

MODERN METHODS OF STUDYING EMOTIONAL STATE IN PATIENTS WITH TRIGEMINAL NEURALGIA

M. J. Latipjonov

U. T. Abdukadirov

Department of Neurology, Andijan State Medical Institute,
Andijan, Republic of Uzbekistan

Abstract:

Temperament properties were studied in 42 patients with trigeminal neuralgia using a questionnaire form of the temperament properties accentuation test (TAST) before and after treatment. Patients received finlepsin as a basic pharmacotherapy therapy. It was found that patients with trigeminal neuralgia, upon admission to the hospital during the period of exacerbation of the disease, are characterized by a predominance of manifestations of emotional instability and social passivity. After complex treatment, there is a decrease in neuroticism indicators against the background of increased aggressiveness and sensitivity, which indicates the ambiguous nature of the change in the emotionally unstable properties of temperament. Gender differences in the severity of temperament properties in patients with trigeminal neuralgia have been established: men have higher levels of sensitivity before treatment and social activity after its completion compared with the indicators of these scales in women. The revealed features of changes in the severity of temperament properties in patients with trigeminal neuralgia indicate the need to find effective means of correcting their psychophysiological condition.

Keywords: trigeminal neuralgia, temperament properties, pain.

Introduction

Paroxysmal facial pain is a common group of human neurological diseases characterized by a peculiar clinical picture, a pronounced effect on quality of life and persistent disability. Among them, trigeminal neuralgia is the most severe, which is one of the most persistent pain syndromes in clinical neurology. Among facial pain syndromes, trigeminal neuralgia ranks first in frequency [1] and is common with a frequency of up to 30-50 cases per 100,000 population, and the incidence, according to WHO, is in the range of 2-4 people per 10,000 population [5]. At the same time, more than 90% of cases occur in people over 40 years of age and mainly in women (60-70%) [6]. Prolonged and intense pain serves as a powerful stressful factor and can have a significant effect on the body's regulatory systems – nervous, endocrine and immune. The change in their activity, as is known, is manifested by a change in a number of integrative parameters, including the psychophysiological status. According to the psychoemotional stress effect on patients, trigeminal neuralgia is one of the most severe

diseases of the peripheral nervous system. The consequences of this exposure may depend not only on the strength and nature of the pain, but also on the characteristics of its perception. It is known that the perception of pain significantly depends on psychological factors, in particular, studies in recent years demonstrate its connection between the perception of pain with depression and anxiety [2]. In this regard, the psychophysiological indicators of patients with trigeminal neuralgia, based on their temperamental characteristics, are of particular interest. At the same time, in the available literature, we have not found works in which a comprehensive study of the relationship between the characteristics of pain syndrome and psychophysiological indicators was conducted.

Goal. The aim of the work was to identify the peculiarities of temperament properties in patients with trigeminal facial pain.

Materials and methods of research. The study was performed with the participation of 42 patients (19 women and 23 men) aged 33 to 73 years who were hospitalized in the Department of Maxillofacial surgery of the Kursk Regional Clinical Hospital with a diagnosis of neuralgia of the II-III branches of the trigeminal nerve. All studies were conducted before and after treatment. Upon admission of patients to inpatient treatment and upon its completion, their psychophysiological status was studied using the test of accentuated temperament properties – TAST [7], which includes 125 questions to evaluate the 9 temperament properties and reliability scales presented below.

1. Hyperthymia (cheerfulness, optimism).
2. Social activity (the need for social contacts).
3. Energy (intensity of subject-object interaction).
4. Neuroticism (vague complaints of somatic distress).
5. Shyness (shyness in social interactions).
6. Aggressiveness (short temper, irritability, anger, verbal conflict).
7. Rigidity (conservatism, cognitive inertia).
8. Emotional lability (fluctuations in the mood background, vegeto-somatic instability).
9. Sensitivity (impressionability, vulnerability).
10. Control (social desirability of answers) – with values on the scale of more than 5 points, the test results were recognized as unreliable.

