

Insomnia Disorders in Elderly Patients with Chronic Cerebral Ischemia on the Background of Neurovegetative Dysfunction

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ABSTRACT: The article is devoted to the study of insomnia disorders in elderly people with chronic cerebral ischemia, depending on the presence of neurovegetative dysfunction in them. The study involved 163 patients aged 60 to 74 years (average - 67 + 5.8 years) with clinically and laboratory confirmed chronic cerebral ischemia syndrome of stage 2 (CCI2) (106 (64.4%) women, 58 (35.6%) men).

KEYWORDS: Elderly, chronic cerebral ischemia, neurovegetative dysfunction, sleep disturbance.

INTRODUCTION

Dysfunction of the autonomic nervous system (ANS) is often associated with the development and progression of chronic vascular diseases in humans and is a key mechanism of their occurrence and progression (2).

In the clinic of chronic cerebral ischemia (CCI), symptoms of disturbance in the psychoemotional sphere and the suprasegmental link of autonomic regulation are often revealed, which are anatomically, physiologically and biochemically related to the systemic mechanisms of regulation of the wakefulness - sleep cycle (1,3,4). Sleep disorders in SVD and CCI disrupt the quality of life and reduce the working potential, which is a significant social problem and determines the relevance of work.

Purpose of the study

To study insomnia disorders in elderly people with chronic cerebral ischemia, depending on the presence of neurovegetative disorders in them.

MATERIAL AND METHODS

The study involved 163 patients aged 60 to 74 years (average 67 + 5.8 years) with clinically and laboratory confirmed chronic cerebral ischemia syndrome of stage 2 (CCI₂) (106 (64.4%) women, 58 (35.6%) men). All patients were hospitalized at the neurology department of the clinic of the Andijan State Medical Institute. The distribution of patients by age group was carried out according to the WHO recommendations (2021).

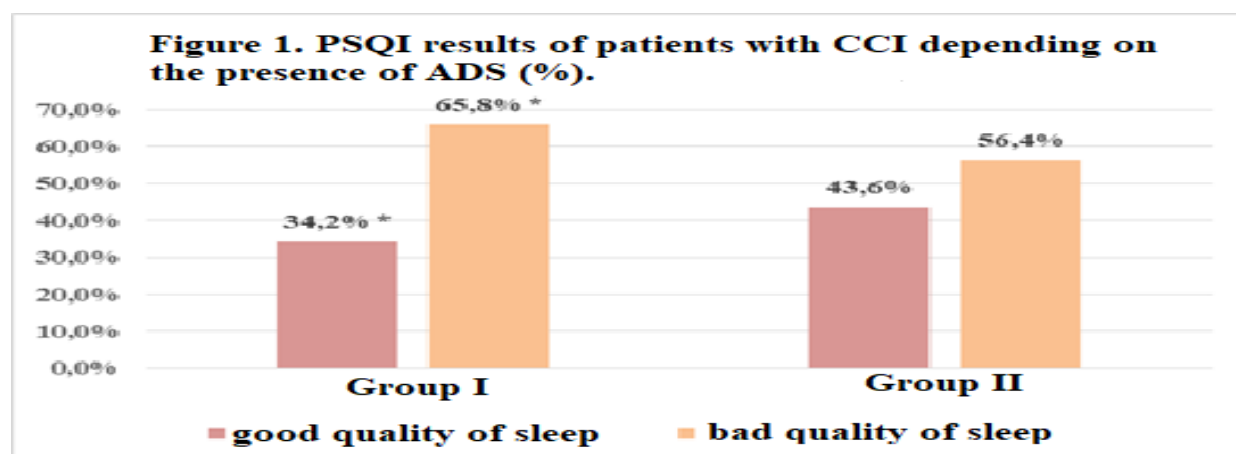
To study the effect of ADS on insomnia disorders in elderly people, we distinguished two comparison groups: group I - patients with CCI₂ with symptoms of ADS (79 patients) and group II - patients with CCI₂ without SVD (94 patients). The control group (CG) consisted of 25 patients who did not have clinical and laboratory criteria for CCI and ADS, comparable in gender and age.

To assess the state of sleep, scales and questionnaires recommended by the Clinical Guideline for the Evaluation and Management of Chronic Insomnia in Adults, 2008 (Pittsburgh Sleep Quality Index (PSQI), Insomnia Severity Index (ISI), Epworth Sleepiness Scale (ESS)) were used.

