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Систематическое употребление ЛСД, мефедрона и красного мухомора без признаков психической и аддиктивной патологии. Случай Дарьи Д.

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АННОТАЦИЯ

В статье описан случай Дарьи Д. 23 лет, употреблявшей на протяжении ряда лет различные наркотические вещества (ЛСД, марихуану, мефедрон) и самостоятельно отказавшейся от наркотизации с переходом на легальное употребление микродоз красного мухомора. Проанализирован её психический и аддиктивный статус. Сделан вывод о том, что, несмотря на систематическое употребление наркотиков, для постановки Дарье Д. психиатрического или аддиктологического диагноза оснований нет.

Ключевые слова: наркотизация, употребление с вредными последствиями, ЛСД, мефедрон, красный мухомор, МКБ-10.

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Systematic use of LSD, mephedron and amanita muscaria without signs mental and addictive pathology. The case of Daria D.

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ABSTRACT

The article describes the case of Daria D., 23 years old, who has been using various drugs (LSD, marijuana, mephedrone) for a number of years and independently abandoned using drugs with the transition to the use of microdoses of red fly agaric (*Amanita Muscaria*). Her mental and addictive status is analyzed. It is concluded that, despite the systematic use of drugs, there are no grounds for making Darya D. a psychiatric or addiction diagnosis.

Keywords: *drug addiction, use with harmful consequences, LSD, mephedrone, fly agaric, Amanita Muscaria, ICD-10.*

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Differentiating between deviant forms of behavior and addictive disorders is becoming more complex every year due to changes in society's ideas about the boundaries of normative behavior [1]. Particular difficulties arise when assessing the propensity of young people to experiment with psychoactive substances (PAS). A clinical case demonstrating this phenomenon is presented below.

Daria D., 23 years old. Her heredity was aggravated by mental illness, as her father and both grandfathers were alcoholics. She was born by vaginal delivery during weeks 40–41 of a normal pregnancy. The Apgar score was 9 points. Childhood growth and development were normal. She attended preschool institutions from the age of 1 year and a half, graduated from high school as an external student, and then attended the Lobachevsky Lyceum at the Federal University with a gold medal.

The family atmosphere was tense, as Daria's father left the family when she was 12 years old. He abused alcohol, but according to Daria's mother, was not aggressive toward them. The father did not work, and was not the provider for the family; Daria reported negatively about him. She is currently not in contact with her father. Her mother remarried. Daria's stepfather was also prone to alcohol abuse. Daria described an episode when her intoxicated stepfather "molested" her. He had amnesia about the episode and sought her forgiveness. The relationships with him, as well as with her father, were poor. Until now, she communicates with him formally, without any emotional relationship.

Due to the tense family situation, Daria sought to live separately beginning in adolescence. She achieved her dream at the age of 18 years when she moved to another city and entered the university at the Faculty of Geology. She had dreamed of becoming a geologist since childhood because she enjoyed nature, as well as the opportunity to communicate "with experienced adult people, who were plentiful in this specialty."

She married at the age of 19 years and divorced 3 years later. She is currently in a relationship. She noted that the relationship with her husband was unequal, as she indulged him in everything, even despite his irritability and intemperance.

She describes herself as an easygoing person. She always loves lively company, makes friends easily

with unfamiliar people, and is open and ingenuous. According to her mother, Daria loved to read since childhood. She always liked something new, she was always inquisitive, but too trusting. One day, a friend purchased an expensive telephone on her credit, and she had to pay the entire amount on her own since her friend left.

Daria often had problems in relationships with people because she tried to help everyone and sympathize. "I allow a person to show all the negative traits in their relationship with me. I watch this." According to her, she did not allow others to manipulate her; therefore others often became irritable or angry toward her as they expected different behavior from her. She could not maintain long-term relationships. She was inclined to change companies, cities, "friends," and professions. Since childhood, she was interested in studying psychology. She liked to "experiment" in relationships with people; "to communicate, for example, simultaneously with street children from gangs and with children from good families and gymnasiums, to analyze and compare their behavior and emotions."

In this regard, she considered herself disengaged and cold toward people ("I can show interest without any problems, and then I get bored, and I openly demonstrate it"). She maintains a close and trusting relationship with her mother. After her parents divorced, a female friend appeared; however, they rarely communicated. Daria says that young men are often like female friends to her, and communication was more interesting with them. Despite that she considers herself a "loner," her circle of contacts was wide and constantly changing. She recently had the feeling that she wanted to have a permanent circle of friends.

