

Sleep complaints and their relation to coronary artery disease, arterial hypertension and depressive mood in West Lithuanian population

Jurgita Andruškienė,

Giedrius Varoneckas,

Arvydas Martinkėnas

*Institute of Psychophysiology and Rehabilitation c/o
Kaunas University of Medicine,
Palanga, Lithuania*

Background. There is evidence to suggest that sleep disorders accelerate development of somatic and mental diseases. The aim was to investigate the prevalence of sleep complaints among Palanga citizens aged 35–74 and to establish relations among sleep complaints, coronary artery disease, arterial hypertension and depressive mood.

Materials and Methods. Data on randomly selected 1602 persons (600 males and 1002 females) aged 35–74 were collected. Sleep complaints were evaluated using the Basic Nordic Sleep Questionnaire. Cardiovascular status was evaluated using the Rose questionnaire, electrocardiography findings, arterial blood pressure measurement results and physical investigation. Depressive mood was assessed using the WHO(5) Well-being Index.

Results. The study subjects most often complained of regular night-time awakenings (37.2%), too early awakenings in the morning (7.1%) and difficulties in falling asleep (6.9%). Persons who had arterial hypertension with coronary artery disease, more often than healthy subjects complained of daily difficulties in falling asleep and regular night-time awakenings ($p < 0.05$).

Difficulties with falling asleep every night, regular night-time awakenings, too early awakenings, sleepiness in the morning and decreased working ability were more often reported by respondents who had a depressive mood as compared with persons whose mood was considered normal, – respectively 11.5% vs. 5.1%, 46.7% vs. 33.5%, 10.6% vs. 5.7%, 21.7% vs. 8.6% and 5.1% vs. 0.4%, $p < 0.001$.

Conclusions. Almost a half (49.0%) of the study population were not satisfied with sleep quality. Coronary artery disease, arterial hypertension or depressive mood were more frequent among persons with sleep complaints.

Key words: sleep complaints, coronary artery disease, arterial hypertension, depressive mood

BACKGROUND

In recent years, there has been a great interest in the epidemiology of insomnia, but only a limited number of studies, mostly from Europe and North America, have included a nationally representative population (1). Epidemiological information about prevalence of insomnia and sleep complaints varies in different countries (2), because of the diversity of data collection methodology. According to research carried out in the United States of America, Europe and Australia, 10–49% of population were not satisfied with their sleep quality (3). Sle-

ep complaints among Lithuanian citizens have not been investigated up to now, however, foreign scientists report that sleep disorders influence the development of many somatic as well as mental diseases (4). Insomnia patients experience both physical fatigue and psychological impairment resulting in a reduced quality of life (5). Insomnia also increases the use of healthcare resources as patients often have long-term health problems, require a greater number of physician visits and are hospitalized more often and for longer periods as compared with individuals without insomnia (6). Supposedly, there is a relation among sleep disorders, depression and heart and vascular diseases (3).

The aim of the present study was to investigate the prevalence of sleep complaints in a sample of Palanga citizens (West Lithuania) representative with respect to the age and gender (age, 35–74) and to establish

Correspondence to: Giedrius Varoneckas, Institute of Psychophysiology and Rehabilitation, Kaunas University of Medicine, Vydūno 4, Palanga LT-00135, Lithuania. E-mail: giedvar@ktl.mii.lt

relations among sleep complaints, coronary artery disease, arterial hypertension and depressive mood. Sleep complaints in this study were defined as difficulties in falling asleep, night-time awakenings, too early awakenings in the morning, excessive sleepiness in the morning, decreased ability to work accompanied by dissatisfaction with sleep quality or use of sleeping pills.

The study provided the first data in Lithuania on the prevalence of sleep complaints in the population. A relationship among sleep complaints, coronary artery disease, arterial hypertension and depressive mood was established.

MATERIALS AND METHODS

Study design

The design of the study: a population-based, epidemiologic cross-sectional study.