Statistical processing of the data obtained during the study of the results was carried out using the SpSS20 program. Qualitative characteristics are described using absolute and relative (%) values. Quantitative features in the form of arithmetic mean ± standard error (M ± m). The statistical significance of the differences between the groups was determined by the Student, Mann-Whitney, Kruskal-Wallis method; the Kedall correlation was used for the correlation analysis.

RESEARCH RESULTS

According to the results of the Pittsburgh Sleep Quality Index (PSQI) questionnaire, in group I patients with 52 (65.8%) patients had “poor sleep quality”, and in group II patients - 58 (61.7%) patients (Figure 1).



Note: * - significant differences in groups, at a significance level of 0.05.

A comparative analysis of the results of the Pittsburgh Sleep Quality Index (PSQI) in patients with CCI in groups is presented in Table 1.

Table 1.

Comparative analysis of PSQI results in patients with CCI type depending on the presence of ADS (Me, 25%, 75%).

PSQI	Group I (n=79)	Group II (n=94)	p≤0,05
PSQI	10,7 [5,2;12,7]	12,3 [8,0; 15,1]	0,005*
Subjective assessment of sleep quality	2 [1;2]	2 [1;2]	0,871
Sleep latency	3 [1;3]	2 [1;3]	0,608
Sleep duration	1 [1;2]	2 [1;3]	0,001*
Sleep efficiency	1 [0;2]	2 [0;3]	0,008*
The use of sleeping pills	0 [0;0]	0,5 [0;1]	0,205
Daytime activity disorders	1 [0,25;2]	2 [1;2]	0,101

Note: * - significant differences in groups, at a significance level of 0.05.

As can be seen from Table 1, we revealed statistically significant differences in the indicators of the “global sleep quality index” in patients with CCI, depending on the presence of ADS in them (10.7 [5.2; 12.7] and 12.3 [8.0; 15.1], respectively; Mann-Whitney criterion 0.017; p = 0.05), from which it follows that the quality of sleep patients with CCI and ADS significantly worsens. We also revealed statistically significant differences in indicators in the following components: sleep duration (p = 0.001), sleep efficiency (p = 0.008). In patients with CCI with ADS, sleep duration decreases, sleep efficiency decreases, and intrasomnic disturbances increase.

