

131 patients of the psychoneurological dispensary in Shymkent city, including 79 men and 52 women from different age groups (from 18 to 72 years) during five years. Mathematical methods resulted in the identification of common features of

suicidal behavior as well as factors influencing suicidal behavior.

Keywords: suicide, sociodemographic characteristics, ethnicity.

РЕЗЮМЕ

СОЦИОДЕМОГРАФИЧЕСКИЕ ХАРАКТЕРИСТИКИ СУИЦИДЕНТОВ ТЮРКСКИХ И СЛАВЯНСКИХ НАЦИОНАЛЬНОСТЕЙ

Смагулов Б.

Международный казахско-турецкий университет, Туркестан, Республика Казахстан

В статье рассматриваются особенности суицидального поведения в зависимости от социодемографических характеристик, таких как пол, возраст, уровень образования, жилищные условия, социальный и семейный статус, а также этнические особенности лиц.

Целью исследования явился анализ суицидоопасных эмоциональных расстройств во взаимосвязи с этнокультурными и социально-экономическими факторами.

Материалом исследования послужили клинические данные о пациентах психоневрологического диспансера города Шымкент, общее количество (n=131), из них 79 мужчин и 52 женщины разных возрастных групп (от 18 до 72 лет) на протяжении пяти лет.

В результате применения математических методов выявлены общие черты суицидентов, а также факторы, влияющие на суицидальное поведение.

რეზიუმე

სუიციდენტების სოციოდემოგრაფიული მახასიათებლები სხვადასხვა ეთნოკულტურის წარმომადგენლებში

ბ.სმაგულოვი

ყაზახურ-თურქული საერთაშორისო უნივერსიტეტი, თურქესტანი, ყაზახეთის რესპუბლიკა

სტატიაში განხილულია სუიციდური ქცევის თავისებურებანი პიროვნების ისეთ სოციოდემოგრაფიულ მახასიათებლებზე დამოკიდებულებით, როგორცაა სქესი, ასაკი, განათლების დონე, საცხოვრებელი პირობები, სოციალური და ოჯახური სტატუსი და ეთნიკური თავისებურებები.

კვლევის მიზანს წარმოადგენდა სუიციდური საფრთხის შემცველი ემოციური დარღვევების სტრუქტურის შეფასება სოციალურ-ეკონომიკურ

ფაქტორებთან ურთიერთკავშირში. კვლევის მასალად გამოყენებული იყო ქალაქ შიმკენტის ფსიქონევროლოგიური დისპანსერის პაციენტების კლინიკური მონაცემები; 18-72 წლის ასაკის პაციენტების რაოდენობა შეადგინა 131, მათგან 79 – მამაკაცი, 52 – ქალი. მათემატიკური მეთოდების გამოყენებით დადგენილია სუიციდენტების საერთო ნიშნები, ასევე, სუიციდურ ქცევაზე მოქმედი ფაქტორები.

NEUROLOGICAL DISORDERS AMONG THE USERS OF HOMEMADE ARTISANAL EPHEDRONE PSYCHOSTIMULANTS AND INVESTIGATION OF THIOGAMMA EFFICACY IN THEIR TREATMENT

¹Asatiani N., ^{2,3}Todadze Kh.

¹Drug AddictioClinic “Neogeni”; ²Tbilisi State Medical University;

³Center for Mental Health and Prevention of addiction, Tbilisi, Georgia

Non-medical use of psychostimulants is considered one of the most common and growing problems in the world nowadays.

According to the National Institute on Drug Abuse (NIDA), the number of cocaine users in the world in 2014 was 1.5 million. It should be noted that the number of cocaine users has decreased in recent years, although the use of other stimulant drugs (amphetamines, methamphetamines) has increased.

According to the same institute, in 2014 the number of users of synthetic stimulants – methamphetamines and amphetamines was 1.6 million, of which 569,000 people consumed methamphetamines. The number of users of stimulant drugs significantly exceeds that of previous years.

The damage caused by the non-medical use of stimulant drugs is grave. In 2001, 8.2% of drug-related ailments were associated

with harmful methamphetamine use. In 2014, over 5,500 deaths were accounted for cocaine overdose worldwide. According to the U.S. National Institute on Drug Abuse (NIDA), the lowest rate of cocaine-related deaths was in 2010, and from 2010 to 2015, that number increased 1.6 times.

According to the World Health Organization (2015 drug report), amphetamine-like drugs (amphetamines and methamphetamines) are the second most widely used in the world, while cocaine is the fourth. The prevalence of amphetamine drugs in the world, among the 15-64 age group, at this stage was 0.3-1% (13.8- 53.8 million users), while the prevalence of cocaine was 0.3-0.4% (13-20 million users).