After testing, the scores were converted into dimensionless and comparable wall scores. According to the literature data [3], the value of the measured property in 8 walls was regarded as its moderate strengthening, with 9 walls the property is strongly expressed, 10 walls are very strongly expressed. At 9 and 10 walls, the property was qualified as accentuated, 3 walls were assessed as a moderate deficiency of the measured property, 2 walls – a pronounced deficiency, 1 wall – a very pronounced deficiency of the property. Since the TACT scales measured the bipolar properties of temperament, at values 1-3, it was assumed that the opposite pole of the measured bipolar property

dominates the status of the subject. In our work, the drug finlepsin in 200 mg tablets (Pliva, Croatia) was used for the treatment of trigeminal neuralgia, which is the drug of choice for this pathology. The regimen of the drug was established individually, taking into account the indications and the condition of the patients. The drug was prescribed to primary patients as a test agent for differential diagnosis with other pathology of the maxillofacial region: if after taking 600-800 mg of finlepsin the analgesic effect did not develop, then the diagnosis of typical trigeminal neuralgia was not confirmed and such patients were excluded from the study [6]. In case of confirmation of the diagnosis in primary patients, finlepsin was used at an initial dose of 200-400 mg per day, which was subsequently gradually increased in order to determine the effective dose until the pain disappeared completely. On average, the effective dose was 400-800 mg per day and was prescribed in two doses. Treatment at this dosage was carried out for 10 days, and then patients were prescribed a maintenance dose of 400 mg per day, which was also divided into two doses. The course of treatment lasted up to 28 days. Repeated (relapsed) patients who had previously received finlepsin were immediately prescribed the drug at a therapeutic dose of 400-600 mg / day, which was distributed in 2-3 doses. After the pain disappeared, the dose was gradually reduced to maintenance. Along with the use of finlepsin, the complex therapy of trigeminal neuralgia included a number of other pharmacological drugs and physiotherapy treatment. In the first 5 days after admission to inpatient treatment, all patients were intravenously injected with prednisone (60 mg), euphyllin (5 ml of 2.4% solution), spasmalgin (5 ml) and lasix (20 mg) in 200 ml of saline solution. Over the next 5 days, patients received trental (5 ml) in a similar volume of saline solution. From 11 to 15 days of hospital stay, patients were prescribed intravenous drip of actovegin (5 mg). Throughout the treatment, along with pharmacotherapy, patients were prescribed physiotherapy: helium-neon laser, acupuncture, diadynamic currents. Taking into account the peculiarities of the psychological content of temperament types in men and women, the test data were grouped both as a general group and by gender. The reliability of the obtained results was determined by the Student's t-criterion and the z-criterion of the difference of fractions [4].

The results of the study and their discussion. The results of a psychophysiological study of patients with trigeminal neuralgia performed using TAST made it possible to establish both changes in the severity of individual temperament properties as a result of the treatment, and their gender differences. As can be seen from the table, in the general group of patients with trigeminal neuralgia, upon admission to the hospital, the average values of neuroticism, sensitivity and emotional lability were higher than the level of other temperament properties, which indicates a greater manifestation of emotional instability in patients. In addition, higher values of the timidity scale relative to low levels of hyperthymia and social activity indicate a tendency towards social passivity. At the end of inpatient treatment, patients had increased sensitivity (by 9%,

activity (by 24%, $p<0.05$) and decreased rigidity (by 14%, $p<0.01$), which indicates an increase in their manifestations of social activity against the background of therapy. At the same time, there was an increase

in aggression (by 15%, $p<0.05$) against the background of a decrease in neuroticism (by 17%, $p<0.01$), which indicates an ambiguous change in the features of emotional instability in patients.

A comparison of the nature of changes in the studied indicators in men and women revealed some gender differences, in particular, a comparison of the values of the TAST scales before treatment showed that men had a higher sensitivity index compared to women (by 16%, $p<0.05$).

The values of the other scales did not differ significantly. After the treatment, men compared with women had a significantly increased level of social activity (by 36%, $p<0.01$) against the background of a decrease in rigidity (by 24%, $p<0.05$). These results may indicate that men have a more pronounced increase in social activity traits.

