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MANAGEMENT AND TREATMENT OF MILD FORMS OF COVID-19

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ABSTRACT
This article substantiates the possibility of treating mild forms of COVID-19 at home, taking into account the epidemiological situation. As a result of the studies, it was found that clinically COVID-19 is more often mild in age groups. The possibility of care and treatment of mild forms of COVID-19 at home has been established.

KEYWORDS: COVID-19, epidemiology, treatment, light forms.

INTRODUCTION

At the end of December 2019, in the city of Wuhan, located in one of the central provinces of eastern China, information about an outbreak of acute pneumonia appeared.[1] A virus belonging to the Coronaviridae family was isolated from the patients, identified as a new virus with a unique genome and capable of infecting humans. The World Health Organization (WHO) has designated the identified virus as a new coronavirus - SARS-CoV-2, and the disease it causes as COVID-19. The new virus began to spread rapidly in China and the countries of Southeast Asia, and then, with the help of aircraft, to countries in Europe, Asia, Africa and America. In a short period of time, Covid-19 was introduced to 114 countries of the world. WHO, after assessing the epidemic situation in the world, announced the beginning of the COVID-19 pandemic on March 11, 2020.[2,3,4,5]

The true mortality rate is currently inaccurate, however, according to available information, mortality (that is, the number of deaths attributed to the number of registered cases of the disease) ranges from 3-4%, and the proportion of deaths from infection (the number of deaths attributed to the number of persons with infectious diseases) below.[6,7,8]

According to available information, 80% of cases in adults of COVID 19 are characterized by mild or asymptomatic course, 15% - by severe course, which requires oxygen therapy, and in 5% of cases, the disease becomes extremely severe and requires mechanical ventilation.[9,10,11] The emergence of the disease caused by the new coronavirus (COVID-19) has posed challenges for healthcare professionals related to the rapid diagnosis, clinical management and treatment of patients with this infection. Taking into account the available data on this disease and the characteristics of the transmission of the pathogen, WHO recommends triage of all patients with suspected COVID-19 infection. At the same time, with symptoms of a severe course of an acute respiratory infection, when you first seek medical help, proceed to emergency treatment. For people with mild disease, hospitalization may not be required if there is no risk of rapid deterioration.[12]

Clinical features[13]

The incubation period ranges from 2 to 14 days, on average 5-7 days. COVID-19 is characterized by the presence of clinical symptoms of acute respiratory viral infection: increased body t (from 83% to 90%); cough (dry or with little phlegm) in 80% of cases; fatigue (44% to 70%). It was also found that among the first symptoms there may be myalgia (from 11% to 35%), loss of appetite (from 40% to 84%), headaches (from 8% to 13.6%), diarrhea (3%), nausea (5.0%). These symptoms can also be observed in the absence of an increase in body temperature.

The diagnosis is established on the basis of clinical examination, data from the epidemiological history and laboratory results.

1. Detailed assessment of all complaints, medical history, epidemiological history.

2. Physical examination with the establishment of the severity of the patient's condition, necessarily including: assessment of the visible mucous membranes of the upper respiratory tract, auscultation and percussion of the lungs, palpation of the lymph nodes, examination of the abdominal organs, thermometry, pulse oximetry, measurement of heart rate, blood pressure, respiratory rate movements.

Based on the results of the complex of clinical examination, the question of the type of medical care and the amount of additional examination is being decided.

Laboratory diagnostics includes: Detection of SARS-CoV-2 RNA using nucleic acid amplification (PCR) methods.

Detection of antibodies of class M and class G immunoglobulins to SARS-CoV - 2 (ELISA).

The volume, timing and frequency of laboratory tests depend on the severity of the disease. The mild course of the disease with the observation of the patient on an outpatient basis does not require additional laboratory tests.

Instrumental research methods[14]
- Plain radiography of the lungs,
- Computed tomography of the lungs (CT).

Purpose of the study
Justification of the possibility of treating mild forms of COVID-19 at home, taking into account the epidemiological situation.

MATERIALS AND METHODS
We conducted a pilot study of 30 patients with mild forms of COVID-19 aged 20 to 60 years. The diagnosis was confirmed by SARS-CoV-2 RNA PCR. General clinical and instrumental research methods (CT of the lungs) were carried out.

