ISSN NO: 2770-2936
Date of Publication:13-12-2022

Mental Status and Quality of Life in Patients With Sinus Node Weakness Syndrome and Chronic Coronary Heart Failure of Ischemic Etiology

Khusainova Munira Alisherovna
Khaydarov Sanjar Nizamitdinovich
Toirov Doston Rustamovich
Kurbonov Sherkhon Haqnazarovich
Samarkand State Medical University

Abstract: The frequent combination of sinus node weakness syndrome (SNWS) and chronic heart failure (CHF) in patients has shown the need for a comprehensive study of their impact on the adaptability of these patients. The assessment of quality of life (QOL) and mental status in patients with SNWS and CHF of ischaemic etiology was carried out. Sinus node weakness syndrome accounts for about 9% of all cardiac rhythm disorders and is one of the current problems of modern arrhythmology. This is due to the fact that with sinus node weakness syndrome hemodynamic disorders can develop, the quality of life of patients is reduced, significant difficulties arise in the treatment of the underlying cardiovascular disease and associated rhythm disturbances. Patients with sinus node weakness syndrome have a reduced ability to work. For example, 14.5% of all patients with a first-time disability are with sinus node disorder. In industrialised countries, more than half of the patients implanted with an artificial pacemaker are patients with weak sinus node syndrome. We used 6 minute walking test, as well as level of depression, anxiety, alexithymia; coping>mechanisms and Vital Style Index in 75 CHD patients with and without SNWS, complicated CHF I>II (NYHA) were assessed. No additional negative effect of SNWS on somatic, mental status and QOL was found in patients with CHF.

Key words: sinus node weakness syndrome, chronic heart failure, mental status, quality of life

Introduction

Current cardiology practice has shown that coronary heart disease and arterial hypertension are the main etiological causes of conditions such as chronic heart failure (CHF) and sinus node weakness syndrome (SNS), which can occur in the same patient. The clinical presentation of these complications is also known to be a manifestation of hemodynamic inadequacy due to either bradythachyarrhythmia or impaired cardiac muscle contractility. However, it is easy to assume that combination of CCS and CHF not only changes patient's functional capabilities but also influences his adaptability to environmental conditions, and, consequently, quality of life (QOL) and mental status, that determines urgency of complex, multidisciplinary technique of examination in this contingent of patients.

Purpose of the study: to assess quality of life and mental status of patients with CCSU and CHF of ischaemic etiology.

Materials And Methods

The study enrolled 75 CHD patients with functional class I-II (NYHA) who were inpatients at SamMU clinic: 38 patients with CHD (study group) and 37 without CHD (comparison group). The study group comprised 26 women and 12 men aged 68±1 years, confirming the perception of the highest prevalence of SNWS. The prevalence of SNWS was highest in women and those over 60 years of age. Left ventricular ejection fraction (LVEF) according to echo-cardiographic study was 56,7±1,8%; CHF of functional class I was found in 21 cases, functional class II - in 17 cases; tension angina of functional class I-II was registered in 26% of patients; 10% patients had previous myocardial infarction (MI); hypertension was diagnosed in 58% of patients. A permanent pacemaker (AAI stimulation mode) was implanted in 24% of patients in the main group. The comparison group was represented by 16 women and 21 men. Although the age of all

ISSN NO: 2770-2936
Date of Publication:13-12-2022

studied patients could be considered comparable (elderly), patients without SNWS were younger than those in the main group (65±1 years, p<0.03). Mean values of EF in the comparison group were 51.9±2.0%; CHF class I was found in 19 cases, and functional class II - in 18 cases. Excluding CHF severity, clinical status of control group patients was more severe: angina II-III functional class was registered in 70% of patients, 46% of patients had previous MI, hypertension was revealed in 86% of cases. Patients' standard therapy included ACE inhibitors, diuretics and antiaggregants. Beta-blockers were given to patients with implanted PECS and 70% of comparison group patients. After stabilisation of drug therapy, exercise tolerance was assessed in all patients using the six-minute walk test (SMWT). The intensity of complaints that arose during the test (breathlessness, palpitations, general fatigue, leg fatigue, dizziness, pain) was ranked according to an 11-point Borg scale and summarised. In both groups, the non-specific SFD36 experimental-psychological methodology and the Minnesota Medical History Questionnaire (MLHFQ) were used to investigate health-related quality of life. health-related quality of life. The patients' mental status was investigated as follows: the level of depression and anxiety was assessed according to the Zung Depression and Spielberger Anxiety Self-Assessment Scales. To determine the leading coping mechanisms (coping behaviour) in difficult stressful situations caused by chronic somatic pathology, the Heim questionnaire was applied, and the diagnosis of protective psychological mechanisms was carried out using the Kellerman-Plutchik method. The Toronto Alexythymia Scale (TAS) was used to assess the degree of alexithymia, a personality trait that manifests itself as a subject's inability to express and regulate painful emotions. Statistical analysis of the data was performed using Statistica software.