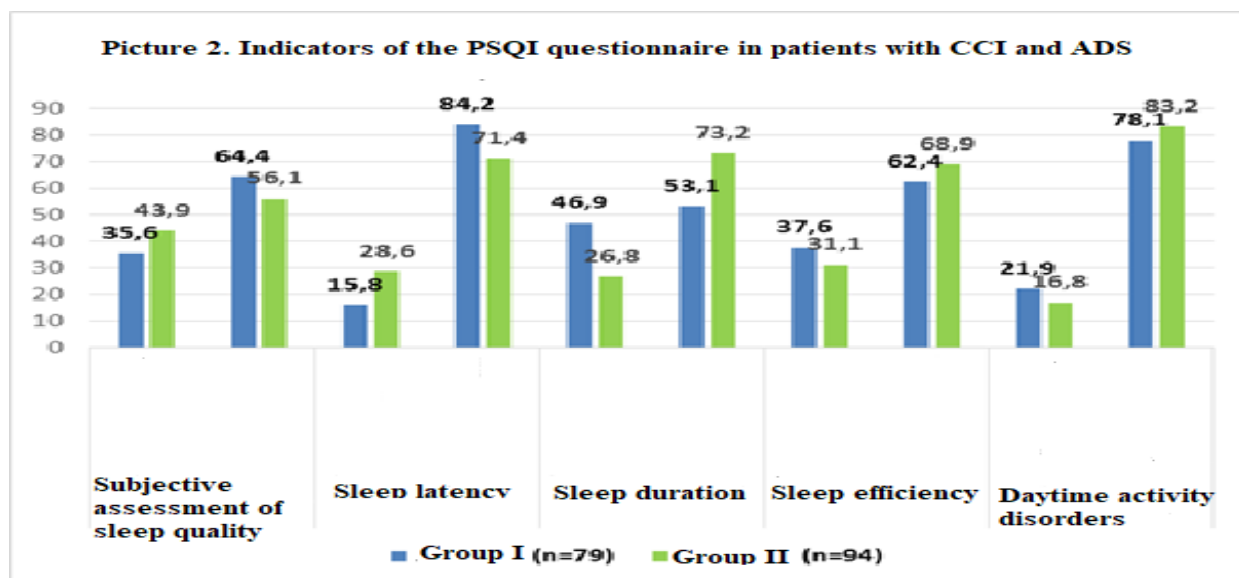
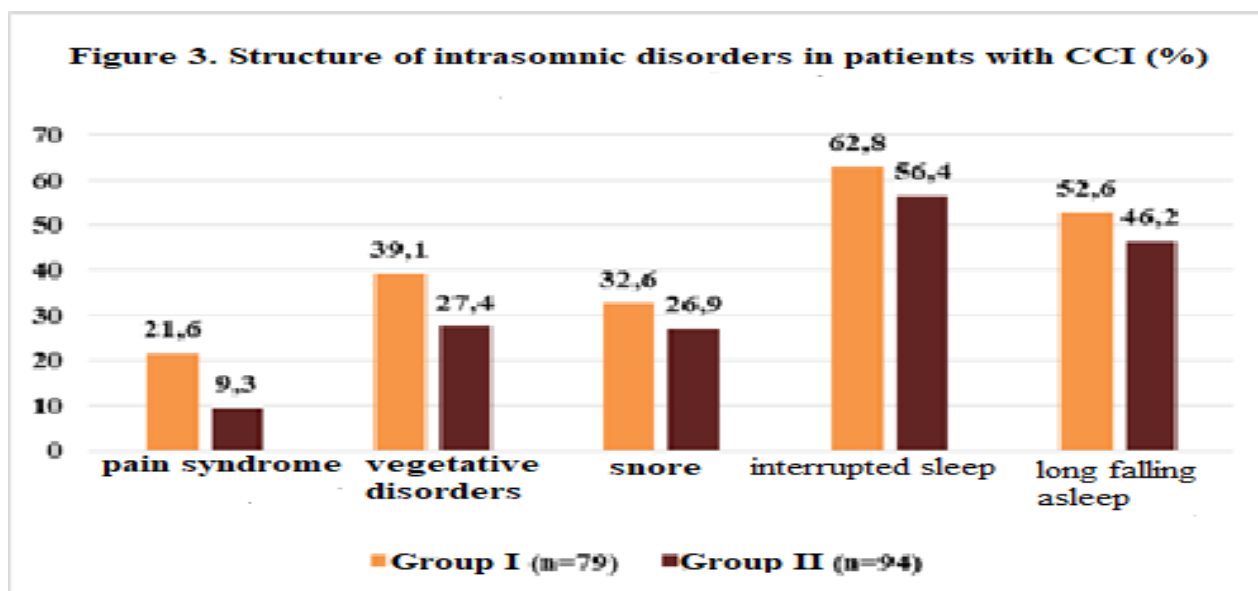


Figure 2 shows that 64.4% of middle-aged patients (group 1) and 56.1% of elderly patients (group 2) assessed their sleep as “bad”. Sleep duration less than 7 hours was noted by 53.1% of patients

in group I and 73.2% of patients in group II. Sleep efficiency was reduced in 62.4% of Group I and 68.6% of Group II patients. 78.1% of patients in group I and 83.2% of patients in group II noted violations of daytime activities, which manifested themselves in the difficulty of staying awake in the course of daily activities.

Studying in detail the structure of intrasomnic disorders in patients with CCI, depending on the presence of ADS, we found (Fig. 3) that complaints about prolonged sleep initiation time prevailed (52.6% and 46.2%, respectively), difficulties with maintaining sleep (62.8% and 56.4%, respectively), respiratory disorders in the form of loud snoring (32.6% and 26.9%, respectively), pain syndrome of various localization (21.6% and 9.3%, respectively). It should be noted that patients have the occurrence of these complaints with a frequency of more than 3 times a week during the last month, which meets the criteria for detecting intrasomnic disorders according to PSQI.



CONCLUSION

According to the results obtained, impairment of many sleep characteristics is a frequent occurrence in elderly patients with chronic cerebral ischemia. And in elderly patients with CCI in the presence of autonomic dysfunction syndrome, the quality of sleep significantly worsens. Thus, in elderly patients with CCI in the presence of autonomic dysfunction syndrome, it is necessary to investigate the quality of sleep.

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