RESULTS
In Uzbekistan, on March 9-15, 2020, the first laboratory-confirmed case of COVID-19 in the country was detected. A set of quarantine, preventive and anti-epidemic measures was taken in a timely manner, the country did not allow an uncontrolled epidemic rise in the incidence of COVID-19 to occur. This made it possible to gain time for equipping the material and technical base of infectious diseases and laboratory services, training personnel, deploying an additional number of infectious and observational beds.[15,16]

From March 9 to August 2, 2020, 25,828 laboratory-confirmed COVID-19 patients were detected in Uzbekistan, which amounted to 0.08% of the total population. Of the identified COVID-19 patients, men accounted for 65.6%, women - 34.4%. Of the total number of patients, children and adolescents aged 0-19 years, there were 13.2%, patients aged 20-39 years - 55.8%, patients at a mature age 40-59 years old - 25.6% and elderly people 60 years and older - 5.4%.[17,18,19] In a comparative assessment of the severity of the course of the disease, it was found that in most patients (83.0%) the disease was asymptomatic and mild, the disease of moderate severity was diagnosed in 13.7% of patients.[15,18,19] The severe course of the disease was determined only in 3.3% of patients. In the age aspect, the distribution of mild forms was as follows: 0-19 years old - 90.1%, 20-39 years old - 86.7%, 40-59 years old - 79.2%, 60 years and older - 46.0%. COVID-19 proceeded in a severe clinical form 1.6 times more often ($p < 0.001$) in men than in women. In most children and adolescents (90.1%), COVID-19 was asymptomatic and mild, severe cases were noted only in 0.6% of cases. In elderly people, compared with younger patients, there were significantly fewer asymptomatic and mild cases of the disease (46.0%), the disease was more often moderate (30.7%) and severe (23.3%).[15,16,18,19]

Taking into account the above and taking into account the epidemic situation, the issue of monitoring and treating patients with a mild form of COVID-19 at home was considered.

Deciding on home observation and treatment
Patients with mild disease may not need hospitalization; however, in all suspected or confirmed cases, isolation is necessary to contain further transmission of the virus. The decision about where to be monitored in case of suspected COVID-19: in a medical institution or at home, should be made individually, in each case, and depends on:
- Clinical presentation (fever <38°C, cough, general weakness, loss of appetite, sore throat, nasal congestion, headache).

- No need for supportive therapy (detoxification agents);

- Potential risk factors for the development of severe complications (age, concomitant chronic diseases with systemic manifestations);

- If there are appropriate home conditions (a separate, ventilated room for the patient, the presence of a young or middle-aged caregiver without concomitant diseases);

- If possible to exclude contact with vulnerable co-residents (Clinical case management of COVID-19: Interim guidance May 27, 2020).

- The presence of the patient's consent to treatment at home.

Patients and their families should strictly adhere to the following guidelines.
- Isolate the patient in a separate, well-ventilated room.

- Limit the patient's movement around the house and try to minimize his stay in the same room with other people. Ensure that common areas are well ventilated.

- Family members should stay in another room or, if this is not possible, be at least one meter away from the sick person.[12]

- Limit the number of people caring for the patient (one person without chronic diseases or immunodeficiency conditions).

- It is necessary to exclude visits of visitors to the patient until the moment of complete recovery and the disappearance of any signs and symptoms of the disease.

- Take measures to ensure hand hygiene after any contact with the patient or with objects around him.[20]

- It is advisable to use disposable paper towels to dry your hands after washing with soap and water. If not available, clean cloth towels should be used and replaced as soon as they become damp.

- The patient should wear a medical mask whenever possible, which will prevent the spread of secretions from the respiratory tract.[20] If a person cannot stand the presence of a medical mask on his face, he must strictly follow the rules of respiratory hygiene: cover his mouth and nose when coughing or sneezing with a disposable paper napkin.

- The caregiver should wear a close-fitting medical mask whenever he is in the same room as the patient. No reuse of masks or gloves is allowed.

- Avoid direct contact with the patient's body fluids, especially with secretions from the oral cavity or respiratory tract, and with the patient's feces.

- Bed linen and cutlery should be specially selected for the patient; they should be washed with soap and water each time after use or detergent.

- Surfaces that the patient regularly touches should be washed and disinfected daily.[20]

For initial treatment, use household soap or detergent, followed by rinsing with a household disinfectant containing 0.5% sodium hypochlorite (equivalent to 5000 ppm or 1 part of 5 to 9 parts water bleach solution).

- Clothes, bedding, shower and hand towels, etc., used by the patient, should be washed by hand with ordinary laundry soap or in a washing machine with ordinary washing powder at a temperature of 60–90°C, and then dry thoroughly.[21]

When planning home care, the first step is for a trained health professional to assess the living conditions for their suitability for providing care; it is necessary for the healthcare professional to assess the readiness of the patient and family members to comply with the precautions that will be recommended for ensuring isolation at home (i.e. hand hygiene, respiratory hygiene, cleaning the premises, restrictions on movement inside and outside the home).

During the entire period of providing care at home, that is, until the symptoms of the disease completely disappear, the patient's interaction with medical professionals should be established. It is necessary to collect information on the patient's condition daily by telephone. Assess the general condition, body temperature, clarify complaints (cough, shortness of breath, weakness, sweating, diarrhea, rash, myalgia), saturation (if possible).