Results

In a 6-minute exercise test, patients with SNWS covered a longer distance than patients in the comparison group, but the severity of complaints accompanying SMWT did not differ significantly between the two groups. Despite beta-blocker therapy, at baseline, at minute 6, and after 3 minutes of recovery time (RT), heart rate (HR) was consistently higher in comparison group patients than in SNWS patients. The patients in the main group also had lower respiratory rate (RR) both initially and during the test. It should be noted that patients with SNWS were associated with subjective sensations at the time of SMWT, while patients in the comparison group were associated with age and EF.

Thus, despite the older age and predominance of women in the group, patients with SNWS performed better than patients in the comparison group, which is likely to be due to their more severe clinical status. However, greater tolerance of SMWT in SNWS patients may be considered as a consequence of moderate bradycardia recorded in them, which is physiologically reasonable during physical activity. The following findings were obtained in a study of the mental status and quality of life of patients. Contrary to representations of modern researchers about frequent affective disturbances in patients with cardiovascular pathology, the level of depression was low (53±1.4 points and 51±1.6 points, respectively) in the study and control groups. However, as other chronic somatic patients, all subjects were highly anxious (personal anxiety was 51±1.3 points in patients with SNWS and 54±1.8 points in comparison group patients). Situational (reactive) anxiety (i.e., affective reactions to current events - hospitalization and exacerbation of an illness) was low. In a comparison group, reactive anxiety was more pronounced (47±2.1 points vs. 41±1.4 points for patients with SNWS, p<0.01), which most likely may reflect experiences of patients with greater functional impairment and lower tolerance of physical activity.

The correlation between the SMWT results and The relationship in the main group (Spearman correlation coefficient, 0.37; p=0.02) was noteworthy. The inability to verbalize feelings and emotions was expressed to varying degrees in the patients of the groups studied. Thus, SNWS patients had a pronounced alexithymia (79±2 points), whereas the comparison group had only a tendency to alexithymia (74±2 points, p<0.05). These findings supported the idea of alexithymia as a dynamic personality trait that changes depending on the clinical picture of the disease: the more pronounced the functional impairment, the more severe the distress that the patient had to express as an increasing number of complaints, thereby reducing the alexithymia radical. Chronic cardiovascular disease has also affected the coping strategies of patients with life difficulties. Almost half (47%) of the patients in the main group had nonconstructive coping mechanisms: patients avoided solving problems or isolated themselves, staying alone; 34% of patients with SNWS used relatively constructive coping mechanisms, distracting themselves from difficulties and

ISSN NO: 2770-2936
Date of Publication:13-12-2022

engaging in other activities and worries. Only 13% of patients with SMWT exhibited constructive behaviour.

In the comparison group, non-constructive coping behaviour also prevailed quite frequently: 42% of the patients isolated themselves and avoided solving problems. In 25% of the comparison group patients coped relatively constructively with difficulties by distracting themselves from them. In contrast to the patients with SMWT, in the comparison group 31% of patients demonstrated constructive behavioural coping mechanisms (turning to others for advice, cooperating with others, or in altruistic worries solving problems). In the cognitive sphere, 50% of SSRI patients and 54% of comparison group patients demonstrated constructive coping mechanisms: most often patients maintained self-control or analysed the difficult situation. Relatively constructive coping mechanisms in the cognitive sphere were demonstrated by 13% of patients in the main group and 19% of comparison group patients. Non-constructive cognitive coping mechanisms were registered in 39% of the patients with SMWT (more often - ignoring problems) and in 26% of the comparison group patients (more often - humility). In the emotional sphere, both constructive (more often optimism) and nonconstructive coping mechanisms (more often suppression of emotions in oneself) were registered with almost the same frequency in all patients. In addition, in the emotional sphere, 16% of the patients in both groups demonstrated relatively constructive coping mechanisms (more often - emotional release).

