

Case From Practice Features of the Covid-19 Course with Concomitant Diseases

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Abstract: When studying the pathogenesis of a new coronavirus infection, hemorological disorders have a significant impact on the course and outcome of the disease. It is known that chronic diseases of the cardiovascular and respiratory system, concomitant infectious diseases lead to severe trends and complications of COVID-19. Consequently, in each case, each patient needs to study the interaction of various factors for the flow and outcome of the disease.

Examine the activity of the hemochaguanse system in one case of practitioners in a patient COVID-19 amid related diseases.

Evaluation of the functions of the hemokoaguagulation system in one case of practitioners in a patient COVID-19 Against the background of concomitant diseases, the history of the disease of the patient retrospectively and promising was studied.

Analyzed by a clinical case of one patient from practice. During the study, clinical manifestations and laboratory readings have a patient with COVID-19 described in detail. Despite the late treatment on the outpatient and inpatient stage, with the help of timely treatment, the rapid flow of the disease was suspended without complications to cure a patient with COVID-19.

Patients with somatic diseases adding oral anticoagulants to the treatment regimen prevents unpleasant consequences and serious flow SARS-COV-2. Bearing in mind damage in different parts of the coagulation system of blood in the pathogenesis in patients with COVID-19, the purpose of adequate therapy with anticoagulants has a special place when treating patients.

Keywords: COVID-19, anticoagulants, outpatient treatment, laboratory research.

Introduction

Relevance. Based on the analysis of the pathogenesis of the novel coronavirus infection (COVID-19), it has been found that it has a significant impact on microcirculation disorders and thrombosis processes in the body. [1]. This is also confirmed by research studies published in various publications [2,3]. While the need for injectable anticoagulants in severe cases is a key component of COVID-19 treatment, the issue of antithrombotic therapy in less severe cases often remains a major challenge in practice. In mild and asymptomatic cases of COVID-19, most patients over 65 years of age are treated at home, in outpatient settings. The use of parenteral anticoagulants in outpatient settings is not advisable. At the same time, taking into account the characteristics of the course and complications of this infection, it is important to remember that the disease can quickly worsen and the patient's condition can worsen [4]. In outpatient treatment of patients, all components of the treatment regimen should be carefully reviewed. The majority of patients with COVID-19 have somatic pathology. The number of such pathologies increases

among the elderly. At the same time, chronic diseases of the cardiovascular system can lead to a severe course of the disease and adverse consequences not only in COVID-19, but also in other infectious diseases. Therefore, in each case, it is necessary to study the interaction of the various components of a comprehensive treatment program, assess the benefits and potential risks of the drugs used. There are indications for the continuous use of anticoagulant drugs in patients with a history of persistent and paroxysmal atrial fibrillation, venous thrombosis, pulmonary embolism, certain surgical diseases, diseases of the nervous system, and patients with limited mobility due to trauma. However, there is no generally accepted scheme of antithrombotic treatment regimens for outpatient treatment of patients with COVID-19. In general, the manifestation of DVT syndrome in COVID-19 is classical, with the development of hemorrhages in the form of not only thrombosis, but also tissue hemorrhages and erythrocyte diapedesis.

Anticoagulants have shown high efficacy in treating systemic inflammatory syndrome in the setting of COVID-19, but their use should be judicious. Anticoagulants should be used in COVID-19 in combination with anti-inflammatory and antibacterial therapy, taking into account laboratory monitoring of the dynamics of thrombus formation.

Anticoagulants are a pharmacotherapeutic group of drugs that affect hemostasis and are used to prevent and treat arterial and venous thrombosis and thromboembolism. Hypercoagulability is observed in various diseases. Therefore, anticoagulants are widely used in various clinical areas - cardiology, phlebology, cardiovascular surgery, dermatology, urology, facial surgery, neurosurgery, pulmonology. Interest in anticoagulants has increased against the background of the spread of SARS-CoV-2 coronavirus infection, in which coagulopathy develops along with respiratory disorders. Coagulopathy associated with COVID-19 is characterized by an increase in D-dimer levels, hyperfibrinogenemia, thrombocytopenia, increased thromboembolism, and, as a result, the development of disseminated intravascular coagulation [1,6]. Drugs with anticoagulant activity have been included in the complex therapy of COVID-19 [7,8].