It should be noted that in the United States and other developed countries, non-medical drugs, such as cocaine, amphetamines and methamphetamines, are used for non-medical purposes. Mainly they are produced by illegal pharmaceutical factories or at laboratories.

In Georgia, over the recent years, a sharp increase in the consumption of homemade artisanal psychostimulants has been observed. Two types of homemade artisanal psychostimulants, named “Jeff” and “Vint” in slang, have been used to get the desired narcotic effect. The above-mentioned drugs are mainly produced, using certain chemical components, from anti-cold medications (often filled by pharmacies without a prescription) containing ephedrine, pseudoephedrine, or phenylpropanolamine hydrochloride (norephedrine). As a result of chemical treatment of the precursors containing these drugs, the psychostimulant such as ephedrone can be produced. It is an indirectly acting sympathomimetic medication stimulating the release of catecholamines (dopamine, noradrenaline) in the brain, clinically revealed as having a stimulating effect.

The toxic effect caused by the homemade psychostimulant “Vint” is the result of alpha-iodine-pervitin (the drug stimulating the methamphetamine group), while as for “Jeff”, in addition to ephedrone, potassium permanganate as an aggressive neurotropic toxin is used. It is precisely that double toxic effect that leads to the most malignant course of “Jeff” addiction - rapid formation of addiction, rapid progredient course, development of significant psycho-somatic disorders, severe, almost irreversible, neurological disorders and, most importantly, the rapid formation of toxic encephalopathy. Toxic (ephedronic) encephalopathy is manifested by severe neurological disorders and is characterized by symptoms characteristic for Parkinsonism, not responding to treatment with Levodopa preparations, dystonia, postural instability, and well expressed pseudobulbar and vegetative syndromes.

Due to the vast availability, low cost, simple manufacturing technology, as well as the strongest narcogenic and toxic effects of the obtained compound, narcotization with the homemade artisanal psychostimulant “Jeff” can be considered especially dangerous for the population of Georgia. Toxic (ephedronic) encephalopathy is characterized by development of severe, almost irreversible neurological disorders, affective disorders, and cognitive impairment. Consequently, the above-mentioned will result disability in homemade psychostimulant consumers and significant deterioration of their quality of life. The social drama of the disease arises from the fact that “ephedronic parkinsonism” appears to be the cause of severe disability in young people, even at a strong remission from drug addiction.

The situation is especially complicated by the fact that modern medicine has no known specific treatment for addiction caused by the use of drugs containing ephedrone and potassium permanganate. Therefore, getting positive treatment results in

such patients is more problematic compared to other types of drug addiction, such as in case of opioid addiction. However, it should be emphasized that unlike other forms of drug addiction, after cessation of homemade psychostimulant “Jeff” administration, the patient’s condition often does not improve: at that stage, the neurological symptoms stabilize and may slightly regress; in most cases they continue to progress and may cause narcotization relapse in the future.

Neurochemical mechanism of the action of -ephedrone-norepinephron, pseudoephedrone-containing artisanal psychostimulants consists in their ability to release catecholamines – noradrenaline and dopamine – from presynaptic nerve endings and stimulate central noradrenergic and dopaminergic receptors. It can be assumed that prolonged action of homemade psychostimulants leads to the depletion of dopaminergic structures, giving a stimulus to the development of prenatal disorders [1-7].

However, in addition to the effect of psychostimulants, the other causes of extrapyramidal disorders, such as manganese toxic effect may be considered as well. The high concentrations of this element (Mn) in the blood lead to development of manganism. The latter is associated with elevated levels of manganese in the brain. Manganese accumulates primarily in the areas known to contain high concentrations of non-heme iron: caudate nuclei, pale nucleus, black substance, and the subthalamic nucleus. Selective damages to the basal ganglia during manganese intoxication/poisoning may be associated with a high content of oxidative enzymes in the basal nuclei, resulting in conversion of non-toxic divalent manganese to toxic trivalent manganese with its further involvement in oxidative stress processes. The main pathogenetic mechanisms in manganism are: oxidative stress, mitochondrial dysfunction, exotoxicity and neurotransmitter dysfunction [8-10].