Selection process and participants

A random stratified selection among 35–74-year-old citizens of Palanga was performed by the Residents' Register Service. The study was approved by the Bioethics Committee of Lithuania. The random selection was performed in the following age groups: 35–44, 45–54, 55–64 and 65–74 years. In total, 2500 persons were selected. The calculated sample size was 1630 ± 33 persons with the probability of $p = 0.954$. However, a decision to select 2500 citizens was made because of the low response rate. Potential respondents were contacted by phone. The difference in response rate depending on age, gender or other variables was not measured. In the period of 16 months, data on 1602 persons, 600 males and 1002 females, were collected. The response rate was 68.5% (160 selected citizens were not available to participate in the study, because they were not found at the given addresses). According to age the respondents were divided into four groups: 35–44 years ($n = 402$), 45–54 years ($n = 390$), 55–64 years ($n = 438$) and 65–74 years ($n = 372$). The sample represented the population of Palanga aged 35–74 with respect to age and gender.

Questioning, objective investigation and the statistical analysis of data were performed.

Questionnaires

The Basic Nordic Sleep Questionnaire (7) was used to assess the frequency of sleep complaints: difficulties in falling asleep, night-time awakenings, too early awakenings in the morning, excessive sleepiness in the morning, self-evaluated sleep quality and use of sleeping pills in the period of the last three months. While answering every question of the 14 given, a respondent scored a number of points which was equal to the number denoting the chosen variant. In this way a respondent could score from 14 to 70 points after answering 14 questions. A greater sum of the points denoted a worse quality of sleep. The WHO (5) Well-being Index (8) questionnaire containing five questions reflected the well-being of a person during the last

two weeks. After filling in the questionnaire the points were totalized and multiplied by 4 while standardizing. In this way the received score varied from 0 to 100. The datum-point was 50 points. The respondents who scored 50 and more points did not have depressive mood. For the respondents who scored less than 50 points the depressive mood was identified and they were ascribed to the group of the increased risk of depression.

Pain in the chest during tension (Rose questionnaire) (9) was used for diagnosing the stenocardia of tension.

The Self-evaluation of health questionnaire (10) contained questions about complaints and diseases respondents had had and medicines they had used in the period of the last year.

Objective investigation

Arterial blood pressure (ABP) measurement. ABP was measured twice with a quicksilver sphygmomanometer in the right hand while the investigated person was sitting, with the precision of 2 mmHg (11). The average of two measurements was used for the analysis. ABP was measured following the methodical recommendations of Klumbienė and Satkienė (11), which were prepared using the WHO protocol. ABP measurement was performed twice in the beginning of the visit and at the end, when the person was sitting. At the time of the same visit ECG was performed and a person filled in the questionnaires. The ABP measurement procedure was performed by specially prepared specialists. Cardiologists consulted the study persons during the second visit.

Electrocardiographic (ECG) examination. Electrocardiogram of 12 derivations was registered. Standard I, II, III, aVL, aVR, aVF and Vilsen derivations were recorded. The ECG recording procedure was performed by specially prepared health specialists. The results of ECG examination were used for classification of the study persons into groups according to their cardiovascular status.

Consultation of cardiologist

A cardiologist gave a consultation to each person in order to inform about the results of the investigation. United criteria for the evaluation of cardiovascular status were used. According to data collected using the Rose questionnaire, ECG findings, ABP measurement results, answers to the questionnaire on self-evaluated health and physical examination, three independent cardiologists classified all investigated persons into four groups: 1) the group of healthy persons consisted of 1048 subjects, 685 or 65.3% of them females, without coronary artery disease (CAD) and / or arterial hypertension (AH); 2) the AH group consisted of 139 persons, 75 or 54.0% of them females; 3) the CAD group consisted of 232 persons, 160 or 69.0% of them females; 4) the group of CAD patients with AH consisted of 183 persons, 82 or 44.8% of them females.

Statistical analysis

The proportions were presented as percentages with 95% confidence intervals (CI). Statistical analysis was

performed using the SPSS 12 statistical package. The chi square (χ^2) and Fisher's exact test were used to detect the differences among the groups while analyzing the prevalence of sleep complaints in the population. The difference of two proportions was used to determine significances for categorical data using probabilities directly or the arcsin transformation of the probability (12). Differences were considered significant at $p < 0.05$.

