THE AMERICAN JOURNAL OF MEDICAL SCIENCES AND PHARMACEUTICAL RESEARCH
ISSN (e): 2689-1026 DOI: https://doi.org/10.37547/TAJMSPR/Volume02Issue07-10

Coronavirus In The World Today

Samadova Makhsuda Buriyevna,

Excellence In Public Education Of The Highest Category, Lecturer Of Biology, Academic Lyceum Under Navoi State Mining Institute, Uzbekistan

Otajonova Gavxarjon Usmonovna,

Student, Urgench Branch Of The Tashkent Medical Academy, Uzbekistan

Yerejepbayev Kuvanish Tursun Oglu,

Student, Urgench Branch Of The Tashkent Medical Academy, Uzbekistan

OPEN ACCESS

The American Journal of Medical Sciences And Pharmaceutical Research

JULY 2020

Page No.: 73-80

Volume-II Issue-VII

PUBLISHED: 30 JULY 2020

www.usajournalshub.com/index.php/TAJMSPR

Abstract

This article provides information on coronavirus infection, its origin and spread, which has reached the level of a pandemic in the world. The etiology, resistance to the external environment, epidemiology, pathogenesis, clinic, diagnosis, treatment regimen of COVID-19, which shakes the whole world, are described. The World Health Organization has provided 14 important rules for protecting against coronavirus infection, as well as recommendations for people at risk to protect themselves and not infect others.

Keywords: coronavirus, etiology, epidemiology, clinic, diagnosis, treatment, health, prevalence, recommendation, risk group

ISSN (e): 2689-1026 DOI: https://doi.org/10.37547/TAJMSPR/Volume02Issue07-10

Introduction

At the moment, according to official data provided by the World Health Organization on a daily basis from the beginning of 2020, it is a painful point for countries around the world. putting a heavy burden on every second. On January 30, 2020, it declared the spread of a new coronavirus (COVID-19) as a public health emergency of international importance. All measures and efforts today are aimed at finding a cure for it. This newly identified virus belongs to the family of "infectious viruses" that can occur in the respiratory system, from a simple cough to an acute severe respiratory respiratory syndrome. Mutations in this family of viruses occur very quickly. In 2019, the SARS-COV-2 strain of this virus appeared. The upper bouts featured two cutaways, for easier access to the higher frets. That's why scientists have named the virus **CORONAVIRUS**. The main ways in which the virus is transmitted from person to person are through coughing, sneezing, exhalation, through droplets in the mouth and nose, direct human contact, or touching the surface of a surface object touched by a person who has been exposed to the virus. In this case, the infection is spread immediately by touching the infected person's organs, such as the mouth, face, nose, or eyes. Mammals are the natural hosts of many coronaviruses that exist today. Coronaviruses of the first and second groups are viruses that cause non-severe respiratory infections in humans. The most severe clinical conditions are caused by the following viruses:

SARS-**CoV** virus (detected in China in 2002) leads to the development of atypical pneumonia or severe acute respiratory syndrome (OORS);

- **MERS**-**CoV** virus (2012 in Saudi Arabia) leads to the development of Middle East respiratory syndrome, which is characterized by acute pneumonia and renal failure.

There are enough viruses in the coronavirus family, but only six of them (seven with a new virus) can be transmitted to humans.

The Main Findings And Results

Given all of the above problems, "What is a virus?" Let's take a brief look at the question. Viruses (Latin: virus - "poison") are non-cellular forms of life that reproduce only within the cell. Viruses are tiny living things made up of nucleic acid molecules and carriers of genetic information wrapped in a protective shell. Their main feature is the proliferation of parasites in the cells of infected organs. These organs do not have their own apparatus for synthesizing molecules, so they use human and animal cells as a source for self-replication. In nature, many different viruses are known to parasitize bacteria, plants, animals and human cells.

When a virus enters a cell, it loses its genetic information and assimilates it by altering the body's genetic code. Viruses also carry genes or groups of genes between organisms.