It has been suggested that one of the endogenous antioxidants of the human body – alpha-lipoic acid (thioctic acid), due to its wide spectrum of action [10-16], may affect certain pathogenetic mechanisms in manganism. Alpha-lipoic acid occurs during the oxidative decarboxylation of alpha-keto acids and performs many functions in the body. Here, we will draw attention to some of them: Alpha-Lipoic acid is referred to as a **universal antioxidant**. It is both fat- and water-soluble substance that is beneficial for protection from various types of oxidative stress, including intracellular oxidative stress. It is a well-known fact that accumulation of free radicals causes damage to cell DNA and mitochondria, impairment in ATP synthesis and, consequently, to a cell death. Alpha-lipoic acid and dihydrolipoic acid (reduced form of alpha-lipoic acid) are considered as strong antioxidants protecting cells from oxidative stress, reducing the risk of disease development caused by free radicals and slowing down the aging process. In addition to the above-mentioned, alpha-lipoic acid has shown a synergistic correlation with other antioxidants – it activates glutathione, vitamins C and E and cysteine/cystine systems.

Alpha-Lipoic acid is a cofactor for mitochondrial metabolism. In particular, as a cofactor it is involved in the oxidative decarboxylation of pyruvic acid and other keto acids, in its turn leading to the elimination of metabolic acidosis. In the aerobic environment, pyruvate enters mitochondria and via reacting with pyruvate dehydrogenase, transforms to acetyl-CoA, which is involved in the citric acid cycle (Krebs cycle). Certain coenzymes and cofactors are necessary for this reaction. Among them is alpha-lipoic acid. In conditions of alpha-lipoic acid deficiency, pyruvate accumulates in the cytosol and converts

to lactic acid. As indicated above, alpha-lipoic acid is a cofactor for the mentioned reaction. Alpha-lipoic acid deficiency leads to reduction in aerobic properties and aerobic threshold of the cell, which is of great importance for energy production, while increase in the concentration of alpha-lipoic acid results in conversion of pyruvate to acetyl-CoA and, consequently, enhancement of aerobic metabolism.

Alpha-lipoic acid has neuroprotective properties/effects – with suppressing inflammatory process in the CNS it helps to reduce cerebral edema caused by demyelination, normalize metabolism in nerve cells as well as facilitates entry of glucose into the nerve cells, while with increasing endoneurial blood circulation improves transmission of nerve impulses; stimulation of axon growth and branching has a positive effect on axonal transport.

Alpha-lipoic acid has chelating properties: inactivates heavy metals and the heavy metal salts. Reduced form of alpha-lipoic acid binds to heavy metal ions with its sulfhydryl radicals and reduces their toxicity. Based on the above-mentioned properties of alpha-lipoic acid, it has been suggested that this substance may affect the pathogenetic mechanisms of toxic encephalopathy caused by use of artisanal psychostimulants and be effective for treatment of this pathology.

Based on the above, the aim of this study was evaluation of the neurological disorders in the users of the homemade psychostimulants of ephedrone group and assessment of the efficacy of Thiogamma in their treatment.

Material and methods. 60 patients at the Narcological Clinic “Neogene” were enrolled into the study; enrollment was subject to the following criteria: diagnosis of mental and behavioral disorders associated with ephedrone use; withdrawal state. Toxic encephalopathy; age - 20-65 years; gender - male. The patients were selected and diagnosed for the study according to ICD-10 criteria. The study was conducted in compliance with bioethical principles, based on informed consent. The main study group (Group I) consisted of 45 patients and the control group (Group II) – of 15 patients. The study was anonymous and confidential.

Thiogamma drug (alpha-lipoic acid, meglumine salt, manufacturer WÖRWAG PHARMA) with a daily dose of 600 mg was added for a duration of one month, to the standard treatment regimen of the patients of the Group I in both inpatient and outpatient settings.

Initially, the prescribed drug was administered via intravenous (IV) drip, dissolved in 250 ml buffered saline, and then in tablet form on an empty stomach. The Thiogamma drug was selected purposefully, since alpha-lipoic meglumine salt has fewer side effects compared to ethylenediamine and trometamol salts.

The patients (both inpatient and outpatient) in the Group II were treated with placebo drug along with standard treatment for the same period. Clinical-neurological disorders of the patients were evaluated before and after one-month therapy course. Neurological examination and Unified Parkinson Disease Rating Scale - UPDSR - were used.

Results and discussion. The main complaints of the patients involved in the study before treatment were: general weakness, decrease or slowing in voluntary movements, loss of balance, speech deterioration (before comprehensive aphasia), stiffness/constraint, coordination impairment, presence of involuntary movements (limbs or head tremors, quick and convulsive jerking/ticks of facial muscles, etc...) difficulties in self-care.