The degree of increase in the pain test rating scales in comparison with their maximum possible indicators in the subgroups of men and women also did not differ significantly and fully corresponded to the nature of their changes in the general group. At the same time, it should be noted that the indicators of emotional attitude to pain in men almost reached the maximum values and amounted to 97.3%, while in women their severity was 10% less (87%). Currently, there are no works in the literature in which a comprehensive study of the relationship between the characteristics of the pain syndrome and psychophysiological indicators was carried out. In this regard, it was of particular interest to study the properties of temperament in patients, which is currently assessed as a formal dynamic characteristic of mental processes and features of emotional response. It was found that in the general group of patients with trigeminal neuralgia after treatment, the indicators of sensitivity (by 9%, $p<0.05$) and aggressiveness (by 14%, $p<0.01$) increase. At the same time, the indicators of neuroticism significantly decrease after treatment (by 11%, $p<0.05$), which indicates the effectiveness of the therapy. In women after treatment, indicators of timidity (by 21%, $p<0.01$) and sensitivity (by 15%, $p<0.01$) were significantly increased, which indicates the preservation of emotionally unstable temperament traits noted before treatment. . In men after treatment, there was a statistically significant increase in the scales of hyperthymia (by 32%, $p<0.01$), social activity (by 24%, $p<0.05$) and a decrease in rigidity values (by 14%, $p<0.05$). $p<0.01$), which

indicates the manifestation of socially active accentuated properties of temperament. There is also an increase in aggressiveness (by 15%, $p<0.05$), but a decrease in neuroticism (by 17%, $p<0.01$), which reflects the preservation of emotionally unstable accentuated traits of temperament properties after treatment.

Thus, certain gender features of temperamental characteristics are observed before and after treatment. When comparing the indicators of the TACT scales in men and women in both situations, it was found that in men, compared with women, the sensitivity index

was significantly increased (by 16%, $p < 0.05$). The values of the other scales did not differ significantly. After the treatment, the level of social activity significantly increased in men compared to women (by 36%, $p < 0.01$) against the background of a decrease in rigidity (by 24%, $p < 0.05$). These facts may testify that in this case, socially active accentuations of temperament properties begin to appear in men. Thus, in the examined group of patients with trigeminal neuralgia before the start of treatment, men compared with women are distinguished by a higher level of sensitivity against the background of the absence of significant differences in other TACT scales. After the therapy, the features of psychophysiological changes manifested themselves in higher social activity in men.

In this regard, along with pure accentuated types of temperament, patients with a high frequency met mixed types, including these accentuations. After the treatment, the main temperamental characteristics of the patients were preserved, but the degree of their severity changed. At the same time, against the background of a weakening of a number of indicators of the emotional instability factor, which should be regarded as confirmation of the effectiveness of therapy, the preservation of certain enhanced properties of this temperament factor was observed. In addition, the data obtained allow us to conclude that a chronic disease with a pronounced pain syndrome increased the severity of accentuations of the emotional instability factor.

Conclusion

In patients with trigeminal neuralgia, upon admission to the hospital, the pain syndrome is characterized by the predominance of components associated with pain behavior, adaptability and emotional attitude to pain over nociception indicators. The structure of the pain syndrome before and after treatment has no gender differences.

The traditional complex treatment of trigeminal neuralgia has the most pronounced effect on the nociceptive components of paroxysmal facial pain. At the same time, the remaining non-nociceptive components of the pain syndrome after the therapy decreased less pronouncedly (sensory sensation, pain experience, pain behavior) or did not change (adaptability).

Features of the nature of the pain syndrome in patients with trigeminal neuralgia necessitate the optimization of pharmacotherapy in order to reduce the level of neuroticism of patients and the emotional attitude to pain. The use of a multidimensional verbal-color pain test in patients with trigeminal neuralgia is an informative method for assessing pain, which allows optimizing the treatment of pain syndrome, taking into account the individual characteristics of its structure. Patients with trigeminal neuralgia upon admission to the hospital are characterized by the predominance of the properties of emotional instability and social passivity in the structure of temperament. After complex treatment, there is a decrease in neuroticism and emotional lability, but manifestations of emotional instability persist.

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