

## Research Article

# Mental Disorders Caused by the COVID-19 Pandemic

Aliyev NA<sup>1\*</sup> and Aliyev ZN<sup>2</sup><sup>1</sup>Department of Psychiatry and Drug Addiction, Azerbaijan State Advanced Training Institute, Azerbaijan<sup>2</sup>Department of Psychiatry, Azerbaijan Medical University, Azerbaijan**\*Corresponding author**

Nadir A. Aliyev, Department of Psychiatry and Drug Addiction, Azerbaijan State Advanced Training Institute, Baku, Azerbaijan; Email: aliyevnadir@yahoo.com

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**Keywords**

- Mental disorders
- Coronavirus
- Depression

**Abstract**

**Objective:** The literature on psychiatric disorders associated with the coronavirus pandemic is scarce. In publications, indicate increased anxiety, depression, aggression of other mental disorders. However, there are practically isolated cases of mental disorders associated with a pandemic of coronavirus disease.

**Materials and Methods:** Eligible 50 participants to meeting the DSM-5 criteria for nosophobia, anxiety, and exacerbation of the main diseases of patients with mental.

**Results:** All examined individuals showed various mental disorders.

**Conclusion:** Despite the fact that the patients examined by us did not suffer from the disease, COVID-19, but they had mental disorders of varying degrees: from neurotic to psychotic disorders.

## INTRODUCTION

### Messages for the general population

1. The first problem. COVID-19 affects and can affect people from many countries in many geographical areas. When treating people with COVID-19, do not link the disease to any ethnic or nationality. Be merciful to all who are affected, to any country and those who come from it. People affected by COVID-19 have made no mistakes and deserve our support, compassion and mercy. Disease caused by the virus itself, which is generally self-limiting, but can be fatal, especially in susceptible, elderly people.
2. The second problem. Do not refer to people with the disease as "COVID-19 case", "victims", "COVID-19 family" or "patient". These are "People who have been treated for COVID-19", "People who have been treated for COVID-19" or "People who have been cured of COVID-19", and their families and loved ones will continue to work after they get rid of COVID-19. To reduce stigma, it is important to distinguish a person from having a personality as defined by COVID-19. Almost everyone who hears about the virus causes anxiety, worry, worry, and suffering.
3. The third problem. Minimize watching, reading or listening to disturbing news about COVID-19; seek information only from reliable sources, and you can basically take practical steps to prepare your plans and protect yourself and your loved ones. Look for information updates once

or twice a day. The sudden and continuous spread of news about the accident can cause concern to everyone. Learn the facts; not gossip and misinformation. Regularly gather information from the WHO website and local health authorities' platforms to help you separate the facts from the rumors. Facts can help minimize fears. This problem applies not only to psychiatrists and other psychiatrists who are fully trained for professionals, but also to cadets and students who need to develop their education as well as possible in the current, radically changing environment. They also need our help [1].

## MATERIALS AND METHODS

### All patients was examined

This was a double-blind, placebo-controlled trial for patients diagnosed with DSM-5 for rapid cycle bipolar disorder. The patients gave their informed, written consent to participate.

In accordance with the Helsinki Declaration of the World Medical Association "Recommendations for doctors engaged in biomedical research involving people", adopted by the 18th World Medical Assembly (Finland, 1964, revised in Japan in 1975, Italy-1983, Hong Kong-1989, the South African Republic-1996, Edinburgh-2000); The Constitution of the Republic of Azerbaijan, the Law "On Psychiatric Assistance" (adopted on 12.06.2001, with amendments and additions -11.11.2011, Decisions of the Cabinet of Ministers of the Republic of Azerbaijan No. 83, dated April 30, 2010 "On Approval of the Rules for Conducting Scientific,

Preclinical and Clinical studies of medicines" are established. The conditions of the conducted researches corresponded to the generally accepted norms of morality, the requirements of ethical and legal norms, as well as the rights, interests and personal dignity of the participants of the studies were observed.

- a) Conducted research is adequate to the topic of research work.
- b) There is no risk for the subject of research.
- c) Participants in the study were informed about the goals, methods, expected benefits of the study and associated with risk and inconvenience in the study.
- d) The subject's informed consent about participation in the research was received.

