pancreatitis. Intoxication. Hepato-splenomegaly. Septic nephropathy. Multiple organ failure. Pulmonary edema. Cephaledema. AHF, APF. Bilateral coxarthrosis. Condition after the left hip joint endoprosthetics (2014). Arthrosis of the left ankle joint. Toxicoallergic dermatitis. Varicose veins of both lower extremities. Postthrombophlebitic syndrome of the veins of the left upper leg. Chronic hepatitis. Chronic pancreatitis.

20.09.17: Forensic diagnosis – Community-acquired bilateral pneumonia. Induration of left and right lungs. Klebsiella pneumoniae is detected in the bacteriological study of lung fragment. Sepsis. Klebsiella pneumoniae is observed in bacteriological examination of blood and internal organs. Serous-proliferative arachnoiditis, encephalitis, epicarditis, hepatitis. Focal interstitial myocarditis with focal subendocardial acute ischemia, dystrophy of cardiomyocytes. Multiple organ failure. Edema, venous plethora of the brain. Severe renal parenchymal dystrophy with focal necrobiosis and necrosis of epithelial tubules. Delipidization of endocrinocytes of the adrenal cortex. Dystrophy and dissolution of vessel walls in viscera with irritation and desquamation of epithelium. Atherosclerotic coronarosclerosis in the stage of atheromatosis with stenosis up to 1/2. Parenchymal dystrophy, venous

plethora of internal organs. The condition is reported after providing medical care.

Thus, considering the clinical case of sepsis, one should emphasize that it is important to collect detailed medical history (especially if broncho-pulmonary system is involved), to consider where the patient works and his/her profession (especially for health-care workers, and other categories of people who work with organized groups of population). It is advisable to assume a nosocomial infection as a pathogen. Hence, one must bear in mind that strains of multiresistant nosocomial microorganisms can act as pathogen, and in this case it is necessary to choose an adequate antibiotic of broad spectrum. It is essential to take into account that Klebsiella pneumoniae is an extremely important gram-negative opportunistic pathogen that causes primarily urinary tract infections (inspiratory infections and bacteremia), due to the nature of its structure and metabolic processes. Strains of multiresistant Klebsiella pneumoniae, insusceptible to one of the latest antibiotics – colistin, – have already appeared. The results of bacterioscopic study during two hours are of particular importance, since they make it possible to predict the pathogenic flora and choose the correct antibiotics.

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