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CLINICAL AND PSYCHOMETRIC STUDY OF PSYCHOEMOTIONAL DISORDERS AND QUALITY OF LIFE IN PATIENTS WITH HEMIFACIAL SPASM

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ABSTRACT

Hemifacial spasm (HFS) is a chronic neurological disorder characterized by involuntary contractions of the facial muscles and is often accompanied by psychoemotional disturbances and a decreased quality of life. The aim of this study was to assess the levels of depression, anxiety, and quality of life in patients with HFS, as well as to determine the relationship between the frequency of spasms and psychoemotional distress.

KEYWORDS: *Hemifacial Spasm, Psychoemotional State, Depression, Anxiety, Quality of Life, Facial Muscle Spasms, SF-36, HDRS, HADS.*

RELEVANCE

Hemifacial spasm (HFS) is a chronic disorder characterized by involuntary contractions of the facial muscles innervated by the facial nerve. This condition has a significant impact on patients' quality of life, reducing physical activity, limiting social interactions, and exacerbating psychoemotional disturbances. Despite advances in pharmacotherapy and surgical interventions, the mechanisms underlying depression and anxiety in patients with HFS remain insufficiently studied. Furthermore, an important aspect is the limited understanding of the relationship between the intensity of spasms and psychoemotional disturbances. Identifying psychoemotional factors and their impact on quality of life is crucial for developing comprehensive therapeutic strategies that should include not only the correction of motor disorders but also psychotherapeutic support aimed at reducing stress, restoring emotional balance, and improving social adaptation. Therefore, the study of psychoemotional disturbances in patients with HFS represents an important clinical and scientific task.

AIM OF THE STUDY

To assess the psychoemotional state and quality of life of patients with hemifacial spasm, to determine the relationship between the frequency of spasms and the level of psychoemotional distress, and to examine the impact of chronic stress on the course of the disease.

MATERIALS AND METHODS

The study included 62 patients with a clinically confirmed diagnosis of hemifacial spasm (main group) and 40 healthy volunteers (control group), matched for age and sex. This ensured the comparability of the groups and minimized the influence of demographic factors on the study results (see Figure 1).

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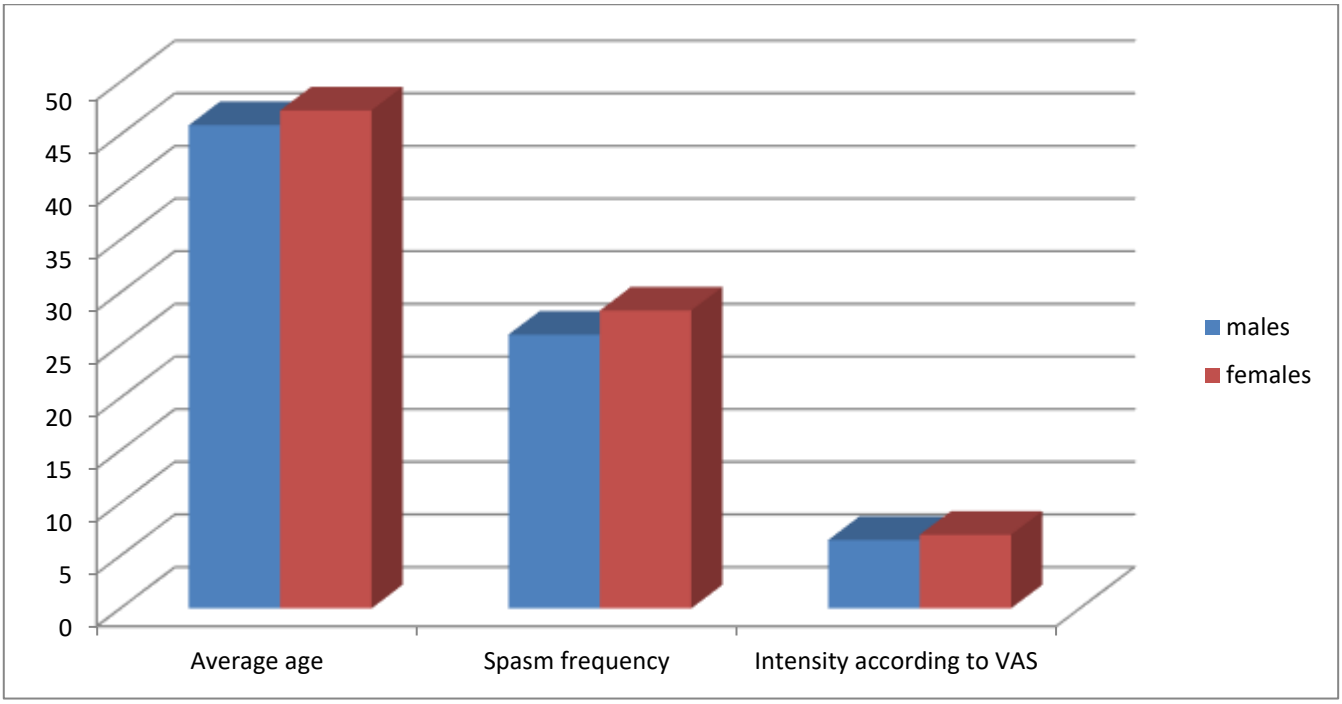