The decision of the Ethical Committee at the Azerbaijan Psychiatric Association on the article of NA. Aliyev, Z.N. Aliyev "Mental disorders caused by the COVID-19 pandemic" submitted for publication in psychiatric journals: in connection with compliance with its legislative requirements and regulatory documents is to approve the article by N.A. Aliyev, Z.N. Aliyev "Mental disorders caused by the COVID-19 pandemic". Patients were observed at the Mental Health Center of the Ministry of Health of the Republic of Azerbaijan. The study was conducted from January 01, 2020 to 01 of the June 2020 years.

Also we excluded sexually active subjects with active or unstable epilepsy, other genetic syndromes or congenital infections associated with autistic-like syndromes, prematurity; subjects who have been treated within the previous 30 days by any medication known to have a clearly defined potential for toxicity or with any psychotropic drugs; subjects with clinically significant abnormalities in laboratory tests or physical examination; subjects with a history of hypersensitivity or serious side effects associated with the use any drugs A detailed clinical interview with parents by a clinical expert, accompanied by physical examination and blood analysis, was used to ensure that subjects did not meet any exclusion criteria. A structured clinical interview, for DSM-5 Axis I Disorder, Patient Edition, was used to diagnose anxiety disorders, depressions, nosophobia to DSM-5 [2]. Hundred patients (40 men and 60 women) whom we studied were under observation in Mental Clinic for Outpatients of Baku City of Azerbaijan Republic. The length of the washout was 2 weeks. Patients were washout from the all medications. Eligible participants were required to be between 18 and 65 years of age. We excluded serious medical conditions including with other psychiatric disorders (e.g. bipolar disorder II tipi, schizophrenia, patients judged to be at serious suicidal or homicidal risk, dependence of psychoactive drugs, somatic, neurological illness etc). Also we excluded unstable epilepsy, other genetic syndromes or congenital infections associated with autistic-like syndromes, prematurity; subjects who have been treated within the previous 30 days by any medication known to have a clearly defined potential for toxicity or with any psychotropic drugs; subjects with clinically significant abnormalities in laboratory tests or physical examination; subjects with a history of hypersensitivity or serious side effects associated with the drug use, and subjects who, during the previous 3 months, started new non-pharmacological procedures, such as diet, vitamins and

psychosocial therapy. A detailed clinical interview with parents by a clinical expert, accompanied by physical examination and blood analysis, was used to ensure that subjects did not meet any exclusion criteria.

Patients clinically significant of abnormal laboratory or EEG findings were ineligible. Patients before the study had not used antidepressants, antipsychotics, anxiolytics, benzodiazepines, SSRI and venlafaxine. Washout of all medicines was two weeks.

Our Follow-up observation (catamnesus), was conducted from January 01, 2020 to June 01, 2020. The results of follow-up observations showed that patients receiving carbamazepine in combination with lithium are in a state in full remission during for 2.5 years.

Choosing of the antidepressants, anxiolytics, antipsychotics hypnotics and benzodiazepines conducted according to the Textbook of psychopharmacology fifth edition [3].

According to the experience of our Azerbaijan State Advanced Training Institute for Doctors named by A. Aliyev, department of psychiatry and drug addiction, mental disorders caused by the COVID-19 pandemic can be divided into several groups:

1. Nozophobia - Fear get infected of COVID-19 (n=30)
2. Anxiety disorders caused by the COVID-19 epidemic. Anxiety a feeling of worry, nervousness, or unease, typically about an imminent event or something with an uncertain outcome. (n=30)
3. Depressions caused by the COVID-19 epidemic. (n=35)
4. Exacerbation of the main diseases of patients with mental disorders as a result of the COVID-19 epidemic (n=3)
5. Therapy of mental disorders that may occur after quarantine.
6. Other mental disorders caused by the COVID-19 pandemic (n=2)

The following treatment methods are recommended for the treatment of mental disorders caused by the COVID-19 pandemic.

- I. Pharmacological groups and approximate doses of drugs

### Antidepressants

**Amiltriptyline:** The starting dose - 20-40 mg / day intramuscular or intravenous. When well tolerated, the daily dose can be increased by 20-40 mg to 100-150 mg. After 7-10 days, when the desired effect is achieved, it is taken orally, in the form of 20 mg injection; the drug is replaced by a per-oral dose of 50 mg.