In many cases, the gradual manifestations of the above neurological disorders was the reason for cessation of homemade psychostimulant “Jeff” (ephedrone group) use by the patients.

Prior to the study, neurological examination of patients in-

involved in the study revealed the following rate in developed symptoms: hypomimia – 100%, general bradykinesia – 80%, diffuse decline in muscle strength – 100%, increased muscle tones in plasticity – 80%, recovery of bone-tendon reflexes and their asymmetry – 70%, pathologic pyramidal symptoms – 60%, ataxia – 100%, coordination disorder – 100%, dysarthria and other speech disorders – 80%, limbs tremor – 60%, hyperkinesia of chorea-type – 20%, facial hemispasm – 20%, vegetative disorders (hyperhidrosis, hypersalivation, trophic disorders, etc...) – 80%.

Before treatment, according to the UPDSR scale, the mean score in patients of Group I was 39.5, and in patients of Group II – 39. As a result of treatment, on the UPDSR scale the scores of the patients of Group I decreased by 16%, and in patients of group II by 10%.

Narcotization with the homemade artisanal psychostimulant “Jeff” can be considered especially dangerous for the population of Georgia due to the easy access, low cost, simple technology, as well as the strongest narcogenic and toxic effects of the ingredients required for its manufacturing.

Toxic (ephedronic) encephalopathy is characterized by development of severe, almost irreversible neurological disorders, affective disorders, and cognitive impairment. Consequently, the above-mentioned will result disability in homemade psychostimulant users and significant deterioration of their quality of life. The social drama of the disease arises from the fact that “ephedronic parkinsonism” appeared to be the cause of severe disability in young people, even at a strong remission from drug addiction.

The situation is especially complicated by the fact that modern medicine has no known specific treatment for addiction caused by the use of drugs containing ephedrone and potassium permanganate.

Multiple studies have been conducted to evaluate the efficacy of one or other preparations in treatment of the users of homemade Ephedrone Psychostimulants. Clinical syndromes of toxic encephalopathy cannot be treated by Levodopa and other anti-Parkinson medications; in addition, there is no other effective therapy leading to reducing some symptoms of Parkinson’s disease and improving the quality of live (QoL) for these patients. Even when slight improvement is observed, it is short-term, consequently, the condition may grow progressively worse, despite the abstention from homemade artisanal drugs.

Treatment with Calcium-Sodium salts of EDTA (ethylenediaminetetraacetyl acid) is highly effective at early stages of toxic encephalopathy and results in moderate improvement in movement disorders. Treatment with choline alfoscerate and ethylmethylhydroxypyridine succinate leads to the correction of mainly intellectual-mnemonic and affective disorders.

Treatment with choline alpha phosphate and ethylmethylhydroxypyridine succinate results in the correction of mostly intellectual-mnemonic and affective disorders.

A pilot study using iron (Fe) supplements (Fe) in combination with chelation therapy has been conducted. The study results showed that iron supplements in combination with artificial therapy led to further improvement in neurological symptoms. According to the researchers, iron supplements lead to the reduction of Mn blood levels and to the improvement of damage caused by intoxication with this element [15].

Alpha-lipoic acid is an endogenous antioxidant produced in the body due to oxidative decarboxylation of alpha-keto acids. This affects the most pathogenic mechanisms of the body. Alpha-lipoic acid is an universal antioxidant, an essential cofactor

for mitochondrial metabolism, having neuroprotective effects and chelating properties. Due to the above mentioned, the study aimed at investigating the efficacy of preparation Thiogamma (alpha lipoic acid meglumin acid) in the treatment of neurological disorders among consumers of homemade Ephedrone Psychostimulants.

Based on the study materials it can be reported that the users of homemade ephedron group psychostimulant ("Jeff"), had neurological disorders, mainly manifested with the symptoms of Parkinson's disease; with well-expressed dystonia, postural instability, pseudobulbar and vegetative syndromes.

Prior to the commencement of the study, neurological examination of the enrolled patients showed the following distribution of symptoms: hypomimia – 100%, general bradykinesia - 80%, diffuse decline in muscle strength - 100%, increased muscle tones in plasticity - 80%, recovery of bone-tendon reflexes and their asymmetry - 70%, pathologic pyramidal symptoms - 60%, ataxia - 100%, coordination disorder - 100%, dysarthria and other speech disorders - 80%, limbs tremor - 60%, hyperkinesia of chorea-type - 20%, facial hemispasm - 20%, vegetative disorders (hyperhidrosis, hypersalivation, trophic disorders, etc...) - 80%.

