

Получена: 10 мая 2015 / Принята: 15 июня 2016 / Опубликовано online: 30 июня 2016

УДК 616.89

THE CRAVING SYMPTOM PROFILE OF “BATH SALTS” USE DISORDER: A CLINICAL CASE

Mariya V. Prilutskaya^{1,2}, Francesco Saverio Bersani³

¹ Semey Medical State University, Semey, Kazakhstan

² Republican Scientific and Practical Center for Medical and Social Problems of Drug Addiction, Pavlodar, Kazakhstan

³ Sapienza University of Rome, Rome, Italy

“Bath salts” is a term often used to describe a number of novel psychoactive substances (NPS) including synthetic cathinones. The abuse of “bath salts”/synthetic cathinones has recently been observed in Kazakhstan. In the present paper, the case of “bath salts” use disorder in a 20-year-old woman is presented. Patient’s history of substance use met the DSM-5 diagnostic criteria of cathinones-induced disorder. The course of disease was observed for 2 months in the period of post-acute withdrawal in the frame of an inpatient *withdrawal unit*. During this time, recurrent episodes of craving characterized by heterogeneous severity and symptoms were observed. The emergence of delusional symptoms represented a clinical challenge for differential diagnosis. The case provides the opportunity to discuss the craving profiles possibly associated with the recreational use of cathinones

Key words: novel psychoactive substances, “bath salts”, synthetic cathinones, craving.

Резюме

ПРОФИЛЬ СИМПТОМОВ ПАТОЛОГИЧЕСКОГО ВЛЕЧЕНИЯ ПРИ РАССТРОЙСТВЕ ВСЛЕДСТВИЕ УПОТРЕБЛЕНИЯ «СОЛИ ДЛЯ ВАНН»: КЛИНИЧЕСКИЙ СЛУЧАЙ

Мария В. Прилуцкая^{1,2}, Франческо Саверио Берсани³

¹ Государственный Медицинский университет города Семей, г. Семей, Казахстан

² Республиканский научно-практический центр медико-социальных проблем наркомании, г. Павлодар, Казахстан

³ Римский университет Сапиенца, г. Рим, Италия

«Соли для ванн» - понятие, относящееся к группе новых психоактивных веществ, включая синтетические катиноны. В течение последнего времени злоупотребление «солями для ванн» / синтетическими катинонами стало регистрироваться и в Республике Казахстан. В данной статье приводится описание клинического случая зависимости от «солей для ванн» у 20-летней пациентки. Синдром зависимости при этом был диагностирован согласно критериям пятой версии Классификации психических расстройств Американской психиатрической ассоциации (DSM-5). Подчеркнут особый фазный характер патологического влечения в ранний постабстинентный период. Затронуты вопросы дифференциальной диагностики в пределах круга психотических расстройств. Обсуждается вопрос об особой симптоматологии патологического влечения при потреблении синтетических катинонов.

Ключевые слова: новые психоактивные вещества, «соли для ванн», синтетические катиноны, патологическое влечение.

Түйіндеме

СИМПТОМАТОЛОГИЯЛЫҚ ПРОФИЛДІҢ ПАТОЛОГИЯЛЫҚ НӘСІПТЕРДІҢ ЖАҢА ПСИХОАКТИВТЫҢ «ВАННАҒА АРНАЛҒАН ТҰЗДАРДЫҢ» ТӘУЕЛДІЛІГІ: КЛИНИКАЛЫҚ ЖАҢДАЙ

Мария В. Прилуцкая^{1,2}, Франческо Саверио Берсани³

¹ Семей қаласының мемлекеттік медицина университеті, Семей, Қазақстан

² Нашақорлық медициналық-әлеуметтік проблемаларының республикалық ғылыми-практикалық орталығы, Павлодар, Қазақстан