**Venlafaxine:** Intravenous starting dose - 75 mg once daily. If necessary, the dose is gradually increased over 3-4 days. The daily dose is 150-200 mg.

**Imipramine:** Intravenously, the starting dose is 25-50 mg / day; the average daily dose is 150-250 mg (in the hospital - up to 300 mg / day). The dose can be increased up to. It is taken orally after the effect is achieved.

**Clomipramine:** Orally, 25-50 mg 3 times a day. Parenteral 25-50 mg / day can be increased to 100-150 mg / day.

**Paroxetine:** Intravenously, the initial dose is 10 mg / day, in the absence of the desired effect is increased by 10 mg / day to 40 mg / day; maximum dose-50 mg / day.

**Sertraline:** Internal, starting dose- 25 mg / day; After 1 week, the dose is increased to 50 mg / day, if necessary, the dose is gradually increased to a maximum over several days (50 mg / day) - 200 mg / day.

**Trazadon:** Internally, 75-150 mg / day, 3 times, up to 300-500 mg / day, maximum - 600 mg / day.

**Fluxetine:** Internally, the starting dose is 20 mg in the morning; if there is no effect, the dose can be increased for several weeks. Overdose of 20 mg / day is taken twice (morning and evening). The maximum daily dose is 80 mg.

**Fluvoxamine:** Internally, the average dose is 100-200 mg / day, the maximum is 400 mg / day.

**Citaloparor.** Intravenous, starting dose- 20 mg / day once, maximum-60 mg / day.

**Exitaloprom:** Intravenously, the starting dose is a single dose of 10 mg / day, the average daily dose is 20 mg.

### Anxisolytics

**Alprozalam:** Internal, single dose - 0.25-0.5 mg, average daily - 1-2 mg, maximum - 4-6 mg / day.

**Buspiron:** Internally, the starting dose is 15 mg / day, 3 times, if necessary, the dose can be increased by 5 mg every 2-3 days. The average daily dose is 20-30 mg, the maximum single dose is 30 mg, the daily dose is 60 mg.

**Tofiozepam:** Internally, the starting dose is 50 mg, the average daily dose is 100 mg (50 mg in the morning and 50 mg in the afternoon).

**Clonozepam:** Internally, in small doses - 0.5-2 mg, medium - 4-8 mg, high - 8-16 mg; maximum daily dose- 20 mg

**Bromdihydrochlorphenylbenzodiazepine (Phenazepam):** Internal, single dose - 0.5-1.0 mg, average daily dose - 2-3 mg, maximum - 6-8 mg / day.

**Chlordiazepoxide:** Internal, single dose- 5-10 mg, average daily dose- 30-50 mg 2-3 times.

### Neuroleptics

**Alimemazine:** Internally, the daily dose is 5-10 mg to 60-80 mg (3-4 times), if necessary, the dose can be increased to 200-400 mg / day. The average daily parenteral dose is 40-50 mg (v / d drops), the starting dose is 25 mg / day and can be gradually increased to 75-100 mg / day.

**Holoperidol:** Internally, 1.5-3 mg / day, 2-3 times a day, the dose can be gradually increased to 10-15 mg / day, if necessary, 10-15 mg / day; supportive dose- 0.5-5 mg / day. A / d 5-10 mg 2-3 times a day for several days, maximum- 40 mg / day.

**Levopromazine:** Intravenously, 12.5-50 mg / day to 50-100 mg / day, if necessary 300-400 mg / day parenterally, 25-75 mg / day, then the dose is 100-300 mg / day, 3 times a day, v / d 75-100 mg / day.

**Persianazin:** Internal, starting dose- 10 mg / day, average daily dose- 30-40 mg, 2-4 times, maximum- 50-100 mg / day.

**Sulprid:** Internal, oral, intravenous, single dose - 50-100 mg / day, average daily dose - 100-600 mg, maximum dose - 1200 mg / day.

**Tioridazine:** Internally, the starting dose is 75-200, the average daily dose is 600 mg / day (several receptions), the maximum daily dose in an inpatient setting is 800 mg.

**Chlorpromazine:** Internally, the starting dose - 25-75 mg / day, gradually increasing the dose to the average daily - 300-600 mg, 3-4 intravenously.