Thus, the patients studied had mostly the same "coping" strategies for coping with life difficulties, indicating the existence of unified mechanisms for to adapt to the vital threat of severe chronic cardiovascular cardiovascular disease. Patients' psychological defence mechanisms were assessed according to the Kellermann-Plutchik method. It was revealed, that in order to overcome life difficulties patients with SSSU more often used the following behavioral stereotypes: primitive "regression" ($p<0.005$), replacing the solution of complex tasks by habitual stereotypical simple actions, and "substitution", shifting tension to "safe" objects for the patient, however not contributing to the achievement of the set goal ($p<0.02$). The impoverishment of adaptive strategies of psychological defense in patients with SNWS could be explained by involutionary changes. In contrast, patients in the comparison group tended to "intellectualise" and rationalise their distressing events, thus demonstrating a predominance of mature psychological defence mechanisms ($p<0.05$). The relationship between SMWT results and psychological adaptive mechanisms, registered in comparison group patients, was particularly noteworthy, confirming the importance of psychological factors for physical functioning of this patient population.

It is likely that the higher quality of life in patients with SNWS is due to the absence of high angina severity and marked functional impairment. The reason for dissatisfaction with social functioning in comparison group patients may be a mismatch between the level of ambition and physical capabilities of somatically disadvantaged, anxious, but actively trying to adapt to the changing life situation of patients.

Conclusion

In the present study, there was no additional negative effect of SNWS on the somatic and mental status of patients with a combination of SNWS and CHF. Not only did SNWS patients walk a longer distance in 6 minutes of exercise, but they also demonstrated less reactive anxiety and greater satisfaction with their quality of life. The primitivisation of psychological defence mechanisms in this category of older patients appears to be a consequence of involutionary changes. The correlation between the stress test results and the quality of life indicators and the mechanisms of psychological adaptation confirms the greater importance of mental factors for functioning in highly anxious, less alexithymic, effectively adapting, but somatically more severe patients in the comparison group. At the same time, the anxiety, inability to differentiate arising complaints, not always adequate behavioral reactions registered in patients with SNWS and CHF can be considered as the main targets of additional specialized intervention of psychotherapists and psychologists, aimed at individualization and increasing the effectiveness of ongoing treatment.

Literature

1. Ярмухамедова, С. Х., & Афмирова, Ш. А. (2022). Изменения диастолической функции правого желудочка при гипертонической болезни. *Science and Education*, *3*(11), 270-280.

