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INTEGRATED ASSESSMENT OF RISK FACTORS FOR THE FORMATION OF SOLID DEPENDENCE

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Abstract.

The article presents the identified clinical and dynamic features of the formation of polydependence and a complex of risk factors predisposing in the formation of polyaddiction, which made it possible to develop a matrix for the integral assessment of risk factors for the development of polydrug addiction. The prognostic matrix includes all the factors selected for forecasting with their gradation and the values of the integrated risk indicator from the strength of the influence of an individual factor, the relative risk indicator for each factor and their sum for a complex of factors, as well as the normalizing value - the average frequency indicator according to the entire study. The possible range of risk values for the complex of taken factors is derived.

Key words: Polydrug abuse, premorbid factors, integral assessment, third prevention

The aim of the study was to study a complex of risk factors predisposing to the formation of polydependence and to develop an integral matrix.

MATERIALS AND METHODS

The clinical study was conducted on 129 patients treated in the Republican Narcological Center in hospital settings from 2015 to 2019. All patients - males, were divided into three groups.

Inclusion criterion for group I (main group) was a clinically verified diagnosis according to ICD-10 F19.2: Mental and behavioral disorders caused by the simultaneous use of opioids and cannabinoids. Hashish and tramadol dependence syndrome was verified in 41.1% of patients (n = 53). Comparison groups included patients with opium and hashish monodrug addiction, not complicated by dependence on other types of psychoactive substances. Inclusion criterion for the second comparison group (group II), was a clinically verified diagnosis according to ICD-10 F11.2: Mental and behavioral disorders caused by the use of opioids. Tramadol dependence syndrome was verified in 34.1% of patients (n = 44). A third comparison group (group III) included patients with a clinically verified diagnosis F12.2.: Mental and behavioral disorders caused by the use of cannabinoids. Hashish addiction syndrome was verified in 24.8% of patients (n = 32). Exclusion criteria from the study were comorbid mental pathology requiring dynamic monitoring in a psychiatric institution and dependence on synthetic cannabinoids.

The study was carried out using clinical, experimental-psychological and statistical methods. For an integral assessment of the factors predicting

the formation of polydependence, the method of T. Bayes modified by E. N. Shigan was used.

RESULTS

The mean age of patients in group I was 31.1 ± 7 years, in group II - 30.06 ± 6.7 years, in group III - 31.6 ± 7.1 years ($P_{1-2}; 1-3 > 0, 05$). The duration of the disease ranged from one to eight years and did not significantly differ between the groups. The level of education among the surveyed prevailed in the direction of secondary (53 patients; 41.1%) and secondary specialized (53 patients; 41.1%), only 23 patients (17.8%) had incomplete higher and higher education. Statistically significant group differences were not detected ($P_{1-2}; P_{1-3} > 0.05$). The distribution of patients depending on marital status at the time of the survey was as follows: single (13 patients; 10.1%), married (81 patients; 62.8%) and divorced (35 patients; 27.1%) without statistically significant intergroup differences ($P_{1-2}; P_{1-3} > 0.05$). All three studied groups were comparable in terms of main socio-demographic characteristics and were suitable for comparison.

The study of premorbid social, biological and psychological factors that predispose to the formation of a combined addiction to hashish and tramadol revealed a number of similarities and differences. Hereditary burden of narcological and mental diseases ($C=0.09$), presence or absence of ante-, intra-, perinatal pathology ($C=0.09$), traumatic brain injury ($C=0.22$), presence and forms of deviant behavior ($C=0.26$), the age of onset of smoking ($C=0.26$), and the early age of alcohol consumption ($C=0.17$) did not affect the formation of polydependence. The likelihood of developing polydependence

increased with early exposure to cannabinoids, i.e. before the age of 16. First use of cannabinoids was at 14 years old (20.8% of patients of group I; 15.9% of patients of group II ($P_{1-2} > 0.05$) and 12.5% of patients of group III), at 15 years of age (26.4% of patients of group I; 11.4% of patients of group II ($P_{1-2} > 0.05$) and 18.7% of patients of group III ($P_{1-3} > 0.05$)) and at 16 years (32.1% of patients of group I; 15, 9% of patients of group II ($P_{1-2} > 0.05$) and 31.3% of patients of group III ($P_{1-3} > 0.05$)). At the age of 18 there were patients with monodependence on cannabinoids - 12.5% ($P_{1-3} < 0.01$). The relationship between the frequency of formation of poly- or monodependence with the age of the first use of cannabis was statistically significant and moderate in strength ($C=0.53$; $P < 0.001$). The use of cannabinoids as the first euphoric substance was higher among patients with polydependence (66% of patients of group I; 13.6% of patients of group II ($P_{1-2} < 0.001$) and 34.3% of patients of group III ($P_{1-3} < 0.01$)). In patients with hashish addiction, alcohol was the first euphoric substance (34.0% of patients in group I; 45.4% of patients in group II ($P_{1-2} > 0.05$) and 65.6% of patients in group III ($P_{1-3} < 0.01$)). In 40.9% of patients with tramadol addiction, tramadol was the first euphoric agent ($P_{1-2} < 0.001$). Statistical correlation of the frequency of formation of poly- or monodependence with the type of the first euphoric substance was significant and was estimated to be moderate in strength ($C=0.41$; $P < 0.001$).