Viruses change and mutate because they are constantly circulating in nature, resulting in new types of viruses. Under the pressure of natural selection, only the most resistant forms

ISSN (e): 2689-1026 DOI: https://doi.org/10.37547/TAJMSPR/Volume02Issue07-10

of viruses survive. It should be noted that a living organism can be infected with several viruses at once. In such cases, a new recombinant form is formed as a result of the interaction between genes between viruses. Like other viruses, the coronavirus carries its genetic material to the cells in the body. Ribonucleic acid, called ribosome, acts as a specific mechanism for the spread of this virus. This mechanism begins to produce damaged proteins. Copies of it multiply and spread throughout the body to organs that are comfortable for it, such as the lungs, intestines, and spleen. Even the smallest particle of the coronavirus can cause more serious problems. The lungs, lined with epithelial cells, are the cells that protect the mucous membrane and your body. The virus is the first to disable these protectors. It enters individual receptors on the membrane and enters its own genetic functions. It multiplies and reassembles. It is increasingly filled with new copies of the virus. Until it receives the command to self-destruct. The cell melts and releases viruses that are ready to attack the cells that follow it. viruses begin to multiply at a great rate. After about 10 days, millions of cells are damaged and the lungs are filled with billions of viruses. But this is not the biggest loss. The coronavirus now begins to attack the main victim's immune system. When the immune system comes to protect the lungs, the virus begins to infect it. The corona forces the infected immune system to scream, and the immune system activates more defenders in response. Then there is chaos in the cell. There are two main cells that cause this error. The first is neutrophils, which destroy their enemies, especially their own cells. When they enter the lungs, they kill both healthy and damaged cells. The second is the self-destructing T-Killer cells. It destroys healthy ones when they enter the lungs. Immune cells the more they do, the more damage they do. The infection caused by this virus is called COVID-19. It causes symptoms such as cough, fever and difficulty breathing. The coronavirus is a large family of viruses that contain more than 40 RNA-storing viruses.

- Divided into 2 small families:

- Letoviruses (Letovirinae)
- Orthocoronaviruses (Orthocoronavirinae)

The International Committee on Virus Taxonomy (ICTV) divides this small family of orthocoronaviruses into 4 generations:

- - Alpha coronavirus (round 11)
- - Beta coronavirus (round 9)
- - Gamma coronavirus (2 rounds)
- - Delta coronavirus (8 rounds)

Etiology: The disease is caused by coronaviruses of the genus Beta coronavirus, which store RNA and are 80-220 nm in size. There are 4 different antigens of coronaviruses. The outer shell of the virus is covered with villi. Through these villi, the virus attaches to the cell (hence the family Coronoviridae.). Viruses multiply in the cytoplasm of the epithelium of the upper respiratory tract. This virus produces many virions 4-6 hours after entering the cell.

ISSN (e): 2689-1026 DOI: https://doi.org/10.37547/TAJMSPR/Volume02Issue07-10

The virus is resistant to the external environment. In their outer shell, they bind complement in the patient's blood and in the hyperimmune serum. Respiratory and gastrointestinal coronaviruses are the most common human pathogens. Resistance of the virus to the external environment:

• The temperature on the outer surfaces of the motors is maintained at +33 ºC for up to 16 hours,

At +56 ºC the risk of infection is reduced, at 70C it dies. Chloroform, formalin, ethyl alcohol (70%) are changed by chlorhexidine (1%) - up to 2 minutes

• Can be stored in aerosol for 8-10 hours, in water for up to 9 days. Kills in ultraviolet light (339-423 mkW * s / cm² n.d., 254 nm) -2-15 minutes.

• With this in mind, they are not transmitted through food (bananas, mandarins, meat, fish, etc. (except for wild animals that carry the virus in their bodies in nature).

Coronaviruses remain active for several years when dried (+4 ºC) and frozen (-70 ºC).

• The natural reservoir of infection can be mammals, bats, snakes, monkeys, and more.

The new strain of coronaviruses is thought to have originated from genes of the COVID-19 reservoir found in bats and other unknown species (pangolin).

Epidemiology. The main source of infection is wild and sick person. The disease is transmitted by airborne droplets.

No vaccine has been developed against this disease to date.

