УДК: 612.89.08

SOCIAL MEDIA THERAPY AS A METHOD OF INFLUENCING INDICATORS OF NEUROENDOCRINE ADAPTATION IN YOUNG PEOPLE WITH TENSION HEADACHE

Gaistruk Nataliia
Doctor of Medicine, Professor
Department of Gynecology and Obstetrics №2
Kartelian Roman
Yurii Olena
Student
Vinnitsa National Pirogov Memorial Medical University
Gaistruk Anatolii
Student
Poida Oksana
Senior Lecturer
Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University

Abstract: In this article, we analyzed the effectiveness of the application of the method of social media therapy in the correction of neuroendocrine adaptation in young people with tension headaches. The expediency of using social media therapy sessions in youth with an episodic and chronic tension headache is substantiated. The use of social media material significantly the activity of the sympathoadrenal system, that is, has a depressing effect on the activity of the sympathoadrenal system, which plays an important role in the pathogenesis of tension headache.
Keywords: social media therapy, tension headache, adrenaline, norepinephrine, sympathoadrenal system.

The prevalence of headache in children increases markedly with age and in the adolescent period is approximately 70% [1]. Headaches are difficult for teenagers,

affecting their mood, behavior, performance, training and further professional orientation. Anxiety thoughts "around" own pain and its foci increase pain perception, which in turn leads to the continuous activity of the sympathoadrenal system with all the following consequences. The use of properly selected social media material allows for effective correction of emotional and other psychological disorders, however, at present there is no data on the efficacy and feasibility of using social media psychotherapy in young people with headache, therefore, further research in this direction is of considerable scientific interest and practical importance of this method. The goal of the study is to give a comprehensive assessment of the effectiveness of the use of social media therapy for the correction of neuroendocrine adaptation in young people with tension headache.

Objectives of the study:

1. To evaluate the state of neuroendocrine adaptation (the content of adrenaline and norepinephrine in serum) in young people with tension headache.
2. To study the influence of sociomedical therapeutical techniques on indicators of neuroendocrine adaptation in young people with tension hedache.

The object of the study is social media therapy as a means of non-pharmacological correction of neuroendocrine adaptation in youth with tension headache.

The subject of the study is the state of a stress-implementing system in youth with tension headache and their changes after the course of sessions of social media psychotherapy.

Section 1. Current concepts of tension headache in young people and their non-pharmacological correction (literature review)

Tension headache in teens: prevalence, developmental factors, diagnosis, and psychotherapeutic intervention.

According to modern ideas (need for reference? who says that), tension headache in the children is a psychosomatic discomfort in the formation of which many factors are involved. . The prevalence of this condition is quite controversial. Thus, according to the study of Frankenberg (1991), tension headache in the children is found in 50% of cases [2], according to Vage (1996), Luka Krausgrill (1997) and

Krasnik (1999) - respectively 72%, 51% and 29% [3,4]. The prevalence of tension headache gradually increases with age and reaches its maximum in puberty. An episodic variant predominates in the structure of headache, but chronicity is possible with age.

Etiology and pathogenesis of tension headache. Factors associated with learning are an important factor in the development of headache. The main contribution to the development of tension headache is not the child, but their parents. Tension headache is more common in teenagers with certain types of personality [5] - cyclothymic, hypertensive, emotional, and exalted types of personality accentuate with the high activity level of the sympathoadrenal system. Today, it is known that the factors of formation of tension headache cause functional disorders of the limbicoreticular complex, which leads to a change in equilibrium in nociceptive and antinociceptive systems, the development of anxiety syndrome with changes in the system of the trigeminal nerve. As a result, there is an increase in the tone of pericranial and mimic muscles, which is expressed by the clinical manifestation of tension headache.

Diagnosis of tension headache.

The diagnosis of different variants of headache is based on the diagnostic criteria adopted by the International Headache Society in 1988. [6]. There are episodic and chronic variants of the disease.

The diagnosis of chronic tension headache and episodic variant is the same as above, however, the average incidence of headache episodes is much higher: more than 15 "painful" days per month (or more than 180 days per year) with a disease duration of at least 6 months.

Non-pharmacological treatment for tension headache. In the treatment of tension headache in youth, the following principles should be observed: 1) individuality; 2) validity; 3) comprehensiveness. Along with medication, quite effective in the treatment and prevention of tension headache are psychotherapeutic methods.

1.2. The role of social media therapy in the correction of young people's emotional state.

Social Media Therapy is a social side of psychotherapy care, addressing patients' individual problems through the vast amount of social media material available on the Internet. The material is presented in the form of video, audio, blogs of other people. It can be motivating, distracting, reassuring. The main thing is that it is interesting to patients and evokes the necessary positive emotions. Therefore, social media therapy is an important tool for neuroendocrine adaptation of human and psycho-emotional state. The expediency of using the method of social media therapy to correct the neuroendocrine adaptation of young people with tension headache, which became the subject of our study.

Section 2. Materials and methods of research.

2.1. Study design

The study involved 60 people aged 13 to 22 years, which were divided into three groups: group 1: control - 20 healthy people who did not have stress headache; Group 2: youth with episodic tension headache (1-10 "painful" days per month); Group 3: youth with chronic tension headache (16-20 "painful" days per month). The study was divided into two stages: Phase 1 - we conducted an assessment of neuroendocrine adaptation in healthy individuals, and with episodic and chronic tension headache. In stage 2, for 2 months (3 times a week), we conducted sessions of group social media therapy (5 people each), after which we re-evaluated changes in psycho-emotional state.