RESULTS

Sleep complaints in the last three months and their relation to gender and age among Palanga citizens

Almost a half (49.0%) of the respondents evaluated their sleep quality as average, rather poor or poor. Even 37.2% of the persons complained about night-time awakenings which troubled them every night. More than a third of the respondents (33.8%) claimed that they usually woke up twice per night, approximately a quarter of them (24.5%) woke up 3–4 times and 11.8% more than four times per night. Complaints about difficulties in falling asleep every night, too early awakenings and excessive

sleepiness every morning were prevalent among respectively 6.9%, 7.1% and 12.3% of the study subjects.

Females more often than males complained of difficulties in falling asleep every night, (8.3% vs. 4.7%, $p < 0.05$). Females more often than males considered their sleep poor and were using sleeping-pills regularly (3.9% vs. 1.5% and 4.5% vs. 2.2%, $p < 0.05$) (Table 1). Males more often than females complained of snoring every night and breathing pauses during sleep (25.5% vs. 19.6%, $p < 0.05$, as well as 5.1% vs. 1.4%, $p < 0.05$).

Older citizens more often than younger ones complained of difficulties in falling asleep which troubled them every night (10.5% among the respondents aged 65–74 years vs. 4.0% among persons aged 35–44 years, $p < 0.05$), as well as regular night-time awakenings and too early awakenings in the morning (46.8% vs. 22.1%, $p < 0.001$ and 8.9% vs. 3.7%, $p < 0.05$) (Table 2). Complaints about decreased ability to work because of poor sleep were more prevalent among persons aged 65–74 years as compared with respondents aged 35–44 years (2.7% vs. 0.7%, $p < 0.05$). The number of citizens who considered their sleep poor and those who were using sleeping-pills regularly was higher in the group of older respondents (Table 2).

Table 1. Every night or almost every night sleep complaints among males and females

Sleep complaints	Rate, % (95% CI)		p Value
	Males (n = 600)	Females (n = 1002)	
Difficulty in falling asleep	4.7 (3.0–6.4)	8.3 (6.6–10.0)	0.006
Night-time awakenings	34.5 (30.7–38.3)	38.8 (35.8–41.8)	0.083
Too early awakenings in the morning	6.7 (4.7–8.7)	7.3 (5.7–8.9)	0.640
Not satisfied with sleep	1.5 (0.5–2.5)	3.9 (2.7–5.1)	0.007
Use of sleeping pills	2.2 (1.1–3.3)	4.5 (3.2–5.8)	0.016
Decreased ability to work	1.0 (0.2–1.8)	2.2 (1.3–3.1)	0.077
Use of alcohol or medication without prescription	1.0 (0.2–1.8)	0.7 (0.2–1.2)	0.515
Snoring	25.5 (22.0–29.0)	19.6 (17.1–22.0)	0.005
Breathing pauses during sleep	5.1 (2.8–7.4)	1.4 (0.4–2.4)	0.001

Table 2. Every night sleep complaints with respect to age

Sleep complaints	Rate, % (95% CI)			
	Age, yr			
	35–44 (n = 402)	45–54 (n = 390)	55–64 (n = 438)	65–74 (n = 372)
Difficulty in falling asleep	4.0 (2.1–5.6)	5.1 (2.9–7.3)	8.2* (5.6–10.8)	10.5* (7.4–13.6)
Night-time awakenings	22.1 (18.1–26.2)	33.3** (28.6–38.0)	46.3** (41.7–51.0)	46.8** (41.7–51.9)
Too early awakenings in the morning	3.7 (1.9–5.6)	6.9 (4.4–9.4)	8.7* (6.0–11.3)	8.9* (6.0–11.8)
Not satisfied with sleep	1.5 (0.3–2.6)	3.8 (1.9–5.8)	4.1* (2.2–6.0)	2.4 (0.8–4.0)
Use of sleeping pills	0.5 (0.2–1.2)	3.1** (1.4–4.8)	4.8** (2.8–6.8)	6.2** (3.7–8.6)
Decreased ability to work	0.7 (0.1–1.6)	1.8 (0.5–3.1)	1.8 (0.6–3.1)	2.7* (1.0–4.3)

* $p < 0.05$, as compared with persons aged 35–44.

** $p < 0.001$, as compared with persons aged 35–44.

The most prevalent in the study population was a complaint about awakenings every night, which bothered the respondents in the last three months. The data showed that sleep complaints were more common among females and older respondents as compared with males and younger respondents.