Combined dependence was more common in people with unstable character traits for whom the "weak link" is a pronounced craving for entertainment, desire to remain without mother's control, desire for idleness, amenable to the influence of another person, whose behavior is aimed at immediately obtaining what is desired (60.4 % of patients in group I; 29.5% of patients in group II ($P_{1-2} < 0.01$) and 18.7% of patients in group III ($P_{1-3} < 0.001$); ($C=0.33$; $P < 0.001$)). Defects in upbringing such as hypoprotection, neglect, lack of control over child's behavior, lack of attention and interest to the child (69.8% of patients in group I; 31.8% of patients in group II ($P_{1-2} < 0.001$) and 46, 8% of patients of group III ($P_{1-3} < 0.05$); ($C=0.34$; $P < 0.001$)), upbringing in single-parent family (73.6% of patients of group I; 38.6% of patients of group II ($P_{1-2} < 0.001$) and 34.3% of patients in group III ($P_{1-3} < 0.001$); ($C=0.34$; $P < 0.001$)) were also associated with increased risk.

Identified complex of risk factors predisposing to the formation of combined dependence and examination of clinical and dynamic features of the formation of polydependence on hashish and tramadol allowed us to develop a matrix for integral assessment of risk factors. The prognostic matrix includes all the factors selected for risk assessment with their gradation and values of the integrated risk indicator depending on the strength of the influence of an individual factor. It also includes the relative risk indicator for each factor and the sum of all indicators for a complex of factors, as well as the normalizing value - the average frequency indicator according to the entire study.

To compile a prognostic table, comparable indicators of the predicted phenomenon were obtained according to gradations of the most important factors. The significance of factors and their gradations was determined using the relative risk index (R). This indicator is a ratio of the maximum intensity indicator (c) to the minimum (d) within each individual factor ($R = c/d$).

If the factor has no effect, then it is equal to one. The higher R, the greater the significance of the factor for the occurrence of this type of pathology.

The essence of the method lies in the fact that instead of the usual intensive indicators, a normalized intensive indicator (NIP) is used, which can be calculated by the formula: $N = r / M$, where: N - normalized intensive indicator (NIP), r - intensive indicator of the combined dependence from hashish and tramadol on 85 examined, M - "normalizing indicator".

As can be seen from the table, the risk factors for the development of combined dependence on hashish and tramadol include an unstable personality type ($X=14.73$), a single-parent family, hypoprotective upbringing ($X=6.98$), cannabinoids as the first euphoric substance ($X = 10.17$), age of the first use of cannabinoids before the age of 16 ($X=6.10$), reaction to the first use of cannabis in the form of subjectively pleasant experiences ($X=18.23$), duration of the episodic use < 1 year ($X=18, 05$), duration of regular cannabis use of < 6 months ($X=10.62$), development of a withdrawal syndrome from cannabinoids within 1.5-2 years ($X=27.14$).

Thus, individuals monodependent on hashish, with the highest scores on the predictive matrix for assessing the risk of combined addiction to hashish and tramadol, belong to the risk group ($\Sigma 124$).

Table 1

Predictive matrix for comprehensive assessment of the risk of combined dependence on hashish and tramadol

Risk factors	Gradation of factors	(r) intensive indicator	M, normalizing indicator on 85 patients	NIP	RR	X, integrated indicator	Min	Max
Premorbid personality trait	Asthenic	3,7	3,5	1,049	1,14	3,49	3,49	14,73
	Psychostenic	14,8	14,1	1,049	1,14	3,49		
	Cycloid	1,9	4,7	0,394	3,05	9,30		
	Epileptoid	11,1	9,4	1,181	1,02	3,10		
	Hysteroid	5,6	8,2	0,675	1,78	5,43		
	Unstable	11,1	44,7	0,249	4,83	14,73		
	Conformist	11,1	15,3	0,726	1,65	5,04		
Family type	Two-parent	31,5	34,1	0,923	1,30	4,51	3,02	12,02
	Single-parent	20,4	58,8	0,346	3,47	12,02		
	Guardianship	7,4	7,1	1,049	1,14	3,02		
Upbringing	Hypoprotection	27,8	61,2	0,454	2,64	6,98	3,02	6,98
	Dominant hyperprotection	5,6	8,2	0,675	1,78	4,70		
	Indulgent hyperprotection	11,1	15,3	0,726	1,65	4,36		
	Emotional neglect	7,4	7,1	1,049	1,14	3,02		
	Cruel relationships	3,7	4,7	0,787	1,52	4,03		
first euphoric substance -cannabinoids	Yes	20,4	54,1	0,376	3,19	10,17	4,52	10,17
	No	38,9	45,9	0,848	1,42	4,52		
Age of the first cannabinoid use	< 16	38,9	80,0	0,486	2,47	6,10	2,91	6,10
	> 16	20,4	20,0	1,019	1,18	2,91		
Effects of the first use	Pleasant	18,5	65,9	0,281	4,27	18,23	4,03	18,23
	Unpleasant	38,9	30,6	1,271	0,94	4,03		
	Don't remember	1,9	3,5	0,525	2,29	9,77		
Duration of episodic use of cannabinoids	< 1 year	13,0	45,9	0,283	4,25	18,05	5,86	18,05
	< 3years	38,9	44,7	0,870	1,38	5,86		
	>3 years	7,4	9,4	0,787	1,52	6,48		
Duration of regular use of cannabinoids	< 6 months	20,4	55,3	0,368	3,26	10,62	4,50	10,62
	>6 months	38,9	44,7	0,870	1,38	4,50		
Development of the abstinent syndrome	1,5-2 years	11,1	48,2	0,230	5,21	27,14	5,96	27,14
	3-5 years	40,7	44,7	0,911	1,32	6,86		
	> 5 years	7,4	7,1	1,049	1,14	5,96		
							Σ37,3	Σ124,0