Out of psychological problems, she noted the frequent occurrence of a "feeling of emptiness," which brought mental discomfort. She tried to fill it with "someone and something." "There was not enough understanding in relations with one person, it was necessary to communicate in a friendly way with another young man, it was easier that way." She tried to drown out feelings of emptiness with a passion for work and interests of young men, reading, or helping other people. She claims that she could not successfully implement her identity in the material world,

because “she cannot find an environment that accepts complete openness and a lack of boundaries.”

Her eyesight began to deteriorate beginning in the first grade. Now she has myopia (−5). She experienced severe headaches starting in fifth grade, which was seasonal and worsened predominantly during autumn. She underwent annual treatment in the Department of Neurology.

She has never been under the supervision of a psychiatrist or narcologist; however, she once visited a psychologist “to understand herself.” She denied significant mood swings; she always noted her excessive emotionality, and some anxiety, which disappeared with a change in scenery. She claimed that there is a constant desire to experience strong emotions, a craving for “moral humiliation” because “at these moments she feels better, feels alive.” She notes her “inconstancy” (“I often leave everything; I change relationships and jobs because I want something new”).

Daria’s grandmother died when she was 12 years old. She was very upset by the loss and did not speak for several days. She reports that she experienced unusual sensations on the day of the funeral; “there was a strange condition in the apartment, similar to a psychedelic experience.” “Other people were muffled, I did not see them; there were some unusual sounds in my head, a noise, a melody, a feeling as if I was alone in the room.” After the death of her grandmother, she became “superactive.” She began to participate in school activities with greater energy, and while her background mood had not intensified according to her, she could be depressed (“a bright change of events made me feel better”).

According to Daria, she began to lose weight rapidly and lost 14 kg in 3 months (from 52 kg to 38 kg). Then, her weight began to increase slowly to 46 kg. “I have been losing weight as long as I can remember. I have never been overweight. I wanted to look like a boy beginning in the fourth grade because I only played with boys; I wanted to be thin like them.”

She first tried *alcohol* at the age of 11 years. According to Daria, she quickly became intoxicated from a couple of sips of alcohol, fell, and her “memory turned off.” She started regular intake of alcohol at the age of 17–18 years when she drank up to half a liter of vodka daily during the summer holidays in the company of her peers. She noted that the day

after drinking she could not fully remember what had happened the day before (“she remembered only the first hour of drinking, and then there was an abyss”). However, when studies began after the holidays, she began to drink alcohol significantly less frequently. Abstinence syndrome during alcohol use (withdrawal syndrome) did not occur, and she never drank in the morning because of poor health.

After the divorce (a year before applying to psychiatrists) she experienced a “serious condition.” She suffered from a state of uncertainty and disorder in her personal life and at work. She started to use *mephedrone* once a week during this period, and then more frequently. She liked the people in this company, and talking with them was pleasurable (“It was the world of IT people; extremely interesting people”). The joint intake of mephedrone was also used to understand how different people behave in a state of intoxication. Once, she went from room to room and saw how some people were having fun, while others were resting, or “dreaming and some saw horror scenes.” She was convinced that the feelings of the drug experience were connected with the character of a person, and not with the substance itself. She has talked a lot about this subject. She periodically tried *LSD*¹, *marijuana*, and *ecstasy* during the same period. She resumed drinking alcohol in the morning to “alleviate the drug withdrawal phenomena.”

When analyzing her feelings and experiences from the use of different drugs, she concluded the differences in her reactions. She believed that when using mephedrone, there was a feeling of unity with the world, she enjoyed watching people in a state of intoxication in the company. She liked the state of freedom during the period of intoxication, and the disappearance of fear to express her opinion in public (“Mephedrone helped me open up”). She did not experience increased sexual arousal at the time of intake, although she had heard that this was possible. Every morning, after evening and night use, she had a hard time enduring narcotization and believed that she needed to engage in physical activity to alleviate her condition.