Figure 1. Demographic characteristics of the study groups

For a comprehensive assessment of psychoemotional status, standardized and validated instruments were used. Depression was evaluated using the Hamilton Depression Rating Scale (HDRS), which measures the severity of depressive symptoms, including emotional, cognitive, and somatic manifestations. Anxiety was assessed with the Hospital Anxiety and Depression Scale (HADS), which also helps identify depressive states and psychological stress associated with chronic illness. Quality of life was measured using the SF-36 questionnaire, providing a multidimensional view of patients' physical and psychoemotional functioning, including physical activity, social interaction, and overall quality of life. To identify relationships between the clinical manifestations of spasms and psychoemotional status, correlation analysis using Spearman's correlation coefficient was performed. Comparisons between the main and control groups were conducted using the Mann–Whitney U test for independent samples. Differences were considered statistically significant at $p < 0.05$.

STUDY RESULTS

This section presents the results of the study, including the analysis of psychoemotional status, quality of life, and the relationships of these indicators with the clinical characteristics of hemifacial spasm in patients from the main and control groups.

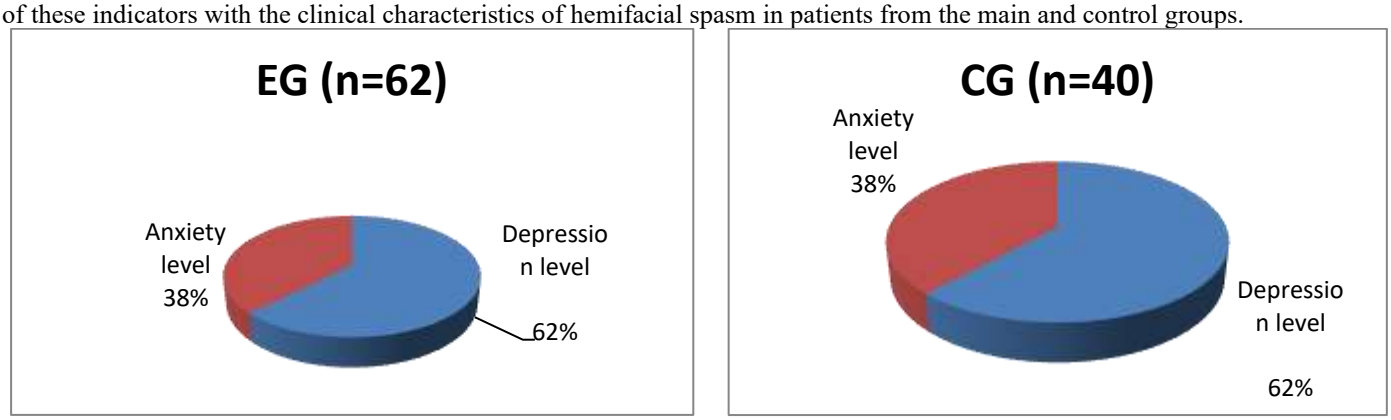


Figure 2. Psychoemotional status according to HDRS and HADS scores

The results showed that patients with hemifacial spasm had significantly higher levels of depression and anxiety compared to the control group. The depression level in the main group was significantly higher (18.7 ± 6.2) than in the control group (9.5 ± 3.4), indicating pronounced depressive symptoms in patients with HFS. Anxiety levels were also markedly higher in HFS patients (11.3 ± 3.8 versus 5.9 ± 2.1).