As a result of treatment, a decrease in the scores on the Unified Parkinson Disease Rating Scale (UPDRS) was observed in patients of both study groups, however, this decrease was more expressed in the patients of Group I where Thiogamma (alpha-lipoic acid meglumine salt) drug was added to the standard treatment protocol. The above results clearly speak to the efficacy of "Thiogamma" drug in treatment of neurological disorders caused by use of the homemade psychostimulants ("Jeff").

REFERENCES

1. Шавловская О.А. Тиоктовая кислота: антиоксидантная терапия неврологических заболеваний. // ПМЖ. 2014;13:960.
2. Alipari ES, Ferris MJ. "Amphetamine mechanisms and actions at the dopamine terminal revisited" // J. Neurosci. 2013 May 22;33(21):8923-5.
3. Andruska KM, Racette AB. Neuromyology of Manganism. // Curr Epidemiol Rep. 2015 Jun;2(2):143-148. doi: 10.1007/s40471-015-0040-x. PMID: 26046010; PMCID: PMC4450773.
4. Ashok AH, Mizuno Y, Volkow ND, Howes OD. Association of Stimulant Use With Dopaminergic Alterations in Users of Cocaine, Amphetamine, or Methamphetamine: A Systematic Review and Meta-analysis. // JAMA Psychiatry. 2017 May 1;74(5):511-519. doi: 10.1001/jamapsychiatry.2017.0135. PMID: 28297025; PMCID: PMC5419581.
5. Boileau I, McCluskey T, Tong J, Furukawa Y, Houle S, Kish SJ. Rapid Recovery of Vesicular Dopamine Levels in Methamphetamine Users in Early Abstinence". Neuropsychopharmacology : official publication of the American College of Neuropsychopharmacology. 2015.
6. Calipari ES, Ferris MJ. Amphetamine mechanisms and actions at the dopamine terminal revisited. // The Journal of Neuroscience : the official journal of the Society for Neuroscience. 2013;33(21):8923–8925.
7. El Barky A.R., Hussein S.A., Mohamed T.M. The potent antioxidant alpha lipoic acid. //J. Plant Chem. Ecophysiol. 2017;2:1016.
8. Jankovic J. Searching for a relationship between manganese and welding and Parkinson's disease". // Neurology. Jun 28. 2005;64(12):2021–8.
9. Heal DJ, Smith SL, Gosden J, Nutt DJ. Amphetamine, past

and present--a pharmacological and clinical perspective. // J. Psychopharmacol. (Oxford). 2013 Jun;27(6):479-96.

10. Koob G.F., Arends M.A., Le Moal M. Drugs, addiction and the brain. Academic Press, Elsevier Inc: 2015; 351.
11. Park S., Karunakaran U., Jeoung N.H., Jeon J.-H., Lee I.-K. Physiological effect and therapeutic application of alpha lipoic acid // Curr. Med. Chem. 2014;21:3636–3645. doi: 10.2174/0929867321666140706141806.
12. Bahare Salehi, Yakup Berkay Yılmaz, Gizem Antika, et al. Insights on the Use of α -Lipoic Acid for Therapeutic Purposes // Published online 2019 Aug 9. doi: 10.3390/biom9080356
13. Smith A.R., Shenvi S.V., Widlansky M., Suh J.H., Hagen T.M. Lipoic acid as a potential therapy for chronic diseases associated with oxidative stress // Curr. Med. Chem. 2004;11:1135–1146. doi: 10.2174/0929867043365387.
14. Szeląg M, Mikulski D, Molski M. Quantum-chemical investigation of the structure and the antioxidant properties of α -lipoic acid and its metabolites. // J Mol Model. 2012 Jul;18(7):2907-16. doi: 10.1007/s00894-011-1306-y.
15. Tuschl K, Mills PB, Clayton PT. Manganese and the brain. Int Rev Neurobiol. 2013; 110: 277–312.
16. Wang GJ, Smith L, Volkow ND, et al. Decreased dopamine activity predicts relapse in methamphetamine abusers.// Molecular Psychiatry. 2012;17(9):918–925.

SUMMARY

NEUROLOGICAL DISORDERS AMONG THE USERS OF HOMEMADE ARTISANAL EPHEDRONE PSYCHOSTIMULANTS AND INVESTIGATION OF THIOGAMMA EFFICACY IN THEIR TREATMENT

¹Asatiani N., ^{2,3}Todadze Kh.