³ Рим қаласының Сапиенца Университеті, Рим, Италия

«Ваннаға арналған тұз» - бұл ұғым, жаңа синтетикалық катинондарды қоса алған психоактивтық заттарының бір түрі болып саналады. Соңғы уақыттың ішінде «ваннаға арналған тұздардың» теріс пайдалануы Қазақстанда тіркелген. Бұл мақалада жиырма жылдық науқастың клиникалық сипаттамасы беріледі. Науқастың синдромы американың жіктеу психикалық бұзылыстарды зерттейтін психиатриялық ассоциациясының бесінші нұсқасының белгісі бойынша анықталған. Патологиялық нәсіптің постабстинентикалық мезгілінің ерекше фазалық мінезі көрсетімен. Шенбер шеінде психотикалық бұзылыстары жөнінде сұрақтары белгіленген. Синтетикалық катинондарының арқасымен пайда болған ерекше симптоматологияның патологиялық нәсіптерді талқылайтын сұрақтары ерекше орнында тұр.

Негізгі сөздері: жаңа психоактивтық заттар, «ваннаға арналған тұздары», синтетикалық катинондары, патологиялық нәсіптері.

Библиографическая ссылка:

Прилуцкая М.В., Берсани Ф.С. Профиль симптомов патологического влечения при расстройстве вследствие употребления «Соли для ванн»: клинический случай // Наука и здравоохранение. 2016. №3. с. 135-140

Prilutskaya M., Bersani F.S. The craving symptom profile of “Bath salts” use disorder: a clinical case. *Nauka i Zdravookhranenie* [Science & Healthcare]. 2016, 3, pp. 135-140.

Прилуцкая М.В., Берсани Ф.С. Симптоматологиялық профилдің патологиялық нәсіптердің жаңа психоактивтың «Ваннаға арналған тұздардың» тәуелділігі (клиникалық жағдай) // Ғылым және Денсаулық сақтау. 2016. №3. Б. 135-140.

Background

Widespread growth in popularity of novel psychoactive substances (NPSs) constitutes a significant threat for the global public health. A NPS can be defined as “a new narcotic or psychotropic drug, in pure form or in preparation, that is not controlled by the 1961 United Nations Single Convention on Narcotic Drugs or the 1971 United Nations Convention on Psychotropic Substances, but which may pose a public health threat comparable to that posed by substances listed in these conventions” [15].

According to the data of UN Office on Drugs and Crime, 348 previously unknown toxic substances have been identified between 2009 and 2013. This number is almost twice the

amount of “traditional” compounds (234 items) identified in 1960-70s years and officially recognized by the world community as narcotic (119 items) or toxic (115 items) substances [15]. Among the most common chemical classes of NPSs there are synthetic cannabinoids, synthetic cathinones, phenylethylamines, piperazines and tryptamines [6].

The majority of NPS researchers nowadays believe that NPSs have a destructive effect on individual’s biological, medical, social and economic condition [3, 9, 10, 16].

Due to use NPS the following health effects are extended: functional abnormalities in internals, development of convulsive attack, mental alienation, uncontrolled behavior with

waves of extremely destructive aggression with suicidal attempts [1, 2]. Further, a rapid growth of attractiveness of NPSs among students has recently been registered and therefore [4] young people attending educational institutions and regularly using Internet represent a population at increased risk of NPSs use [3].

According to News Release from the EU Drugs Agency in Lisbon, both clinicians and scientists should be informed about the negative effects and long-term health outcomes of NPS use [4]. In Kazakhstan NPS consumption started 5 years ago and in the last 3 years the NPS abusers have been treated in specific therapeutic programs, although the management of this form of substance use keeps being fragmentary and inconsistent. The poor clinical outcomes are also caused by the lack of detailed studies on NPS-related craving, abuse, tolerance and withdrawal conditions.

Given the increasing diffusion of NPSs, health and other professionals should be informed about this new trend of substance use in order to promptly recognize and manage the NPS-induced physical and psychopathological syndromes. In this article, we present the case of a 20-year-old woman and we focus on the development of bath salts-related symptoms of craving.

Aim. Psychopathological description of the “bath salts” induced disorder’s development and its course through the clinical case report.