Relations among sleep complaints, coronary artery disease and arterial hypertension

Respondents, who had CAD or CAD with AH had daily complaints about difficulties in falling asleep almost twice as often as healthy persons, respectively 9.9% (95% CI 6.4–14.1) and 10.9% (95% CI 6.8–15.9) vs. 5.8% (95% CI 4.5–7.3), $p < 0.05$ (Figure).

The persons who had CAD or CAD with AH had complaints about regular night-time awakenings more often as compared with healthy subjects – 45.7% (95% CI 39.3–52.1) and 44.3% (95% CI 37.1–51.5) vs. 33.9% (95% CI 31.0–36.8), $p < 0.05$ (Figure).

CAD patients complained about too early awakenings every morning more often as compared with healthy persons – 11.6% (95% CI 7.8–16.1) vs. 5.7% (95% CI 4.4–7.2), $p < 0.05$.

Among males with CAD, complaints about difficulties in falling asleep every night were four times more prevalent as compared with healthy males (11.1% and 2.8%, $p < 0.05$) (Table 3). Night-time awakenings bothering every night were more prevalent among males with CAD or CAD with AH as compared with healthy males (44.4%, 41.6% vs. 30.9%, $p < 0.05$). Too early awakenings every morning were more prevalent among

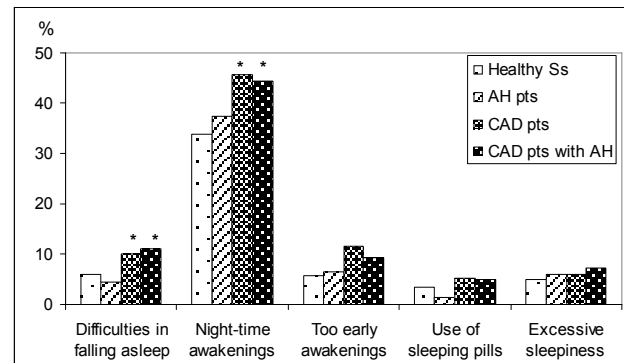


Figure. Every night sleep complaints and cardiovascular status. AH – arterial hypertension; CAD – coronary artery disease. * $p < 0.05$, as compared with healthy subjects

Table 3. Every night sleep complaints and cardiovascular status among males and females

Sleep complaints	Rate, % (95% CI)			
	Healthy	AH	CAD	CAD with AH
Males				
	(n = 363)	(n = 64)	(n = 72)	(n = 101)
Difficulty in falling asleep	2.8 (1.1–4.7)	6.2 (0.2–12.3)	11.1 [†] (4.9–19.5)	5.9 (1.3–10.6)
Night-time awakenings	30.9 (26.2–35.7)	32.8 (21.1–44.5)	44.4 [†] (33.0–56.2)	41.6 [†] (31.1–51.4)
Too early morning awakenings	4.4 (2.5–6.8)	6.2 (0.2–12.3)	12.5 [†] (5.8–21.2)	11.9 [†] (6.3–19.0)
Use of sleeping pills	1.9 (0.5–3.4)	1.6 (1.5–4.7)	1.4 (1.4–4.1)	4.0 (0.1–7.8)
Excessive sleepiness	5.5 (3.2–7.9)	6.2 (0.2–12.3)	8.3 (1.8–14.8)	7.9 (2.6–13.2)
Decreased working ability	0.8 (0.1–1.8)	0	0	3.0 (0.4–6.3)
Females				
	(n = 685)	(n = 75)	(n = 160)	(n = 82)
Difficulty in falling asleep	7.5 (5.5–9.5)	2.7 (1.0–6.4)	9.4 (4.8–13.9)	17.1* (10.0–26.1)
Night-time awakenings	35.6 (32.1–39.3)	41.3 (30.0–52.7)	46.2* (38.5–54.0)	47.6* (36.7–58.5)
Too early morning awakenings	6.5 (4.6–8.3)	6.7 (0.9–12.4)	11.2 (6.3–16.2)	7.3 (1.6–13.0)
Use of sleeping pills	4.1 (2.6–5.6)	1.3 (1.3–4.0)	6.9 (2.9–10.8)	6.1 (0.8–11.4)
Excessive sleepiness	4.5 (3.0–6.1)	5.3 (0.2–10.5)	5.0 (1.6–8.4)	6.1 (0.8–11.4)
Decreased working ability	2.2 (1.1–3.3)	0	2.5 (0.06–4.9)	3.7 (0.5–7.8)

[†] $p < 0.05$ as compared with healthy males.