¹Drug Addiction Clinic "Neogeni"; ²Tbilisi State Medical University; ³Center for Mental Health and Prevention of addiction, Tbilisi, Georgia

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The patients (both inpatient and outpatient) in the Group II were treated with placebo drug along with standard treatment for the same period. Clinico-neurological disorders of the patients were evaluated before and after a one-month therapy course. Neurological examination and Unified Parkinson Disease Rating Scale - UPDRS - were used.

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of Parkinson's disease; with well-expressed dystonia, postural instability, pseudobulbar and vegetative syndromes.

As a result of the treatment, a decrease in the scores on the UPDRS was observed (improved condition) in patients of both groups, however, the improvement was greater expressed in the patients of Group I where Thiogamma (alpha-lipoic acid meglumine salt) drug was added to the standard treatment protocol. The above results clearly speak to the effectiveness of "Thiogamma" in the treatment of neurological disorders caused by the use of homemade psychostimulants ("Jeff").

Keywords: ephedron, manganese, "Jeff", ephedronic encephalopathy, alpha-lipoic acid, thiogamma.

РЕЗЮМЕ

ОПРЕДЕЛЕНИЕ ЭФФЕКТИВНОСТИ ТИОГАММЫ В ЛЕЧЕНИИ НЕВРОЛОГИЧЕСКИХ НАРУШЕНИЙ У ПОТРЕБИТЕЛЕЙ ДОМАШНИХ ПСИХОСТИМУЛЯТОРОВ ЭФЕДРОНА

¹Асатиანი Н.Т., ²Тодадзе Х.Г.

¹Наркологическая клиника «Неоген»; ²Тбилисский государственный медицинский университет; ³Центр психического здоровья и профилактики наркомании, Тбилиси, Грузия

Наркотизация кустарно изготовленным психостимулятором «Джеф» представляет особую опасность для населения Грузии ввиду доступности, дешевизны медикаментов, необходимых для его изготовления, простой технологии его получения и сильнейшего наркотического и токсического эффекта. Положение усугубляется отсутствием в современной наркологии средств лечения зависимости, вызванной употреблением препаратов, содержащих эфедрон и перманганат калия.

В исследовании приняли участие 60 стационарных пациентов наркологической клиники «Неоген» мужского пола, в возрасте 20-65 лет, с диагнозом психические и поведенческие расстройства, вызванные употреблением эфедрона, в состоянии отмены, токсическая энцефалопатия. Отбор и диагностирование пациентов для исследования осуществлялись в соответствии с критериями ICD-10. Исследование проводилось с учетом биоэтических принципов, на основе информированного согласия. Основную I группу составили 45 пациентов, II группу (контрольную) - 15 пациентов. Исследование было конфиденциальным.

В течение стационарного и амбулаторного периода лечения (один месяц) пациенты I группы в дополнение к стандартному лечению получали препарат тиогамма (соль меглюмина альфа-липоевой кислоты) в суточной дозе 600 мг.

Во время стационарного и амбулаторного лечения пациентов II группы, помимо стандартного лечения, в течение того же периода получали плацебо. До лечения и после месячного лечебного курса оценены клинико-неврологические нарушения пациентов. Проведены неврологическое обследование и единая шкала оценки проявления паркинсонизма.

Основываясь на материалах исследования, следует заключить, что у пользователей кустарно изготовленного психостимулятора «Джеф» из группы эфедрона отмечались неврологические расстройства, что, в основном, проявлялось паркинсонизмом; отмечались дистония, постуральная нестабильность, псевдобульбарный и вегетативный синдромы.

В результате лечения у пациентов обеих групп наблюдалось снижение показателей унифицированной шкалы оценки проявлений паркинсонизма (улучшение состояния), хотя последний был более выражен у пациентов I исследуемой группы, в процесс лечения которых, наряду со стандартными медикаментами, был включен препарат тиогамма. Полученные в результате исследования данные указывают на эффективность препарата тиогамма в процессе лечения неврологических расстройств, вызванных потреблением кустарно изготовленного психостимулятора «Джеф».