She notes that she became “asocial” while using marijuana (she smoked no more than 10 times in total). “It seemed that she didn’t understand anything at all.” At the moment of intoxication, there was a

¹LAD — lysergic acid diethylamide.

feeling of alertness (“People seemed to want to do something bad because I seemed strange to them”). She often closed herself in a room, and sent messages to herself on instant messenger to “keep a diary with herself.” Once, while intoxicated, she experienced unusual sensations, “visions” (“I appeared before me, my physical self, but with an evil face”). The feeling of alteration occurred at small doses of the drug.

She has used LSD intermittently since the age of 19 years. “It was nice to talk on LSD, to disconnect from the world, to fly in fantasies.” She used it most of the time with her husband. Several times in a state of abstinence, she felt that she “did not understand anything, was lost in what was happening, other people seemed strangers, things around were unfamiliar, and there was a feeling as if she was not in her apartment.”

After stopping intake, problems with nutrition occurred again, sleep paralysis appeared, she became irritable, “began to stutter” (“I couldn’t think normally, my thoughts did not make sense, so I didn’t communicate with people a lot, they didn’t understand me, and I was angry with myself”). Her appetite was reduced, but there were bouts of overeating with the desire to eat large quantities of high-calorie foods. After that, she felt weak, her speech became “unusual,” her thinking speed slowed, and she became angry with herself, which occasionally caused vomiting and she fell asleep. There was no significant weight gain, but her weight increased consistently.

Active drug use continued for 1 year, after which she stopped using illegal PASs and did not use them for a year. However, she reported that “to increase concentration” she occasionally used “legally allowed *dried fly agaric* in capsules.” She bought it on official sites on the internet. She had carefully studied the effects of so-called “fly agaric microdosing,” which is the use of ultra-low doses of a substance. She was convinced of its harmlessness and, in a sense, the benefits for mental health, in particular, for stimulating intellectual activity.

Currently, Daria is jobless and is searching for employment. She has changed professions often during her career. While studying at the lyceum, she worked as a bartender, then during her studies at the university she held a position as a junior researcher at the Research Institute of Organic and Physical Chemistry for 1 year. She was assistant to the deputy

director for student relations at the Federal University, where she worked for 3 months. After graduating from the university, she worked for a year as an assistant to the chief technologist at an oil refinery as part of an internship. After getting married and moving with her husband to another city, she took a part-time job as a bartender, and after divorce and returning to her hometown, she worked as a business analyst for almost a year and a half but quit for “ideological reasons, since the corporate ethics of the organization did not accept openness or lack of boundaries in communicating with partners and competitors.”

Mental status. Daria applied to psychiatrists on the advice of a friend to understand if the drugs she had taken had changed her health. She did not consider herself mentally or narcologically ill. She presented with no active complaints. When asked, she clarified that she periodically experienced “apathy, a decrease in energy, mood swings and occasional irritability, a feeling of fear and anxiety, and problems with nutrition. Apathy occurred when something monotonous persisted in her thoughts, as if she had disappointed everyone or was guilty of something, or hurting someone.” At the same time, in a conversation, she is active, cheerful, playful, funny, and interested in talking about herself as accurately as possible. She does not feel awkward or embarrassed when discussing her drug use. At the same time, she does not experience feelings of regret and even flaunts the experiences. She had the desire to impress the doctor and talk about the use of fly agarics and microdosing.

She tended to analyze her behavior, as well as her psychological and character traits. She was interested in undergoing a thorough psychiatric examination and establishing whether she had a mental or drug pathology. Her thinking was consistent, of a normal pace, and without signs of qualitative or quantitative changes. Attention was sufficient, memory was not reduced, and mental capacity was high. There were no signs of drug addiction.

Neurologist’s consultation. Vertebrogenerally conditioned cerebral discirculation, in the form of vascular cephalgia.

Magnetic resonance imaging (MRI) in 2014: the MRI indicated local expansion of the subarachnoid cavity; no data on pathological changes in the brain substance were obtained. MRI in 2018: no signs of pathological change were detected in the brain.