* $p < 0.05$, as compared with healthy females.

males with CAD or CAD with AH as compared with healthy males (12.5%, 11.9% vs. 4.4%, $p < 0.05$) (Table 3).

Females who had CAD with AH, as compared with healthy females, more often complained about difficulties in falling asleep, which troubled them every night (17.1% vs. 7.5%, $p < 0.05$) (Table 3). Females who had CAD or CAD with AH, as compared with healthy females, more often complained about night-time awakenings, which troubled them every night (46.2%, 47.6% vs. 35.6%, $p < 0.05$) (Table 3).

To conclude, sleep complaints were related to coronary artery disease and / or arterial hypertension in the study population of Palanga.

Relation between sleep complaints and depressive mood

Citizens of Palanga who had depressive mood, as compared with persons whose mood was considered normal, more often were suffering from difficulty in falling asleep every night (11.5% (95% CI 8.5–14.4) vs. 5.1% (95% CI 3.8–6.4), $p < 0.001$). Persons at an increased risk of depression more often complained about regular night-time awakenings and too early awakenings every morning (46.7% (95% CI 41.9–51.3) vs. 33.5% (95% CI 30.8–36.2), $p < 0.001$ and 10.6% (95% CI 7.8–13.6) vs. 5.7% (95% CI 4.5–7.2), $p < 0.001$) as well as excessive sleepiness in the morning and a decreased ability to work because of poor sleep bothering them every or almost every day (21.7% (95% CI 18.0–25.6) vs. 8.6% (95% CI 7.1–10.3), $p < 0.001$ and 5.1% (95% CI 3.1–7.3) vs. 0.4% (95% CI 0.1–0.9), $p < 0.001$). Persons with depressive mood more often used sleeping pills and took naps (7.7% (95% CI 5.5–10.4) vs. 2.0% (95% CI 1.3–2.9), $p < 0.001$ and 10.2% (95% CI 7.6–13.1) vs. 6.1% (95% CI 4.8–7.5), $p < 0.05$).

Males with depressive mood as compared with males whose mood was considered normal, more often complained about difficulties in falling asleep every night,

regular night-time awakenings and excessive sleepiness every morning (8.7% vs. 3.3%, $p < 0.05$, 42.7% vs. 31.8%, $p < 0.05$ and 15.3% vs. 5.6%, $p < 0.001$) (Table 4). Males with depressive mood, more often than males whose mood was normal, used sleeping pills (5.3% vs. 1.1%, $p < 0.05$).

Females with depressive mood, as compared with females whose mood was normal, more often complained about difficulties in falling asleep every night, too early morning awakenings, excessive sleepiness every morning and a decreased ability to work because of poor sleep, which troubled them every day (13.0% vs. 6.3%, 48.5% vs. 34.6%, 11.6% vs. 5.4%, 24.9% vs. 10.6% and 6.3% vs. 0.4%, $p < 0.001$) (Table 4). Females with depressive mood more often as compared with females whose mood was normal used sleeping pills (9.0% vs. 2.6%, $p < 0.001$).

Females who were found to have depressive mood had a statistically significantly higher index of sleep by Partinen et colleagues (7) which reflects a better quality of sleep, versus females whose mood was normal (32.0 (95% CI 31.0–33.1) vs. 25.8 (95% CI 25.3–26.4), $p < 0.001$). Males with depressive mood had a statistically significantly greater index of sleep as compared with males who did not have depressive mood (30.7 (95% CI 29.1–32.3) vs. 26.5 (95% CI 25.7–27.2), $p < 0.001$).

To sum it up, complaints about regular difficulties in falling asleep, night-time awakenings, too early awakenings in the morning, excessive sleepiness in the morning and a decreased ability to work because of poor sleep among the study cohort were related to an increased risk of depression.