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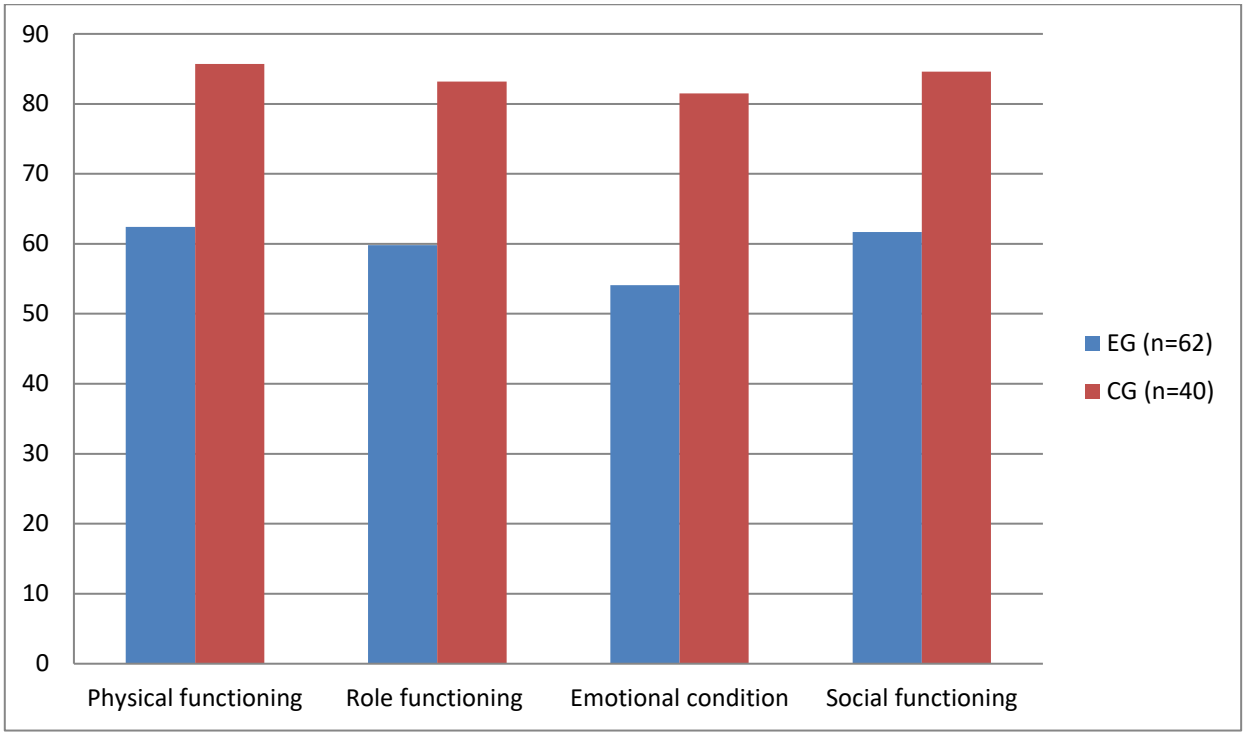


Figure 3. Quality of life according to the SF-36 questionnaire

As shown in Table 3, patients with hemifacial spasm scored significantly lower than healthy volunteers on all quality of life parameters, including physical and emotional functioning, as well as social interaction.