Research objective: To assess the function of the hemocoagulation system in a patient with COVID-19 in a single case of surgery against the background of concomitant diseases.

Research materials and methods. Based on the study of the function of the hemocoagulation system in a patient with COVID-19 in a single case of surgery against the background of concomitant diseases, the medical history of one patient was studied retrospectively and prospectively.

Research discussion.

Clinical case: Patient Anora, 35 years old. Married, 45 years old with a child. Works as a warehouseman. Complaints: cough, fever, pain in the joints of the hands and feet, dizziness, headache, itching and soreness of the back wall of the throat, tightness and discomfort in the chest.

History: bradycardia, varicose veins of the legs, bronchial asthma, osteochondrosis, and UTI. She takes combined contraceptives for contraception. On 16.04.20. the patient's mother was discharged from the distribution center with a confirmed diagnosis of COVID-19. On 29.04.20, the patient developed the following complaints, which gradually worsened: weakness, dizziness, headache, itching and burning of the back of the throat, tightness and discomfort in the chest. Heaviness in the chest, difficulty breathing, shortness of breath, wheezing, and wheezing were observed. The patient's complaints disappear when the patient lies on his stomach, and the same condition is observed when he lies on his back. The patient feels better in a comfortable position, lying down with a high pillow. On 30.04.20, he had diarrhea once. During these days, the patient's body temperature did not rise once. On 06.05.20, the intensity of pain in the back of the chest increased, the patient could not sleep at night. ABP was kept at around 80–90/40–50. Pulse was slightly slow, 50–60 beats/minute, heart rate was 20 beats/minute. The patient was treated at home on an outpatient basis under the supervision of a polyclinic doctor. The patient received zinc, ascorbic acid, and azimak at home. The polyclinic doctor did not pay attention to the

patient's concomitant diseases. He did not prescribe additional laboratory tests. Because the house was warm, he slept with the windows open. The general weakness of the patient increased, weakness in the legs, headache, dizziness, numbness, drowsiness, sleep disturbance, apathy and abulia appeared. On 07.05.20, the body temperature increased - 37.3. 08.05.20. on the day the patient was panting and wheezing. Wheezing increased to whistling, increased headache, debilitating lassitude, migrating pain in the chest, more on the left (left scapula, left arm, radiating to the epigastric and subcostal areas). AB 70/40 mm wire. us., Pulse - 42 times/minute. The temperature is 37.8. up to and held. After that, the patient was called by a doctor from the polyclinic and underwent repeated examination. According to the doctor's recommendation, laboratory tests were performed.

Analysis results:

Complete blood test: Nv 88 g.l, erythrocyte sedimentation rate - $3.0 \times 10 \times 12$, L - $15 \times 10 \times 9$, ESR - 16 mm.s

Blood clotting status: start 2-10, end 2-45

D-dimer 1925 ng / ml (normal up to 440)

09.05.20. according to the results of the analysis, a repeat examination was conducted by the polyclinic doctor. The doctor suspected an attack of bronchial asthma. The fact that the ABP was syst. 80/70 mm Hg. was normal and the hematocrit, platelets, and high D-dimer values in the general blood test were ignored, the treatment regimen was changed and home treatment was recommended, a smear PCR for COVID-19 was taken. A chest CT scan was ordered. By evening, the body temperature had risen again to 38.2 C.

09.05.20. Since there was no change in the dynamics of the patient's general condition, he was admitted to a specialized hospital for COVID-19 treatment.

During the objective examination in the hospital: Temperature 37.2. Saturation 97%. ABP 90/50 mm Hg., HR 50–60 beats/min.

CT results: CT I. Lung damage was estimated at 10–15%.

ECG results: diffuse changes in the myocardium;

D-dimer 2950ng/ml (normal up to 250);

PCR results from the throat were found to be positive.

The patient was diagnosed with: Novel coronavirus infection. COVID-19. Bilateral pneumonia. Severe course. NE grade I.