რეზიუმე

თიოგამას ეფექტურობის განსაზღვრა ნევროლოგიური დარღვევების მკურნალობაში ეფედრონის კუსტარული ფსიქოსტიმულატორის მოხმარებლებში

¹ნ.ასათიანი, ²ხ.თოდაძე

¹ნარკოლოგიური კლინიკა "ნეოგენი"; ²თბილისის სახელმწიფო უნივერსიტეტი; ³ფსიქიკური ჯანმრთელობისა და ნარკომანიის პრევენციის ცენტრი, თბილისი, საქართველო

ნარკოტიზაცია კუსტარული ფსიქოსტიმულატორით „ჯეფი“, მისი დამზადებისთვის საჭირო მედიკამენტების ხელმისაწვდომობის, სიაფის, დამზადების მარტივი ტექნოლოგიისა და მიღებული ნივთიერებათა ნარკვის უძლიერესი ნარკოგენული და ტოქსიკური ეფექტის გამო, განსაკუთრებულ საშიშროებას წარმოადგენს საქართველოს მოსახლეობისთვის. სიტუაციას ართულებს ის, რომ თანამედროვე ნარკოლოგიას არ გააჩნია ეფედრონისა და კალიუმის პერმანგანატის შემცველი პრეპარატების მოხმარებით გამოწვეული დამოკიდებულების სპეციფიკური მკურნალობის საშუალებები.

კვლევაში მონაწილეობა მიიღო ნარკოლოგიური კლინიკა „ნეოგენის“ 60-მა პაციენტმა (ასაკი - 20-65 წ., სქესი - მამრობითი); დიაგნოზი: ეფედრონის მოხმარებით გამოწვეული ფსიქიკური და ქცევითი აშლილობანი, აღკვეთის მდგომარეობა, ტოქსიკური ენცეფალოპათია. კვლევისთვის პაციენტების შერჩევა და დიაგნოსტიკა ხდებოდა ICD-10-ით გათვალისწინებული კრიტერიუმების მიხედვით. კვლევა ჩატარდა ბიოეთიკური პრინციპების სრული დაცვით, ინფორმირებული თანხმობის საფუძველზე, კონფიდენციალურად. ძირითად საკვლევ ჯგუფში (I ჯგუფი) გაერთიანებულ იყო 45 პაციენტი, საკონტროლო ჯგუფში (II ჯგუფი) - 15 პაციენტი.

ძირითადი ჯგუფის (I ჯგუფი) პაციენტების სტაციონარული და ამბულატორული მკურნალობის პერიოდში ერთი თვის განმავლობაში, სტანდარტულ მკურნალობასთან ერთად, ჩართული იყო პრეპარატი თიოგამა (ალფა-ლიპოის მჟავის მეგალუმინის მარილი), 600 მგ დღიური დოზით. საკონტროლო ჯგუფის (II ჯგუფი) პაციენტების სტაციონარული და ამბულატორული მკურნალობის პერიოდში, სტანდარტულ მკურნალობასთან ერთად, იგივე ხანგრძლივობით ჩართული იყო პლაცებო. მკურნალობამდე და ერთთვიანი თერაპიული კურსის შემდეგ შეფასდა პაციენტების კლინიკურ-ნევროლოგიური დარღვევები. გამოყენებული იყო ნევროლოგიური გამოკვლევა და პარკინსონიზმის შესაფასებელი უნიფიცირებული სკალა.

კვლევის შედეგების ანალიზის საფუძველზე გამო-

ტანილია დასკვნა, რომ ეფედრონის ჯგუფის კუსტარულად დაზადებული ფსიქოსტიმულატორების („ჯეფი“) მომხმარებლებს აღენიშნებათ ნევროლოგიური დარღვევები, რაც გამოიხატება, ძირითადად, პარკინსონიზმით (დისტონია, პოსტურალური არამდგრადობა, ფსევდოპულზალური და ვეგეტატიური სინდრომები).

მკურნალობის შედეგად ორივე საკლასი ჯგუფის პაციენტებს აღენიშნა პარკინსონიზმის შესაფასებელი უნიფიცირებული სკალის მაჩვენებლების შემცირება

(მდგომარეობის გაუმჯობესება), თუმცა, ეს უკანასკნელი უფრო მეტად იყო გამოხატული იყო I საკლასი ჯგუფის პაციენტებში, რომელთა მკურნალობის პროცესში სტანდარტულ მედიკამენტებთან ერთად ჩართული იყო პრეპარატი თიოგამა. ზემოაღნიშნული შედეგები მიუთითებს პრეპარატ თიოგამას ეფექტურობაზე კუსტარული ფსიქოსტიმულატორების („ჯეფი“) მოხმარებით გამოწვეული ნევროლოგიური დარღვევების მკურნალობის პროცესში.

COVID-19: АКТУАЛЬНЫЕ ВОПРОСЫ ДЕЯТЕЛЬНОСТИ КЛИНИК ВО ВРЕМЯ ПАНДЕМИИ

Фартушок Т.В.

