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THE INTERNET ADDICTION OF PATIENTS WITH PSYCHOPATHOLOGICAL CONSEQUENCES OF CRANIOCEREBRAL INJURY

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Based on the Kharkov Regional Clinical Psychiatric Hospital № 3 examined 100 male patients aged $38,35 \pm 0,96$ years, with psychopathological consequences of craniocerebral injury (TBI). The control group consisted of 73 healthy male volunteers aged $36,97 \pm 1,73$ years. The frequency of different degrees of Internet use was assessed by using AUDIT-like test INTERNET-UDIT (Internet Use Disorders Identification Test) and calculation of addictive potential in groups.

In patients with psychopathological consequences of craniocerebral trauma, despite the high prevalence of lack of experience «usage» of the Internet, high degrees of addiction and dependence were reported. The addictive potential of the Internet addiction in the study group exceeded 32 % of that of the control group.

KEY WORDS: internet addiction disorder (IAD); AUDIT-like tests; addictive potential; psychopathological consequences of craniocerebral injury

ІНТЕРНЕТ-АДДИКЦІЯ У ПАЦІЄНТІВ ІЗ ПСИХОПАТОЛОГІЧНИМИ НАСЛІДКАМИ ЧЕРЕПНО-МОЗКОВОЇ ТРАВМИ

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На базі Харківської обласної клінічної психіатричної лікарні № 3 обстежено 100 пацієнтів чоловічої статі у віці $38,35 \pm 0,96$ років з психопатологічними наслідками перенесеної черепно-мозкової травми (ЧМТ). Групу порівняння склали 73 здорових добровольця чоловічої статі у віці $36,97 \pm 1,73$ років. У групах вивчалася частота зустрічальності різних ступенів захопленості інтернетом за допомогою INTERNET-UDIT (Internet Use Disorders Identification Test) та визначення адиктивного потенціалу.

У пацієнтів з психопатологічними наслідками перенесеної ЧМТ, незважаючи на значне переваження відсутності досвіду «вживання» інтернету, зареєстровані високі ступені пристрасності та залежності. Адиктивний потенціал інтернет-залежності перевищував на 32 % відповідний показник контрольної групи.

КЛЮЧОВІ СЛОВА: інтернет-аддикція, AUDIT-подібні тести, адиктивний потенціал, психопатологічні наслідки черепно-мозкової травми

ИНТЕРНЕТ-АДДИКЦИЯ У ПАЦИЕНТОВ С ПСИХОПАТОЛОГИЧЕСКИМИ ПОСЛЕДСТВИЯМИ ЧЕРЕПНО-МОЗГОВОЙ ТРАВМЫ

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На базе Харьковской областной клинической психиатрической больницы № 3 обследовано 100 пациентов мужского пола в возрасте $38,35 \pm 0,96$ лет с психопатологическими последствиями перенесенной черепно-мозговой травмы (ЧМТ). Группу сравнения составили 73 здоровых добровольца мужского пола в возрасте $36,97 \pm 1,73$ лет. В группах изучалась частота встречаемости различных степеней увлечённости интернетом с помощью INTERNET-UDIT (Internet Use Disorders Identification Test) и определения адиктивного потенциала.

У пациентов с психопатологическими последствиями перенесенной ЧМТ, несмотря на значительное преобладание отсутствия опыта «употребления» интернета, зарегистрированы высокие степени пристрастия и зависимости. Аддиктивный потенциал интернет-зависимости превышал на 32 % таковой в контрольной группе.

КЛЮЧЕВЫЕ СЛОВА: интернет-аддикция, AUDIT-подобные тесты, аддиктивный потенциал, психопатологические последствия черепно-мозговой травмы

The Internet addiction disorder (IAD), or, more broadly, Internet overuse, problematic computer use or pathological computer use is excessive computer use that interferes with daily life [1]. Study of Internet addiction in different countries is widely reported in the literature [2, 3, 4].

In several studies, where the authors have identified signs of depending which fulfill the criteria DSM-IV: the uncontrolled use, a significant stress effect, conjugation financial problems, social and educational difficulties, provocation of symptoms that characterize hypomania, - researchers operated extremely small samples and did not use clinical and experimental psychological research methods [5, 6].

Using AUDIT-like test INTERNET-UDIT (Internet Use Disorders Identification Test - test for detecting disorders related to passion for the Internet) showed its effectiveness in survey of addictive behavior among young people in Ukraine [7, 8].