In accordance with the above diagnosis, the doctor immediately prescribed the necessary treatment measures. The treatment measures prescribed in the hospital: Clexane 6000 IU/0.6ml p/k 2 times/day. (treatment dose per 60 kg of body weight), heparin was prescribed intravenously through an infusomat in the required dose. Cefepime 1.0 grams 2 times/day. 7 days, ascorbic acid 10.0 intravenously for 7 days. Fluconazole 150 mg 1 time every 3 days of antibiotic therapy, drinking more fluids. In addition, zinc 2 times, trombopol 75 mg 1 time, vitamin D 1 tablet 2 times were prescribed. After the first treatment, the next day, breathing improved slightly, the brain became clearer, and the pressure in the chest decreased slightly. After the treatment, shortness of breath at rest disappeared, weakness remained, shortness of breath and chest pain appeared only when standing or straining. The patient had a rapid pulse and ABP. Discomfort was observed in the heart area. On 11.05.20., a blood test was performed on the recommendation of the attending physician.

According to the results of the analysis:

1. Troponin 130.7 ng/l (normal up to 15.6);
2. D-dimer 930 ng/ml.

3. General blood analysis: Hemoglobin 88 g/l, erythrocyte 3.0, leukocyte $3.78 \times 10^9/l$ (normal 4.50–11.00), eosinophils 6.00% (normal 1.00–5.00), lymphocytes 47.00% (normal 19.00–37.00), neutrophil index 1.44 $\times 10^9/l$ (norm 2.10–8.89).

11.05.20. In the evening, the patient developed pain in biceps muscles. The temperature was kept around 37.2 C.

Added to the above prescribed treatments: troxevasin topically for 4 weeks, Asparkam 1 tab. 3 times a day for 4 weeks, Milgamma 2.0 ml m/o 1 time a day for 10 days.

Taking into account the high troponin index, the following was prescribed:

1. ECG (05/13/20) - Diffuse changes in the myocardium.
2. Echo-KG (05/13/20) - mitral and tricuspid valve prolapse I degree.
3. Ultrasound (05/13/20) conclusion: Varicose veins of the lower extremities, valvular insufficiency in deep veins).

After the above treatment procedures, on 14.05.20. the swelling and pain in the veins in the legs disappeared. The patient was prescribed an examination by a cardiologist and vascular surgeon. The above treatment procedures were added to the necessary treatment measures.

19.05.20. The patient's general condition was assessed as satisfactory in dynamics. Therefore, Clexane was switched to Xarelto 15 mg 2 times / day. (treatment dose) (after ten days of treatment). Zyrtec 1 tab. / day. was recommended. A change in urine color to pink was observed (Xarelto improves glomerular filtration). 23.05.20. the red color improved. Temperature 36.7. 09.06.20. The dose of Xarelto was reduced (after a three-month treatment dose) to 20 mg 1 time per day (prophylactic dose). Temperature 36.5. Blood analysis during the illness for a month and a half showed: eosinophilia (6–8%), neutropenia/agranulocytosis (segment nuclear neutrophils 35–37%, absolute neutrophil count around $1.50 \times 10^9/l$) - high risk of hypercytokinemia; leukopenia ($3.5\text{--}4.0 \times 10^9/l$), lymphocytosis (around 45.00%), increased hemoglobin (116 g/l); relative increase in cholesterol, decrease in ALT, AST, uric acid; episodic increase in the AST index to the upper limit, periodic increase in the prothrombin index to the upper limit of the norm, and persistence of the D-dimer index at high levels for 4 months. Xarelto 20 mg 1 time/day. Vazirtek 1 tab./day is being treated. The patient stopped working for a certain period of time. Despite the late start of treatment, with the help of timely treatment prescribed by an experienced doctor, the patient's disease was stopped and the patient's COVID-19 disease was cured without complications.

Conclusion: In patients with somatic diseases, the addition of oral anticoagulants to the treatment regimen reduces the risk of severe SARS-CoV-2 disease and prevents its adverse consequences. Given the damage to various parts of the blood coagulation system in the pathogenesis of COVID-19, it is advisable to conduct adequate anticoagulant therapy in such patients.

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