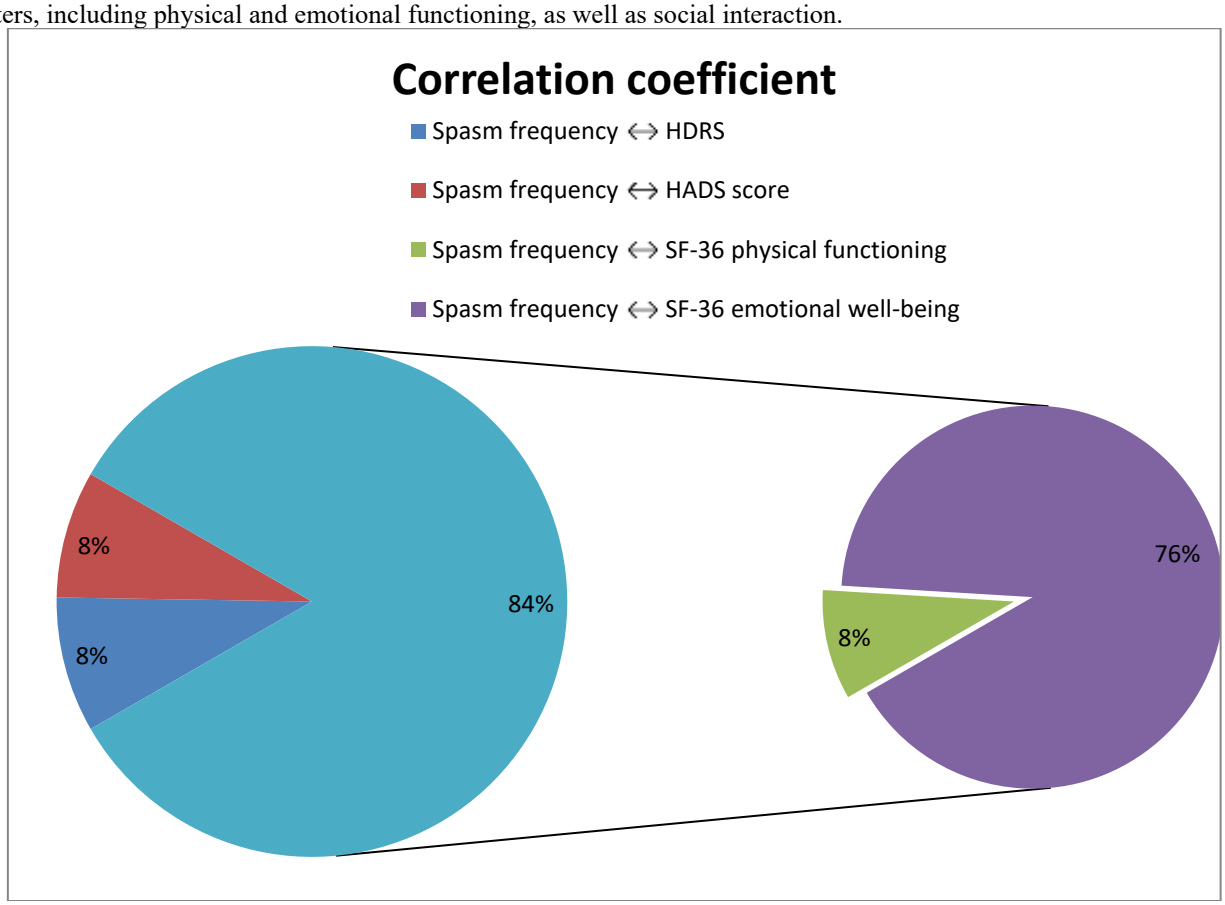


Diagram 1. Correlation between spasm frequency and psychoemotional status

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Indeed, the results from Diagram 1 highlight the importance of the psychoemotional component in the clinical presentation of hemifacial spasm (HFS). A direct correlation between spasm frequency and levels of depression and anxiety indicates that the more frequent and intense the spasms, the more pronounced the psychoemotional disturbances in patients. This may be related to the ongoing stress and anxiety caused by the unpredictable and unpleasant manifestations of the disorder, which exacerbate depressive and anxious symptoms. Conversely, the inverse relationship between spasm frequency and quality of life confirms that the frequency and intensity of spasms significantly impact patients' physical and emotional functioning.