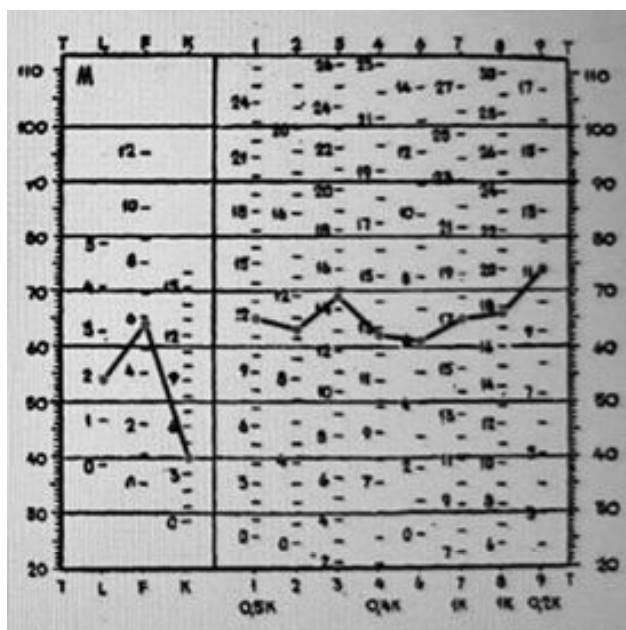


Fig. 1. The results of the examination using the Mini-mult test.

Electroencephalography (EEG) in 2021. The alpha rhythm was disorganized, pointed in shape, with separate sharp fluctuations. It was recorded in all segments with predominance in the parietal-occipital region, at a frequency of 10–11 Hz and amplitude of 130 μ V. In the main rhythm series, groups of pointed oscillations of the same frequency range were recorded, spreading to the anterior-central sections, as well as individual acute alpha oscillations with amplitudes not higher than the background. Zonal differences were preserved. Beta activity was not enhanced, and was low-amplitude, with a frequency of about 16–25 Hz. Beta activity was diffusely recorded, with predominance in the anterior-central leads. Slow-wave activity was recorded diffusely in the form of low-amplitude fluctuations in the theta range. Bilaterally synchronous activity was registered, namely frequent bilaterally synchronous pointed groups of alpha waves, with amplitudes not higher than the background. The reaction to opening and closing of the eyes was weakened. The response to rhythmic photostimulation (3–24 Hz) was an assimilation of the flickering rhythm in a wide frequency range. Response to hyperventilation (3 min) revealed somewhat enhanced bilateral-synchronous activity in terms of the index. *Conclusion.* Minor diffuse changes in bioelectrical activity were noted on the EEG, as well as moderate functional changes in the

bioelectrical activity of the diencephalic genesis. No typical epileptiform signs or focal slow-wave activity were detected.

Psychological examination (Mini-mult; Fig. 1).

According to the survey, Peaks were revealed on scales 9 and 3, suggesting such personal characteristics as vigorousness, cheerfulness, a tendency to change, and contact with people. Usually, people with high score on scale 9 of the MMPI² are characterized as superficial and unstable. These people are careless and overestimate their capabilities. In addition, a personality profile with a high score on scale 3 suggests the desire to seem larger, more significant than they really are, a desire to draw attention to themselves.

DISCUSSION

The case of Daria D. is not unique due to the prevalence of drug experimentation and carefree risky lifestyles among young people. The vast majority of such cases are not in the field of view of psychiatrists and narcologists, and the behavior of such people in adulthood becomes orderly and adaptive. If such people visit a psychiatrist or narcologist, they are diagnosed with drug use with harmful (injurious) consequences [F1x.1 according to the International Classification of Diseases, 10th revision (ICD-10)] [2] and possibly a personality disorder (F6).

In accordance with the clinical guidelines approved by the Ministry of Health of the Russian Federation, harmful use of PASs is a pattern of PAS use that harms health. Harm can be physical (e.g., hepatitis as a result of self-administration of injectable drugs) or mental (e.g., secondary depressive disorder after severe alcoholism) [3].

The clinical guidelines clarified that the following diagnostic criteria for the harmful use of PASs should be considered for the diagnosis:

- 1) PAS use has caused (or significantly aggravated) harm to the patient's physical or mental health, *including impaired judgment or dysfunctional behavior*;
- 2) PAS use leads to disability or has *adverse effects on interpersonal relationships*;
- 3) The cause of the harm must be use of a PAS;
- 4) The nature of the use of a PAS has persisted

²MMPI — Minnesota Multiphasic Personality Inventory.

for at least 1 month or periodically repeated for 12 months.

Attention should be paid to the discrepancy between the main diagnostic criteria for use with harmful consequences and the comments of the developers.