The frequency of different degrees of the Internet addiction among patients with psychopathological consequences of craniocerebral injury still has not been studied.

OBJECTIVE

To study the frequency of different degrees of the Internet addiction among patients with psychopathological consequences of craniocerebral injury.

MATERIALS AND METHODS

The research work was carried in two groups. The study group consisted of 100 male patients aged $38,35 \pm 0,96$ years, with psychopathological consequences of craniocerebral injury who were examined at the Kharkov Regional Clinical Psychiatric Hospital № 3. The control group consisted of 73 healthy male volunteers aged $36,97 \pm 1,73$ years.

The research was conducted by using AUDIT-like test INTERNET-UDIT (№ 29 597, 27.07.2009) and calculation of addictive

potential (the ratio of the number of people who have experience of the «usage» dependency object was accompanied by the formation of the corresponding dependence of the total number of persons who had experience of this «usage», expressed as a percentage, i.e. quantitative measure of the ability of the Internet to cause addiction) [7, 8].

Interpretation of the results of the test carried out on the basis of calculation of received grade points: number of points in the range of 1 to 7 were classified as Internet surfing (Zone I), from 8 to 15 - as an predilection to the internet (Zone II), from 16 to 19 - predilection to the Internet at the stage of formation of addiction (Zone III), from 20 to 40 – formed addiction (dependence) (Zone IV).

Mathematical and statistical analysis of received grade points was performed using the software Microsoft Office XL 2010 with the calculation of the percentage (P) and its error (sp). Valid data were recognized with the significance level $p < 0.01$. The indicator was calculated using Microsoft Excel and SPSS 15.0 for Windows.

RESULTS AND DISCUSSION

In patients with psychopathological consequences of craniocerebral trauma, compared with healthy individuals of the control group, despite the high prevalence of lack of experience «usage» of the Internet (35 %), there was enthusiasm for the Internet by 63 % less while the predilection to the internet was recorded at 4 % more, predilection to the Internet at the stage of formation of addiction revealed by 6 % more, formed addiction (dependence) registered 18 % more than in the control group of healthy volunteers. The addictive potential of the Internet addiction in the study group exceeded 32 % of that of the control group (33 % vs 1 %). The frequency of different degrees of the Internet addiction among patients with psychopathological consequences of craniocerebral injury is presented in tab. 1.

Table 1

The frequency (P±sp) of different degrees of the Internet addiction among patients with psychopathological consequences of craniocerebral injury

Degrees of Internet addiction	Study group	Control group	comparison
noexp.	42 ± 6%	7 ± 3%*	+35%
Zone I	16 ± 4%	79 ± 5%*	-63%
Zone II	14 ± 4%	10 ± 3%	-4%
Zone III	9 ± 3%	3 ± 2%	-6%
Zone IV	19 ± 5%	1 ± 1%*	+18%

*p ≤ 0,01 - in current values versus the control group

According to published data, the prevalence of the internet addiction ranges from 1 to 5 % of the population [4-6].

The received data of frequency of the internet addiction among healthy population in our study correspond to those described in [4-6, 9-13].

The obtained data of frequencies of the internet addiction among patients with psychopathological consequences of craniocerebral injury are new. However, it is known that traumatic brain injury (TBI) may cause emotional, social, or behavioral problems and changes in personality [14-17], that allows to speak that the craniocerebral injury increases the tendency to form depending conditions, changing additive status of persons with traumatic brain lesions compared with their healthy peers.

CONCLUSIONS:

1. The frequency of Internet use among patients with psychopathological consequences of craniocerebral injury was 35 % less than in the control group.

2. Despite the high prevalence of lack of experience «usage» of the Internet (35 %), the Internet addiction among patients with psychopathological consequences of craniocerebral injury on the level of internet dependence registered 18 % more than in the group of healthy volunteers.

3. The addictive potential of the Internet addiction among patients with psychopathological consequences of craniocerebral injury exceeded 32 % of that of the control group.

PERSPECTIVES FOR FUTURE RESEARCH

Using AUDIT-like test INTERNET-UDIT in study the frequency of occurrence of various degrees of the Internet addiction for developing and improving diagnostic and therapeutic protocols of care patients with psychopathological consequences of traumatic brain injury.

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