Reduced physical activity, limited social interaction, and deteriorating emotional well-being—these factors collectively lead to a significant decline in overall quality of life. The results emphasize the need for a comprehensive approach to treating HFS, which should include not only therapy to control motor symptoms but also psychological support to improve psychoemotional well-being. Psychotherapeutic methods and stress management strategies can play a key role in restoring patients' emotional balance and enhancing their quality of life. This may include cognitive-behavioral therapy, relaxation techniques, and resilience training. Additional approaches could also be considered, such as pharmacological treatment to manage depression and anxiety, as well as physiotherapeutic interventions aimed at reducing spasm frequency and improving patients' functional status.

Table 1
Regression analysis of predictors of psychoemotional distress

Parameter	β (coefficient)	p	Contribution to variance, %	Note
Spasm frequency	0,44	<0,01	26,1	Independent predictor of depression and anxiety
Physical quality of life (SF-36)	–0,37	<0,05	18,3	Affects psychoemotional state
Social functioning (SF-36)	–0,33	<0,05	14,7	Associated with anxiety
Emotional functioning (SF-36)	–0,29	<0,05	12,5	Influences depressive symptoms

As shown in Table 1, the regression analysis identified key factors predicting psychoemotional disorders in patients with hemifacial spasm. Spasm frequency proved to be the most important independent predictor of depression and anxiety, accounting for 26.1% of the variability in these measures ($\beta = 0.44$; $p < 0.01$). In addition, deterioration in physical quality of life, according to the SF-36 scale, also significantly reduces the level of psychoemotional distress ($\beta = –0.37$; $p < 0.05$; contribution 18.3%). Social functioning is associated with anxiety levels ($\beta = –0.33$; $p < 0.05$; contribution 14.7%), while emotional well-being is linked to depressive symptoms ($\beta = –0.29$; $p < 0.05$; contribution 12.5%). These findings highlight the importance of a comprehensive approach to treating patients with HFS, which includes not only the correction of motor disorders but also psychosocial support.

DISCUSSION.

The results obtained confirm that the psychoemotional component plays a key role in the clinical presentation of hemifacial spasm. Chronic involuntary contractions of the facial muscles, as well as associated motor impairments, create a persistent sense of discomfort and loss of control in patients, leading to a sustained state of stress. According to Figure 2, patients in the main group exhibit significantly higher levels of depression on the HDRS scale (18.7 ± 6.2) compared to the control group (9.5 ± 3.4), as well as higher levels of anxiety on the HADS scale (11.3 ± 3.8 vs. 5.9 ± 2.1). Quality of life indicators measured by the SF-36 scale also show significantly lower scores in patients with HFS, particularly in areas such as physical functioning (62.4 ± 15.2 vs. 85.7 ± 10.3), role functioning (59.8 ± 18.1 vs. 83.2 ± 12.5), emotional well-being (54.1 ± 16.7 vs. 81.5 ± 11.7), and social functioning (61.7 ± 14.9 vs. 84.6 ± 10.8). Correlation analysis (Diagram 1) revealed a significant direct relationship between spasm frequency and levels of depression ($r = 0.51$; $p < 0.01$) and anxiety ($r = 0.48$; $p < 0.01$), as well as an inverse correlation with physical ($r = –0.46$; $p < 0.05$) and emotional ($r = –0.42$; $p < 0.05$) functioning. These data indicate that the more frequent the spasms, the more pronounced the psychoemotional disorders and the greater the decline in quality of life. Regression analysis (Table 1) identified spasm frequency as an independent predictor of depression and anxiety ($\beta = 0.44$; $p < 0.01$), while deterioration in physical, social, and emotional functioning also had a significant impact on the patients' psychoemotional state. This confirms that more severe motor impairments directly affect psychoemotional well-being.

CONCLUSIONS.

Patients with hemifacial spasm exhibit elevated levels of depression and anxiety, as well as significantly reduced quality of life compared to the control group. Spasm frequency and intensity are closely associated with psychoemotional distress and quality of life. Incorporating psychotherapeutic and stress-oriented interventions into the comprehensive treatment of HFS is warranted to improve patients' psychoemotional well-being and overall quality of life.

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