Cases of secondary infection (from patient to healthy person) are observed among health care providers and family members of patients. In all cases, the infection was observed in close contact with the patient. The disease is most common in the elderly in the world.The presence of antibodies against the virus was detected in 80%. Depending on the season, coronavirus infection accounts for 10-35% of all upper respiratory tract infections. Coronavirus infection is most common in late fall, winter, and early spring (when rhinovirus infection is rare). **Pathogenesis**. Insufficiently studied, the virus infects the upper respiratory tract in adults and the lungs and bronchi in children. The HECV-24 and HECV-25 human viruses have been found in the feces of children with gastroenteritis and in the brains of people with multiple sclerosis.Coronavirus infection binds to the ciliary epithelium of the nasopharynx through the aminopeptidase N-receptor and the sialic acid receptor, and viral replication occurs. This leads to damage to the ciliated epithelium and induction of chemokine and interleukin. **Clinic**: The clinical manifestations of the disease appear 2-4 days after infection. The disease begins with an acute increase in body temperature, with no obvious symptoms of general intoxication. Children also experience chest pain, coughing, and dry wheezing when they breathe. Coronavirus infection can be complicated by acute pneumonia. Chest X-rays may show focal or interstitial infiltrates. In severe cases, worsening of respiratory function, the development of

ISSN (e): 2689-1026 DOI: https://doi.org/10.37547/TAJMSPR/Volume02Issue07-10

respiratory distress syndrome in the second week of the disease, in adults it can be followed by dysfunction of various organs. Occasionally there is an enlargement of the lymph nodes in the neck. Coronavirus infection in the form of acute gastroenteritis has been identified. The disease lasts 1-3 days and the patient recovers completely.

Diagnostic baseline symptoms of coronavirus infections:

- group illness, mainly among members of one family or children;
- seasonality - winter and spring seasons;
-acute onset of the disease;
-leading symptom complex-intensive rhinitis, sometimes symptoms of laryngotracheitis may develop;
-permanent fever, less pronounced general symptoms of poisoning;
- The course of the disease is acute.

Often, a new type of coronavirus (NCoV) occurs in moderate to severe cases. However, in high-risk groups, the disease is more severe and can lead to various complications. Risk groups with severe disease include: the most common condition with a passive immune system, older people (less than two years and older than 65 years), overweight patients and patients with chronic diseases (lung disease, bronchial asthma) , chronic bronchitis, cardiovascular disease, diabetes, etc.). The symptoms of a new type of coronavirus infection are similar to those of the flu and many acute respiratory infections, and the disease usually begins with a rise in body temperature, inflammation of the mucous membranes of the upper respiratory tract, and cough.In this disease, self-diagnosis and self-treatment are dangerous and can lead to serious complications.

In laboratory tests, lymphopenia occurs at the expense of CD4 +, CD8 + and NK-cells - 50%. Thrombocytopenia is observed when the disease progresses. Increased activity of aminotransferase, creatine kinase and lactate dehydrogenase in the blood serum. The diagnosis is made by reverse transcription, PCR test at the onset of the disease in the respiratory tract and plasma, and later in urine and feces, and gives a rapid result. Antibodies are detected by IFA or immunofluorescence 28 days after the onset of the disease.

Treatment: There is no specific treatment. The basis of treatment is the restoration of respiratory function and the activity of other damaged organs.

A new type of coronavirus infection (NCoV) is a viral infection, such as influenza and most acute respiratory infections, which is not affected by antibiotics at all. Antiviral drugs are used to treat the disease and a course of symptomatic treatment is prescribed.

Dosage of drugs prescribed for children:

ISSN (e): 2689-1026 DOI: https://doi.org/10.37547/TAJMSPR/Volume02Issue07-10

Ampicillin - m / o 100 mg / kg 4 times a day.
Arbidol - 50 mg, 100 mg, 200 mg 4 times a day for 7-10 days.
Ascorbic acid - up to 1.0 g / s.
Amoxicillin - 250 mg. Adults and children older than 10 years (body weight over 40 kg) 500 mg 3 times / day; When the infection is severe - from 0.75–1 g 3 times / day.
For children:
- 5-10 years - 250 mg (5 ml of suspension) 3 times / day;
- 2-5 years - from 125 mg (2.5 ml of suspension) 3 times / day;
- For children under 2 years - 20 mg / kg body weight / day;
In newborns and infants, the dose may be increased or decreased and the interval between doses may be increased. The course of treatment is 10–12 days.
Ambroxol syrup-30 mg / 5 ml 100ml, 10 mg / kg / day. (3-4 times) mixed with a little water after a meal. Syrup up to 2 years - 2.5 ml 2 times / day, for 2-5 years - 2.5 ml 3 times / day, over 5 years - 5.0 ml 2-3 times / day. The dose can be increased up to 2 times in the first two days. Acetylcysteine - inhalation 2-5 ml of 20% mixture 3-4 times a day for 15-20 minutes.
Normal human immunoglobulin - 1.5 ml / 1 drop: 0.5 ml / kg, not more than 10 ml per day.
3-12 months. –2.5 - 5 ml and syrup (60-120 mg paracetamol),
1-5 years - syrup from 5-10 ml (120-240 mg paracetamol),
5-12 years - 20 ml of syrup (240-480 mg paracetamol),
In adults and children weighing more than 60 kg - 20-40 ml of syrup (480-960 mg paracetamol) 3-4 times a day.