Case presentation

Presenting symptoms

A 20-year-old Russian woman was admitted in narcological hospital complaining of headaches, chest pain, loss of energy, loss of weight, anxiety, insomnia, strong desire and urge to use “bath salts”. She described her cardiac sensation as “*boring, crushing, dull, gripping and throbbing pain*”. She compared that pain with the feeling of “*taking out the heart, wringing it out and compressing it*”. That pain occurred as seizures and was accompanied by panic attack, anxiety, irritation, emotional instability.

Anamnesis

Subjective, but not objective, anamnesis was collected. Patient’s birth and growth were described as normal. Pubertal crisis was accompanied by pathocharacterological reactions (i.e. opposition, emancipation, imitation).

At the age of 15, she first used alcohol and cannabis. Submissive behavior was among the causes of her first episodes of drug abuse. From the age of 17, the patient used the “bath salts” together with other friends through several routes of administration, including inhaling the powdery substances, smoking them in a joint or using a vaporizer.

Bath salts-related effects included dizziness, feeling of well-being, confidence, maniac mood, motor agitation, fit of energy and euphoria. The intoxication episodes were without perceptual disturbances. She used bath salts regularly for 2 months. Tolerance to “bath salts” developed and led to the gradual escalation of the dose. The frequency of NPS abusing was 8-10 times per day. The bath salts usage was episodic, with prolonged episodes of binge drug use punctuated by brief non-use periods lasting 7-10 days. The episodes of binge drug use were characterized by continuous high-dose use over hours or days which terminated when all bath salts supplies were consumed or when physical exhaustion occurred.

In the following 4 months certain psychiatric side-effects appeared, including depression, anxiety and panic attacks. Compulsive drug use and dependence symptoms were also present. After two-year of consumption, the patient showed chaotic behavior, social isolation, aggressive behavior, and sexual dysfunction.

Withdrawal symptoms including depression, suicidal ideation, irritability, anhedonia, emotional lability, disturbances in attention and concentration, psychomotor agitation and seeking behavior started approximately 4 hours after cessation of usage. Acute withdrawal symptoms (“a crash”) were often seen after periods of repetitive high-dose use (“runs” or “binges”). The withdrawal symptoms lasted for 7-10 days and were associated with intensive craving.

According to the criteria of Diagnostical and Statistical Manual of Mental Disorders – Fifth Edition (DSM-5), the dependence was specified as severe. The clinical profile, in fact, met the following 7 points:

1. the stimulant (“bath salts”) was taken in larger amounts or over a longer period than was intended;

2. there was a persistent desire or unsuccessful efforts to cut down or control stimulant use;

3. craving, or a strong desire or urge to use the stimulant;

4. recurrent stimulant use resulting in a failure to fulfill major role obligations at home;

5. important social, occupational, or recreational activities were given up or reduced because of stimulant use;

6. stimulant use was continued despite knowledge of having a persistent or recurrent physical or psychological problem that was likely to have been caused or exacerbated by the stimulant;

7. tolerance, as defined by either of the following:

a. a need for markedly increased amounts of the "bath salts" to achieve intoxication or desired effect,

b. a markedly diminished effect with continued use of the same amount of the "bath salts" [5].

For the whole period of bath salts usage, the patient was not able to obtain a prolonged symptom remission, despite therapeutic attempts focused on a controlled environment in which access to stimulants was restricted. The social disadaptation markedly increased in the last year. The patient lost her job, broke up with her partner and worsened the relation with her family. Previously she had never taken any treatment for her addiction, and a local psychiatrist suggested her to come to our hospital.

Course of hospitalization and craving profile

The psychiatric conditions of the patient were observed in the period of post-acute withdrawal in the frame of an *inpatient withdrawal* unit for 2 months. The psychopharmacological treatment consisted of carbamazepine 400 mg/die, mirtazapine 30 mg/die and risperidone 1 mg/die. The psychotherapeutic intervention included cognitive-behavioral therapy (8 weekly sessions) with assessments of craving and exposure to drug-use triggers. Laboratory blood tests did not show any abnormalities; metabolites of cannabinoids or opioids were not found in urinal specimens.