2.2. Methods of social media therapy

In order to identify the interests of young people in various social media materials, we asked to answer the questionnaire. To evaluate the impact of social media therapy sessions on a neurohumoral system of young people with tension headache we used video materials: "beauty of Ukrainian steppes", "mountain rivers", "fairy-tale clippings", "active youth rest". Sessions of social media therapy were carried out in groups (10 patients) 3 times a week for 2 months based on the school №1 I-III grades Vinnitsa

2.3. The enzyme-linked immunosorbent assay of neuroendocrine adaptation

The studies were conducted based on the clinical diagnostic laboratory Vinnytsia Regional Hospital named after Pirogov. The state of neuroendocrine adaptation was evaluated by the content of adrenaline and norepinephrine (stress-implementing system) in the blood serum. Blood taking was collected under standard conditions - from 8 am to 9 am, on an empty stomach, after an overnight fast, from an elbow vein with the help of vacuum cleaners into Vacuette tubes (Greiner Bio-One, Austria).

Determination of adrenaline content. Serum adrenaline content was determined by the enzyme-linked immunosorbent assay using the Adrenaline EIA kit.

Determination of norepinephrine content. Serum norepinephrine content was determined by the enzyme-linked immunosorbent assay using the Noradrenaline EIA kit.

2.4. Statistical methods of research The processing of the obtained results was performed according to the methods of variational statistics. Probability was estimated using Student's t test, probable differences at $p < 0.05$. The calculations were performed on a personal computer in the package "STATISTIKA 5.5"

Chapter 3. Indication neuroendocrine adaptation in young people with tension headache and their changes after a course of social media therapy.

3.1. Studies of indicators neuroendocrine adaptation in young people with tension headache.

We evaluated the performance of the stress-implementing system in young people with tension headache (Table 1). It turned out, that in the episodic form of headache tension there is only a tendency to increase the content of adrenaline and norepinephrine in the blood serum. In contrast, in persons with chronic headache, a statistically significant increase in adrenaline and norepinephrine is recorded by 22.6% and 21.8%, respectively, relative to controls.

Table 1

Content of adrenaline and norepinephrine in the blood serum of young people with tension headache (M ± m)

№	Characteristic of groups	n	adrenaline, ng/l	norepinephrine, ng/l
1	Control	20	151 ±5,53	209 ±6,26
2	Episodic tension headaches	20	163 ±6,26	230 ±8,27
3	Chronic tension headaches	20	184 ±6,31*#	256 ±5,50*#

Note: 1. * - $p<0,05$ relative to the control group; 2. # - $p<0,05$ relative to a group of individuals with episodic headache.

3.2. Influence of social media therapy on indicators of neuroendocrine adaptation in young people with tension headache.

We evaluated the impact of social media therapy sessions on neuroendocrine adaptation rates in individuals with tension headache (Table 2). It was revealed that the proposed treatment showed a significant decrease content of adrenaline (by 11.0%) and norepinephrine (by 10.5%) in blood serum compared to such indicators in appropriate groups before treatment, which is evidence of the depressing influence of social media therapy on the activity of the sympathoadrenal system.

Table 2

The impact of social media therapy on content adrenaline and norepinephrine in young people with episodic (ETH) and chronic tension headache (CTH) (M±m)

№	Characteristic of groups		adrenaline, ng/l	norepinephrine, ng/l
1	ETH	Before treatment	163 ±6,26	230 ±8,27
		After treatment	155±6,73	215 ±7,13
2	CTH	Before treatment	184 ±6,31	256 ±5,50
		After treatment	164 ±6,03*	229 ±4,52*

Note: * - $p<0,05$ relative to the appropriate group before treatment

Thus, the use of social media therapy in young people with tension headache significantly reduces the activity sympathoadrenal system, which in turn leads to improvements in the physical and psychological components of health.

Conclusions. In the scientific work based on the study of indicators of neuro-humoral adaptation, the feasibility of using sessions of social media therapy in youth with the episodic and chronic headache of tension is substantiated.

1.The study of indicators of neuroendocrine adaptation showed that in individuals with the episodic and chronic tension headache is registered increased levels of adrenaline and norepinephrine in the blood. 2. The use of sessions of social media therapy significantly reduces the level of hormones of the sympathoadrenal system in young people with chronic forms of tension headache.

LIST OF REFERENCES

1. Jensen R. // Cephagia. - 1999. - Vol. 19. - P. 602-621.

2. Frankenberg S., Pothmann R., Miller B., Sartory G., Wolff M., Heilmeier W. Prevalence of headache in schoolchildren. In: Gallai V, Guidetti V, eds. Juvenile Headache. Excerpta Medica. // International Congress Series 969. - Amsterdam: Elsevier B.V. - 1991. - P.113-117.

3. Barea L.M., Tannhauser M., Rotta N.T. // Cephalalgia. - 1996. - Vol. 16.-P.545-549.

4. Battistutta S., Aliverti R., Montico M. et al. Chronic tension-type headache in adolescents. Clinical and psychological characteristics analyzed through self- and parent-report questionnaires // J. Pediatr. Psychol. - 2009. - Vol. 34, N 7. P. 697–706.

5. Вейн А.М. Головная боль. // Журн. неврол. и психиатр им. С.С. Корсакова. - 1996.- №3.-С.5-8.

Veyn A.M. Golovnaya bol'. // Zhurn. nevrol. i psikhiatr im. S.S. Korsakova. [Journal neuro. and Psychiatry. SS Korsakov] - 1996.- №3.-S.5-8.

6. Колосова О.А. // Российский мед. журн. - 1997. - №3. - С. 30-32.

Kolosova O.A. // Rossiyskiy med. zhurn. [Kolosov OA / / Russian honey. Journal. - 1997. - № 3. - P. 30-32.] - 1997. - №3. - S. 30- 32.