ISSN NO: 2770-2936
Date of Publication:13-12-2022

2. Yarmukhamedova, S. (2020). SURUNKALI GLOMERULONEFRIT BILAN OG ‘RIGAN BEMORLARDA ARTERIAL QON BOSIMINING SUTKALIK MONITORING KO ‘RSATKICHLARINI BAXOLASH. *Журнал кардиореспираторных исследований*, *1*(1), 103-108.
3. Nazarov, F. Y. (2021). CORRECTION OF HEMODYNAMIC DISORDERS IN PATIENTS WITH OUTSIDE BILATERAL TOTAL PNEUMONIA. *Web of Scientist: International Scientific Research Journal*, *2*(11), 151-155.
4. Yarmukhamedova, S. (2020). ASSESSMENT OF SIGNS OF DIASTOLIC DYSFUNCTION OF THE RIGHT VENTRICLE IN PATIENTS WITH ARTERIAL HYPERTENSION. *InterConf*.
5. Alisherovna, K. M., Rustamovich, T. D., Baxtiyorovich, U. J., & Sherzodovna, M. D. (2022). KIDNEY DAMAGE IN CHRONIC HEART FAILURE. *Web of Scientist: International Scientific Research Journal*, *3*(10), 744-752.
6. Alisherovna, K. M., Rustamovich, T. D., Baxtiyorovich, U. J., & Sobirovna, S. M. (2022). Diabetes Mellitus and Hyperglycemia in Patients with Rheumatoid Arthritis. *Texas Journal of Medical Science*, *13*, 99-103.
7. Rustamovich, T. D., Alisherovna, K. M., Baxtiyorovich, U. J., & Abdurakhmonovich, M. M. (2022). Painless Cardiac Ischemia in Women with Rheumatoid Arthritis. *Texas Journal of Medical Science*, *13*, 95-98.
8. Nizamitdinovich, K. S., Alisherovna, K. M., Erkinovna, K. Z., & Davranovna, M. K. (2022). Heart Lesions in Rheumatological Diseases. *Texas Journal of Medical Science*, *13*, 91-94.
9. Davranovna, M. K., Alisherovna, K. M., Erkinovna, K. Z., & Nizamitdinovich, K. S. (2022). Assessment of the Quality of Life of Patients with Coronary Heart Disease. *The Peerian Journal*, *11*, 44-50.
10. Toshtemirovna, E. M. M., Nizamitdinovich, K. S., Tadjiyevich, X. A., & Xudoyberdiyevich, G. X. (2022). ASSESSMENT OF RENAL DYSFUNCTION IN PATIENTS WITH CHRONIC HEART FAILURE.
11. Эргашева, М. Т. (2022). АРТЕРИАЛЬНАЯ ГИПЕРТЕНЗИЯ У ЖЕНЩИН В ПОСТМЕНОПАУЗЕ. *Журнал кардиореспираторных исследований*, (SI-2).
12. Zikiryayevna, S. G., Muxtorovna, E. M., Mamadiyarovich, S. A., & To’raqulovna, Q. S. (2022). KIDNEY DAMAGE IN RHEUMATOID ARTHRITIS: RELATIONSHIP WITH CARDIOVASCULAR RISK FACTORS. *Galaxy International Interdisciplinary Research Journal*, *10*(5), 857-862.
13. Zikiryayevna, S. G., Zohirovna, M. G., Muxtorovna, E. M., & Bahromovich, S. S. (2022). Kidney Damage in Patients with Chronic Cardiac Insufficiency and Obesity. *Texas Journal of Medical Science*, *13*, 72-78.
14. Palvanovna, K. Z., & Muxtorovna, E. M. (2022). THE PREVALENCE OF LESIONS OF THE DISTAL BRONCHIAL TREE (BRONCHIOLITIS) IN PATIENTS WITH RHEUMATOID ARTHRITIS. *Galaxy International Interdisciplinary Research Journal*, *10*(5), 1044-1051.
15. Alisherovna, K. M., Nizamitdinovich, K. S., Davranovna, M. K., & Erkinovna, K. Z. (2022). Kidney Condition in Patients with Myocardial Infarction. *Texas Journal of Medical Science*, *13*, 85-90.
16. Nazarov, F. Y., & Xaydarova, Z. E. (2022). OSHQOZON VA ICHAK YARA KASALLIKLARI BOR BEMORLARDA SUYAKLAR MINERAL ZICHLIGINING BUZILISHI. *Oriental renaissance: Innovative, educational, natural and social sciences*, *2*(Special Issue 4-2), 1037-1044.
17. ALISHEROVNA, M. K., & XUDOYBERDIYEVICH, G. X. (2021). Treatment of Chronic Heart Diseases Insufficiency Depending On the Condition of the Kidneys.
18. ALISHEROVNA, M. K., SHAXMAXMUDOVNA, S. Z., & TATLIBAYEVICH, Y. S. (2021). Effectiveness of Treatment of Chronic Heart Disease Insufficiency Depending on the Functional State of the Kidneys. *JournalNX*, *7*(02), 240-333.
19. Alisherovna, K. M., Toshtemirovna, E. M. M., & Oybekovna, E. E. (2022). QUALITY OF LIFE OF PATIENTS WITH CIRRHOSIS OF THE LIVER. *Spectrum Journal of Innovation, Reforms and Development*, *4*, 197-202.

ISSN NO: 2770-2936
Date of Publication:13-12-2022

20. Alisherovna, K. M., Toshtemirovna, E. M. M., Duskobilovich, B. S., & Umirxanovna, K. G. (2022). DYSFUNCTION LEFT VENTRICULAR IN BRONCHIAL ASTHMA. *Spectrum Journal of Innovation, Reforms and Development*, *4*, 216-221.