The patient demonstrated hypersensitivity towards the craving triggers. She got agitated and anxious during discussions on the topic of drug consumption. The craving was severe and

recurrent (3 episodes). Each episode of craving lasted approximately 7-8 days.

In the initial phase of craving exacerbation, pseudoneurotic symptoms were observed including asthenia and senestopathic sensations; flashbacks, obsessive thoughts and hypochondria were also recorded. The patient reported to have a "strange" feeling in the precordial area, supplied with stretch, squeeze, tear and turn. The beginning of craving was associated with vegetative symptoms including tachycardia, precordial pain, the feeling of pins and needles, tremor and dizziness. Electrocardiographic and echocardiographic investigations did not show any abnormalities. Symptoms of dyssomnia were also present, with initial and middle insomnia, unrefreshing sleep and restless legs symptoms. Moreover, the content of dreams was often connected with scenes of drug consumption.

During the following 1-3 days she was tearful, sentimental, petulant and suspicious. She showed disinhibited sexual behavior toward patients with opioids use disorder, and she regularly contravened the hospitalization rules and schedules. During the peak phase of the craving exacerbation, the patient demonstrated anger, irritability and motor agitation.

Ideas of reference were also registered. For around 3-5 days the patient reported her idea that doctors had a prejudice against her personality and beauty, and she claimed that certain gestures and comments of other patients were directed at her; her previous joviality turned into distance toward the care providers and the other patients. These thought disorders were not bizarre and stopped abruptly without development in a full delusional episode.

The ending of the craving episode was characterized by apathy, weakness, hyperergic asthenia and absent insight. The severity of following episodes decreased steadily. At the end of the treatment program the patient maintained emotional lability and obsessive craving hypersensitivity.

Discussion

This case suggests that craving is a major component of the course of synthetic cathinone addiction. A great number of publications have highlighted the role of craving as a key factor for addiction progress and prognosis. It has been reported the correlation between craving and the

number of relapses, as well as continual character of craving process [13]. The large quantity of diagnostic instruments implies the craving self-reports or multi-dimensional questionnaires [14].

However, the study of NPSs is started only recently, and there is still a lack of validated methods for the psychopathological assessment including dynamic retesting and administration [8, 12, 16]. A better understanding of craving characteristics for the different classes of NPSs is a key point for the diagnostic procedure. It is necessary to determinate the components of craving and identify the significance of such classical definition as "a desire to use a drug, anticipation of a drug's reinforcing effects and intention to engage in drug use" [11].

Our patient's drug history met the criteria of DSM-5. However, her complaints and postwithdrawal psychopathological course were not pathognomonic to the addiction's craving process. High specificity of the urge symptoms was masked by somatic failure, especially related to the vegetative system. Moreover, the course of the craving was episodic. The initial phase of a craving episode was characterized by pseudoneurotic symptoms followed by affective symptoms. Paranoid disturbance with poor insight appeared at the peak of the craving periods; these thought disorders could be interpreted as a compulsive level of craving although they did not have specific behavioral components with intention to use the drug [7, 11]. Instead of this we registered the persecutory type of delusional symptoms, that were limited by short period of time and abortive paranoid thoughts. These features of the craving development distinguished with recurrent course and combined the pattern of the *substance/medication-induced mental disorders* (DSM-5). The clinical course complexity makes the further detailed observation with long-term effects monitoring to be provided.

The multidimensional measurement of the craving should be further explored in the future research on NPS-related psychopathology. Deeper work in the area of differential diagnosis and dynamic administration is warranted.

There is no conflict of interests, there is no financing from the Ministry or any sponsor organizations.