### Normothymics

**Valproate sodium:** Internally, starting at 150-300 mg / day, gradually increasing to 600-1200 mg / day.

**Lithium carbonate:** Orally, the average dose is 300-900 mg / day 3 times a day (prolong foramen 1 g once a day)

#### Duration of treatment

The duration of outpatient, including supportive care, ranges from 1 to 2 months. The duration of inpatient treatment is 30-40. Then semi-inpatient and supportive care is provided.

### Different types of psychotherapy are applied

Psychotherapeutic methods used in depression:

- Cognitive therapy (CT; Beck, 1963, 1964, 1976; Beck, Rusk, Shaw & Emery, 1979);
- Interpersonal psychotherapy (IPP; Clerman, Weissman, Rounsaville & Chevron, 1984),
- Cognitive-behavioral analytical systemic psychotherapy (KDSP, McCullough et al., 1996)
- Cognitive analytical psychotherapy (QAP, Ryle, 1997).

### Non-drug treatment methods

- Plants with antidepressant properties
- Ginseng tincture.
- Aralia tincture. (Shrub plant with broom-like flowers and large leaves.
- Novopassit consists of plant components (coconut, pistachio, hops, hawthorn, cucumber (honey mint, lemon)), hibiscus (tropical plant with large red flowers), black peony.
- Persen is made from herbs with antidepressant properties (cucumber, peppermint, chicory).
- Tincture of cinnamon lemon.

Treatment of borderline mental disorders with electrotherapy, hydro- and phototherapy, hyperbaric oxygenation, acupuncture-reflexology, vibromassage, relaxation, massage, gymnastics, deprivation of sleep deprivation.

### Electrotherapy

Galvanotherapy, electro-sleep, electropuncture

## Hydrotherapy

- Shower - dusty, rainy, needle, circular, shield shower - intermediate area, Charcoal fountain shower, Scottish shower (hot 38-42°C and cold 13-22°C, question shower massage,
- Baths - local, whirlpool, contrast, oxygen, turpentine
- Russian bath - filled with water vapor, the air temperature should be 40-50 °C.
- Roman bath - dry hot air is supplied either on the floor or in the holes in the wall.
- Turkish bath - the air temperature should be 40-50 °C. Humidity is regulated by heating water in the boiler.
- Finnish bath (sauna) - the air temperature is 70-100 °C, the temperature difference between the floor and the ceiling is 60 °C, the relative humidity is 10-15%.

## Phototherapy

Laser, infrared, ultraviolet radiation treatment and prevention. The mechanism of action of phototherapy is based on the reactions of photo physical and photochemical effects by the tissues of the body.

Hyperbaric oxygenation - increases the passive pressure of oxygen in the tissues under an elevated atmosphere.

## RUBDOWN

Massage is the oldest physical means of affecting the body. Represents a generalized reflex reaction of the organism to some extent in the tissues under the influence of local mechanics. Stimulates the adaptive-trophic functions of the autonomic nervous system due to some biologically active substances (histamine, acetylcholine, etc.), in the humoral environment in the tissues. As a result of the massage, blood and lymph circulation improves. Muscle tone and elasticity, contraction functions increase, resulting in improved muscle function. Massage is applied by hand and apparatus. There are two types of massage:

classic and segmental - reflector. Classical therapeutic massage is usually applied every day. The main methods of classical therapeutic massage: rubbing (rubbing), rubbing, rubbing and vibrating. Usually 10-12 courses are conducted, repeated after two months.

## DISCUSSION

History and Discovery, structure-activity relationships, pharmacological profiles, mechanisms of action, pharmacokinetics and disposition, indications and efficacy response, side effects and toxicology, drug-drug interactions antidepressants, anxiolytics, antipsychotics hypnotics and benzodiazepines are described in detail in the literature [3]. Therefore, we will not dwell on them.

## CONCLUSION

Psychopharmacological Treatment of Depression, Anxiety and Related Disorders, Insomnia in Mental disorders caused by the COVID-19 pandemic is necessary. Treatment should be 1-2 months, with low doses of the above drugs. Our Follow-up observation (catamnesis), was showed that patients receiving are in a state in full remission. Treatment tactics of mental disorders caused by the COVID-19 pandemic should target the underlying psychopathological syndrome.

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