The World Health Organization has established 14 rules based on the most important protection against this infection:
1. Rub your hands quickly and with soap for at least 20 seconds, because during this time the shell of any type of virus will break down !!!
2. When sneezing or coughing, cover your mouth and nose with a disposable paper towel. Dispose of after use. If this is not possible, cover with your elbow !!!
3. Never touch your eyes, nose or mouth with your hands !!!
We touch many surfaces with our hands that may be infected.
4. Keep your distance from people with symptoms of colds to a minimum keep it in 3-4 steps !!!
5. Suspend your planned trips and group activities !!!
6. Isolate yourself in home quarantine for 14 days if you have returned from abroad. It will be beneficial for you and others. Do not have contact with isolated people without a medical mask !!!
7. Ventilate your room often !!!

ISSN (e): 2689-1026 DOI: https://doi.org/10.37547/TAJMSPR/Volume02Issue07-10

8. Clean the items you use every day !!!
9. Do not share any personal items !!!
10. Always wash your clothes with household soap and boiling water !!!
11. Avoid seeing and hugging !!!
12. To strengthen the immune system, drink more fluids, lead a regular life, pay special attention to your sleep, physical activity and diet !!!
13. If you have symptoms of a cold, avoid contact with the elderly and people with chronic diseases in general !!!
14. If you have a complaint of fever, sneezing, shortness of breath and diarrhea, you should see a doctor immediately !!!

For individuals from countries where coronavirus infection has been reported:

- If symptoms of coronavirus infection appear within 14 days of arrival in the affected countries, call a doctor immediately;
- Restrict communication and use separate utensils to prevent the spread of the disease to other family members. (washing used dishes in soapy, boiling water);
- Relatives caring for the patient should use a medical mask and wash their hands with soap after each contact with the patient;
- Restrict outings unless necessary until the illness is cured

Conclusion

Today, in the eyes of the whole world, various tactics to combat this infection with high strategic plans, the manifestation of secondary symptoms and protection against the disease are being tested in practice. There is currently no definitive vaccine against coronavirus infection. Strengthened quarantine regulations are losing their relevance day by day. We can prevent the spread of the disease if we stay at home without going outside, but the disease will not stop. In the last six weeks, the number of diseases has almost doubled to nearly 16 million, and the death toll has exceeded 640,000.

According to the head of the WHO, the COVID-19 pandemic "changed the world." He brought people and societies together at the same time and separated them, showing that “people are capable of reacting positively and negatively.” The current pandemic is the most serious global emergency declared in the world. He added Australia, Vietnam, Germany, Cambodia, Canada and China to the list of countries that have managed to prevent or control the spread of the disease as a result of the measures taken. The main measures to combat the spread of infection are detection of infection, isolating, testing, and treating patients and those in contact with them. “Keep your distance, wash your hands, avoid crowded places and closed rooms, wear a mask in recommended places,” added the Director-General of the World Health Organization. In conclusion, I can say that the first step in the fight against coronavirus we need to realize that we can save the whole world by raising the medical culture of the population, preserving our own health.

ISSN (e): 2689-1026 DOI: https://doi.org/10.37547/TAJMSPR/Volume02Issue07-10

References

1. B.M.Tajiyev, X.Yu.Akhmedova, M.S.Madaminov. Methodological manual for infectious diseases doctors, pediatricians, epidemiologists, clinical residents
2. t.me: @Koronavirusinfouz, www.who.int
3. facebook.com:World Healt Organization News
4. Dennis Kasper, Anthony Fauci "Harrison's Infectious Diseases 2 ed" USA, Mc.Graw-Hill Education, English, 2013
5. Daminov T.A. Infectious diseases with childhood infections. Tashkent, 2010
6. Lvov D.K., Head of Virology: Viral infections of humans and animals./M- Izdatelstvo «MIA», 2013, -1200 p .: il.-s. 599-624.
7. Gish RG et al: Safety and antiviral activity of emtricitabine (FTC) for the treatment of chronic hepatitis B infection: A two-year study. J Hepatol 43:60, 2005