References:

1. Baumann M.H., Solis E. Jr., Watterson L.R., Marusich J.A., Fantegrossi W.E., Wiley J.L. Baths salts, spice, and related designer drugs: the science behind the headlines. *J Neurosci.* 2014, 34(46), pp. 15150-1518.
2. Castaneto M.S. Gorelick D.A., Desrosiers N.A., Hartman R.L., Pirard S., Huestis M.A. Synthetic cannabinoids: epidemiology, pharmacodynamics, and clinical implications. *Drug Alcohol Depend.* 2014, 144, pp. 12-41.
3. Cinosi E., Martinotti G., Simonato P., Singh D., Demetrovics Z., Roman-Urrestarazu A., Bersani F.S., Vicknasingam B., Piazzon G., Li J.H., Yu W.J., Kapitány-Fövényi M., Farkas J., Di Giannantonio M., Corazza O. Following "the Roots" of Kratom (*Mitragyna speciosa*): The Evolution of an Enhancer from a Traditional Use to Increase Work and Productivity in Southeast Asia to a Recreational Psychoactive Drug in Western Countries. *Biomed Res Int.*, 2015. Available at: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4657101> (accessed 30.01.2016).
4. Corazza O., Schifano F., Parrott A.C. Novel psychoactive substances: first international conference. *Hum Psychopharmacol Clin Exp.* 2013, 28, pp. 287-288.
5. *Diagnostic and Statistical Manual of Mental Disorders – Fifth Edition. Substance-Related and Addictive Disorders. Section II.* Arlington, VA, *American Psychiatric Association.* 2013, pp. 481-590.
6. Hohmann N., Mikus G., Czock D. Effects and risks associated with novel psychoactive substances: mislabeling and sale as bathsalts, spice, and research chemicals. *Dtsch Arztebl Int.* 2014, 111(9), pp. 139-147.
7. Marlatt G.A. Craving notes. *British Journal of Addiction.* 1987, 82, pp. 42-44.
8. Martinotti G., Corazza O., Achab S., Demetrovics Z. Novel psychoactive substances and behavioral addictions. *Biomed Res Int.* 2014. Available at: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4290894> (accessed 30.01.2016).
9. Parrott A.C. Novel psychoactive substances: second and third international conferences. *Hum Psychopharmacol.* 2015, 30(4), pp. 209-212.

10. Parrott A.C. Why all stimulant drugs are damaging to recreational users: an empirical overview and psychobiological explanation. *Hum Psychopharmacol.* 2015, 30(4), pp. 213-224.
11. Sayette M.A., Shiffman S., Tiffany S.T., Niaura R.S., Martin C.S., Shadel W.G. The measurement of drug craving. *Addiction.* 2000, 95 (12), pp. 189–210.
12. Simonato P., Corazza O., Santonastaso P., Corkery J., Deluca P., Davey Z., Blaszkowski U., Schifano F. Novel psychoactive substances as a novel challenge for health professionals: results from an Italian survey. *Hum Psychopharmacol.* 2013, 28(4), pp. 324-31.
13. Tiffany S.T. Cognitive concepts of craving. *Alcohol Research & Health.* 1999, 23(3), pp. 215–224.
14. Tiffany S.T., Carter B.L., Singleton E.G. Challenges in the manipulation, assessment and interpretation of craving relevant variables. *Addiction,* 2000, 95 (2), pp. 177–187.
15. United Nations Office on Drugs and Crime. World Drug Report 2014. United Nations publication, Sales No.E.14.XI.7, pp.51-55.
16. Valeriani G., Corazza O., Bersani F.S., Melcore C., Metastasio A., Bersani G., Schifano F. Olanzapine as the ideal "trip terminator"? Analysis of online reports relating to antipsychotics' use and misuse following occurrence of novel psychoactive substance-related psychotic symptoms. *Hum Psychopharmacol.* 2015, 30(4), pp. 249-254.

Контактная информация:

Прилуцкая Мария Валерьевна - PhD докторант по специальности «Медицина» Государственного Медицинского университета города Семей.

Почтовый адрес: 140002 Республика Казахстан, г. Павлодар, ул. Торайгырова 83-39

E-mail: mariyapril2407@gmail.com

Телефон: +77014186539