The basic treatment regimen prescribed for outpatients[22]

Drink plenty of fluids (at the rate of 30 ml / kg body weight).
Bromhexine 8 mg 4 times a day.
Spironolactone 50 mg in the morning
Anticoagulants: Rivaroxaban 10 mg once a day or Apixaban 2.5 mg twice a day.
Dipyridamole 75 mg 2 times a day
If fever occurs (increased $t \geq 38$ ° C)[14]
Paracetamol - for adults and adolescents weighing more than 60 kg is used in a single dose of 500 mg, the frequency of administration is up to 4 times / day. Maximum doses: single - 1 g, daily - 4 g. Maximum duration of treatment - 5-7 days.

Non-steroidal anti-inflammatory drugs are prescribed at temperatures above 38.0-38.5°C. With poor tolerance of febrile syndrome, headaches, increased blood pressure and severe tachycardia (especially in the presence of ischemic changes or rhythm disturbances), antipyretics are also used at lower numbers. Ibuprofen - children over 12 years old and adults 200-400 mg 4 times a day. The maximum daily dose may be 1600 mg.
1. Sore throat - warm frequent drinks, gargle every 3 hours, antiseptic sprays, lozenges.

2. Complex therapy of rhinitis and / or rhinopharyngitis (moisturizing / elimination drugs, nasal decongestants)
For local treatment of rhinitis, pharyngitis, with nasal congestion and / or nasal discharge, start with saline, for local use based on sea water (isotonic, and with congestion - hypertonic);

3. Complex therapy of bronchitis (mucoactive, bronchodilator and other drugs).

4. For abdominal discomfort, nausea and / or vomiting, enterosorbents are indicated (colloidal silicon dioxide and others).

5. Vitamin C 200 - 300 mg per day

6. Zinc preparations 50 mg 1 tablet 1 time per day with meals. Duration of admission is 1 month. Reappointment - 2-3 times a year.

7. Respiratory gymnastics.

It is not recommended to prescribe antibiotics for treatment or prophylaxis to patients with mild COVID-19. The widespread use of antibiotics should not be allowed, since their use can lead to an increase in the level of bacterial resistance, which will affect the burden of disease and mortality of the population during the COVID-19 pandemic and beyond.[23,24]

In the latest version of the guidelines issued by the Chinese National Health Commission for the diagnosis and treatment of COVID-19 infection and interim guidelines from WHO, they have argued against the unnecessary use of antibiotics, even broad-spectrum antibiotics.[25] They should be used in the case of an increase in procalcitonin in the case of nasocamial pneumonia or in ventilation pneumonia in the case of microbiological analysis indicating bacterial superinfection. If a fungal infection is suspected, then voriconazole is recommended for the detection of Aspergillus, and fluconazole is indicated for Candida spp.[26]

Patients with a mild form of the disease are removed from medical supervision in the absence of elevated body temperature and regression of respiratory symptoms.

If the body temperature rises again, a chest x-ray or CT is recommended. In the presence of signs of bronchitis and pneumonia, the appointment of broad-spectrum antibiotics of the cephalosporin series.

With a prolonged increase in body temperature, deterioration of health, the appearance of shortness of breath - hospitalization is indicated.

DISCUSSION

Since the end of January 2020, cases of COVID-19 have been reported in many countries of the world.[27] WHO, after assessing the epidemic situation in the world, announced the beginning of the COVID-19 pandemic on March 11, 2020.[2,3,4,5,13,28] A pandemic is dangerous in that the simultaneous infection of many people can lead to congestion of the healthcare system with an increased number of hospitalizations and deaths (Centers for Disease Control and Prevention, March 18, 2020). The epidemic will end as soon as sufficient herd immunity is developed among the population (OSDM, March 22, 2020).

To date, there is no evidence of the effectiveness of using any antiviral drugs for 2019-nCoV. As part of the provision of medical care, it is necessary to monitor the patient's condition to detect signs of clinical deterioration, such as rapidly progressive respiratory failure, and the appointment of therapy in accordance with the patient's condition. Patients infected with 2019-nCoV should receive supportive symptomatic therapy.

For people with mild disease, hospitalization may not be required if there is no risk of rapid deterioration.[12] In case of mild symptoms of the disease, the question of organizing care at home may be considered. The same principle of home care can be applied to symptomatic patients who no longer require inpatient care, or who knowingly refuse to be admitted to hospital; in addition, the need for home health care may arise in situations where hospitalization is impossible or unsafe. In any of these situations, patients with mild symptoms and no concomitant chronic diseases may be offered home treatment. This decision should be made on the basis of a thorough analysis of the clinical situation and an assessment of the patient's home circumstances in terms of the safety of his treatment at home.[29]

CONCLUSIONS

1. Clinically, COVID-19 is more often mild in the age groups 20-39 years old - 86.7%, 40-59 years old - 79.2%, 60 years and older - 46.0%.

2. Differentiation according to the severity of the disease is of great clinical importance.

3. The possibility of treating COVID-19 at home has been substantiated.

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