Львовский национальный медицинский университет им. Данила Галицкого, Украина

Возникновение и распространение новой коронавирусной инфекции. 11 марта 2020 г. Всемирная организация здравоохранения (ВОЗ) объявила коронавирусную болезнь (COVID-19, SARS-CoV-2) пандемией [10]. На 7 июня 2020 г. в мире число инфицированных COVID-19 составило более 6 млн подтвержденных случаев инфицирования, количество смертей – более 394 000. В Украине на это время выявлено 26514 случаев заболевания, в том числе 12000 выздоровевших и 788 летальных. Число диагностируемых случаев составляет 500 в сутки. В последнее время наибольшее количество случаев диагностируется во Львовской области - 68 случаев в сутки, Черниговской и Киевской областях – 43 случая.

Новая коронавирусная инфекция SARS-CoV-2 не исчезнет в популяции, и пока не понятно – будет ли повторяться эпидемия и станет ли она сезонной.

Существующие на сегодняшний день меры профилактики направлены на сдерживание роста заболеваемости, снижение рисков инфицирования, однако не могут гарантированно защитить от встречи с инфекцией

В связи с особенностями репродуктивной функции женщин и физиологическим прогрессирующим снижением возможности иметь беременность, начиная с 35 лет, влияние переменной “время” является критичным, особенно для женщин со сниженным овариальным резервом и старшего репродуктивного возраста.

Откладывание беременности на неопределенный срок у этих женщин является негативным прогностическим фактором для их шансов в отношении рождения здорового ребенка и может привести к тому, что лечение бесплодия станет невозможным.

Психологическое напряжение, тревога, депрессия у пациентов с бесплодием, обусловленные пандемией, усугубляются еще и пониманием отрицательного влияния откладывания лечения на перспективы иметь ребенка.

Нет убедительных данных, свидетельствующих о поражении вирусом ооцитов, сперматозоидов и эмбрионов, а также о специфическом отрицательном влиянии на плод и течение беременности.

Коронавирусы (*Coronaviridae*) – это большое семейство РНК-содержащих вирусов, способных инфицировать человека и некоторых животных, ассоциированных с поражениями верхних дыхательных путей от легких форм острой респираторной инфекции до тяжелого острого респираторного синдрома, пневмонии с острой дыхательной недоста-

точностью и осложнениями в форме острой сердечной или почечной недостаточности,

• Четыре рода коронавирусов: Alpha-, Beta-, Gamma- и Delta-coronavirus.

• Два вида Alphacoronavirus (HCoV-229E и HCoV-NL63) и два вида Betacoronavirus (HCoV-OC43 и HCoV-HKU1) круглогодично присутствуют в структуре ОРВИ, и как правило, вызывают поражение верхних дыхательных путей легкой и средней степени тяжести.

• Два представителя рода Betacoronavirus: SARS-CoV и MERS-CoV являются возбудителями атипичной пневмонии и отнесены ко II группе патогенности. К этой группе отнесен Betacoronavirus-SARS-CoV (COVID-19).

Абревиатура от английского CoronaVirus Disease 2019, новая коронавирусная инфекция 2019-nCoV.

Потенциально тяжелая острая респираторная инфекция, вызываемая коронавирусом SARS-CoV (2019-nCoV) представляет собой опасное заболевание, которое может протекать как в форме острой респираторной вирусной инфекции легкого течения, так и в тяжелой форме, специфические осложнения которой могут включать вирусную пневмонию, влекущую за собой острый респираторный дистресс-синдром или дыхательную недостаточность с риском смерти.

Основные группы респираторных вирусов: *РНК-содержащие*

• Вирусы гриппа А, В, С (*Orthomyxoviridae*)
• Парамиксовирусы (*Paramyxoviridae*) включают три рода:
- *Paramyxovirus* вирусы парагриппа человека (ВПГЧ) 1, 2, 3, 4-го типов, болезни Ньюкасла, парагриппа птиц и паротита;

- *Pneumovirus* – респираторно-синцитиальный вирус (РСВ);

- *Morbillivirus* – вирус кори

• Респираторные коронавирусы (*Coronaviridae*)

• Респираторные реовирусы (*Reoviridae*)

• Пикорнавирусы (*Picornaviridae*)

- собственно возбудителями ОРЗ являются риновирусы (*Rhinovirus*, более 100 серовариантов), а также некоторые сероварианты вирусов Коксаки и ЕСНО (*Enterovirus*)

ДНК-содержащие

- Респираторные аденовирусы (*Adenoviridae*)

Пути передачи: воздушно-капельный (при кашле, чхании, разговоре); воздушно-пылевой; фекально-оральный; контактный.