The drug use of Daria D. did not cause any physical or mental harm to her health. The concepts of “impaired judgment, dysfunctional behavior, and adverse consequences for interpersonal relationships” are indistinct and highly subjective. The clinical and psychopathological examinations indicated none of the listed criteria in Daria. In addition, the ICD-10 [4] explicitly states that the listed phenomena should be considered in the diagnosis only if they “result in disability.” Furthermore, the ICD-10 notes that PAS use leads to socially negative consequences, causes disapproval from another person or society as a whole, or arrest or divorce is not yet proof of this diagnosis.

As the examination showed, Daria D. did not show signs of dependence syndrome (F1x.2). This also suggested that she did not have any drug (addictive) pathology, despite years of use of LSD, mephedrone, and ecstasy, as well as continued use of microdosed dried fly agaric.

It was established during the clinical examination that such an approach is legal, popular, and reflects the world view of a rather large number of young people [5]. From their point of view, the use of dried

mushrooms in a dose not exceeding a few grams is useful in terms of stimulating activity and relieving depression. Modern scientific data do not support this conclusion [6, 7].

During the examination of Daria D., the question was raised about the admissibility of diagnosing her with a “mixed personality disorder,” however, she did not show any clear signs of social maladaptation or impaired self-actualization required for a correct diagnosis.

Thus, despite the fact that society may regard Daria D.’s behavior as outrageous and risky, it did not seem reasonable to establish any psychiatric or addictive diagnosis to her. Further monitoring may help to track the dynamics of Daria’s mental state and assess the correctness of the diagnostic solution.

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СПИСОК ИСТОЧНИКОВ

1. Менделевич В.Д. Психология девиантного поведения. М.: Городец; 2016. 386 с.
2. Кузнецов В.В. Употребление ПАВ с вредными последствиями — фейк-диагноз // Неврологический вестник. 2019. Т. 1. С. 47–51. DOI: 10.17816/nb13559.
3. Психические и поведенческие расстройства, вызванные употреблением психоактивных веществ. Пагубное употребление. Клинические рекомендации. МЗ РФ. http://r-n-l.ru/actualdoc/2018/kp2018/kp_pagubnoe_upotreblenie2018upd.pdf (дата обращения: 05.12.2022).
4. Международная классификация болезней (МКБ-10). <https://mkb-10.com/index.php?pid=4048> (дата обращения: 05.12.2022).
5. Baba Masha, Fadiman J. Microdosing with Amanita Muscaria: Creativity, healing, and recovery with the Sacred Mushroom. Park Street Press; 2022. 352 p.
6. Polito V., Stevenson R.J. A systematic study of microdosing psychedelics // PLoS ONE. 2019. Vol. 14. N. 2. P. e0211023. DOI: 10.1371/journal.pone.0211023.
7. Sziget B., Kartner L., Blemings A. et al. Self-blinding citizen science to explore psychedelic microdosing // eLife. 2021. Vol. 10. P. e62878. DOI: 10.7554/eLife.62878.

REFERENCES

1. Mendelevich VD. *Psihologiya deviantnogo povedeniya*. M.: Gorodec; 2016. 386 p. (In Russ.)
2. Kuznecov VV. Upotreblenie PAV s vrednymi posledstviyami — fejk-diagnoz. *Nevrologicheskij vestnik*. 2019;1:47–51. (In Russ.) DOI: 10.17816/nb13559.
3. *Psichicheskie i povedencheskie rasstrojstva, vyzvannye upotrebleniem psihoaktivnykh veshchestv. Pagubnoe upotreblenie. Klinicheskie rekomendacii*. MZ RF. (In Russ.) http://r-n-l.ru/actualdoc/2018/kp2018/kp_pagubnoe_upotreblenie2018upd.pdf (access date: 05.12.2022).
4. *Mezhdunarodnaya klassifikaciya boleznej (MKB-10)*. (In Russ.) <https://mkb-10.com/index.php?pid=4048> (access date: 05.12.2022).
5. Baba Masha, Fadiman J. *Microdosing with Amanita Muscaria: Creativity, healing, and recovery with the Sacred Mushroom*. Park Street Press; 2022. 352 p.
6. Polito V, Stevenson RJ. A systematic study of microdosing psychedelics. *PLoS ONE*. 2019;14(2):e0211023. DOI: 10.1371/journal.pone.0211023.
7. Szigeti B, Kartner L, Blemings A et al. Self-blinding citizen science to explore psychedelic microdosing. *eLife*. 2021;10:e62878. DOI: 10.7554/eLife.62878.

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