When determining the possible range of risk values for the complex of factors taken, the range from minimum to maximum values was determined as 37.3÷124. Therefore, the higher the value of the normalized integrated risk indicator for the occurrence of combined dependence on hashish and tramadol as a result of exposure to a complex of factors, the higher the risk of a combined dependence in this person and the more reason to single him out in the group of unfavorable prognosis.

In addition to the prognostic table, a possible range of risk values for the complex of factors were determined. The higher the value of the normalized integrated indicator of the risk of combined dependence as a result of the impact of a complex of studied factors, the higher the risk of developing polydependence in this person and the more grounds for singling him into the group of unfavorable prognosis.

Table 2

Sub-range values and individual risk prediction groups of combined dependence on hashish and tramadol

Subrange	Subrange values	Risk groups
Weak probability	37,3 ÷ 53,7	Favorable prognosis
Intermediate probability	53,8 ÷ 80,5	Alert
High probability	80,6 ÷ 124,0	Unfavorable prognosis

CONCLUSIONS

An integral assessment of the factors of the probable formation of a combined dependence on hashish and tramadol showed that the higher risk is associated with an unstable personality type, upbringing in a single-parent family under conditions of hypoprotection, early exposure to cannabinoids before the age of 16 and its use as the first euphoric substance, subjectively pleasant reaction to the first

use of cannabis, short stage of episodic use of < 1 year, short stage of regular cannabis use < 6 months, and development of a withdrawal syndrome from cannabinoids within 1.5-2 years.

The predictive matrix of a comprehensive assessment of the risk of developing polydependence is one of the significant components of an effective strategy for tertiary prevention programs.

REFERENCES:

1. Абдуллаева В. К. Клинико-патогенетические аспекты и оптимизация терапевтической тактики при героиновой наркомании (клинико-экспериментальное исследование): Автореф. ... дис. докт. мед. наук. –Ташкент, 2017. – 41 с.
2. Ашуров З. Ш. Клинико-биологические особенности опийной наркомании у больных с девиантным поведением // Сибирский вестник психиатрии и наркологии. – 2016. – № 2. – С.60.
3. Винникова М. А., Ежкова Е. В., Булатова Р. А. Терапевтические стратегии модификационной профилактики при синдроме зависимости, вызванном сочетанным употреблением психоактивных веществ: обзор данных литературы // Профилактическая медицина. – 2018. – № 2. – С. 62.
4. Кубитов А. О. Семейная отягощенность по наркологическим заболеваниям: биологические, генетические и клинические характеристики // Социальная и клиническая психиатрия. – 2015. – Т. 25, № 1. – С. 99.
5. Bailey A. J., Farmer E. J., Finn P. R. Patterns of polysubstance use and simultaneous co-use in high risk young adults // Drug and Alcohol Dependence. – 2019. – Vol. 205. – P. 4
6. European Monitoring Centre for Drugs and Drug Addiction (2021), Polydrug use: health and social responses, <https://www.emcdda.europa.eu/publications/mini-guides/polydrug-use-health...>
7. Hassan A. N., Le Foll B. Polydrug use disorders in individuals with opioid use disorder // Drug Alcohol Depend. – 2019. – Vol. 198. – P. 28
8. Forster M., Gower A. L., Borowsky I. W. et al. Associations between adverse childhood experiences, student-teacher relationships, and non-medical use of prescription medications among adolescents // Addict Behav. – 2017. – Vol. 68. – P. 32
9. Karjalainen K., Lintonen T., Hakkarainen P. Illicit drug use is increasing among non-medical users of prescription drugs-Results from population-based surveys 2002-2014 // Drug Alcohol Depend. – 2017. – Vol. 178. – P. 433
10. UNODC/WHO International Standards for the Treatment of Drug Use disorders. E/CN.7/2020/CRP.6.