DISCUSSION

Citizens of Palanga complained of difficulties in falling asleep, bothering them at least twice per week, not as often as citizens of other European countries (France,

Table 4. Every night sleep complaints and depressive mood among males and females

Sleep complaints	Rate, % (95% CI)		
	Without depressive mood	With depressive mood	<i>p</i> value
<i>Males</i>	(n = 450)	(n = 150)	
Difficulty in falling asleep	3.3 (1.9–5.2)	8.7 (4.1–13.7)	0.025
Night-time awakenings	31.8 (27.6–36.2)	42.7 (34.8–50.6)	0.022
Too early morning awakenings	6.0 (3.8–8.2)	8.7 (4.1–13.2)	0.257
Use of sleeping pills	1.1 (0.4–2.3)	5.3 (2.3–9.5)	0.015
Excessive sleepiness	5.6 (3.4–7.7)	15.3 (9.5–21.1)	<0.001
Decreased working ability	0.4 (0.04–1.3)	2.7 (0.7–5.9)	0.095
<i>Females</i>	(n = 701)	(n = 300)	
Difficulty in falling asleep	6.3 (4.5–8.1)	13.0 (9.1–16.8)	<0.001
Night-time awakenings	34.6 (31.1–38.1)	48.5 (42.8–54.2)	<0.001
Too early morning awakenings	5.4 (3.7–7.1)	11.6 (8.0–15.3)	<0.001
Use of sleeping pills	2.6 (1.4–3.7)	9.0 (5.7–12.2)	<0.001
Excessive sleepiness	10.6 (8.3–12.9)	24.9 (20.0–29.8)	<0.001
Decreased working ability	0.4 (0.06–0.9)	6.3 (3.5–9.1)	<0.001

Great Britain, Germany, Italy, Portugal and Spain) older than 15 years (13) – 16.9% vs. 27.2%. The difficulty in falling asleep was bothering 11.9% of citizens older than 18 years in Finland (14). The difference could be influenced by different methods used for obtaining the data (telephone interview) and the age of the study cohort. Complaints about night-time awakenings twice per week, among citizens of Palanga were not so frequent as among citizens of other European countries (17.2% vs. 18.0% (13) or 31.6% (14)). The proportion of the population who reported awakenings too early in the morning at least twice a week was similar in Palanga and in France, Great Britain, Germany, Italy, Portugal and Spain (13) (15.4% vs. 18.0%). Data from other countries showed that 5.5% of citizens of Iceland, Sweden and Belgium (15) aged 20–45 years, as well as 16.7% of citizens of Iceland aged 65–84 years were complaining about too early awakenings twice a week.

Citizens of Palanga complained about difficulties in falling asleep, too early awakenings in the morning and frequent awakenings at night as often as did citizens of other European countries, but there the possibility of comparison was limited because of the different methodology and age of the study cohort.

The use of sleeping pills among the citizens of Palanga was not prevalent: once or twice per week they were used by 2.9%, 3–5 times per week by 1.1%, every night by 3.6%. In a representative sample from Great Britain, which included persons older than 15 years, sleeping pills were used regularly by 1.5% of respondents (16) and in Japan by 6.0% of respondents older than 20 years (17). In a representative sample from one of the states of the USA, 13.0% persons aged 18–45 years used alcohol for sleep quality improvement, 18.0% took sleeping pills, 5.0% used both alcohol and sleeping pills (18).

Results of the study performed in Palanga have demonstrated a relationship among sleep complaints, coronary artery disease and / or arterial hypertension. These findings have repeated the results reported by foreign researchers that males with arterial hypertension more often complained about difficulties in falling asleep, frequent awakenings and unusual sleepiness (18). Females, as compared with males, were significantly more dissatisfied with their sleep quality and complained about difficulty in falling asleep more frequently ($p < 0.05$) (19). As many as 75.0% of females and 30.0% of males with CAD complained about insufficient sleep (20).

A relationship between sleep complaints and depressive mood was also established. These results did not contradict the results of other studies which have shown that mood disorders were diagnosed for 30–50% of persons who were dissatisfied with their sleep quality, and almost the same proportion of persons with mood disorders complained about poor sleep quality (21, 22). Sleep complaints, even when depressive mood was not established, were related with an increased risk of depression (23).

CONCLUSIONS

Almost a half (49.0%) of the study population from Palanga were not satisfied with their sleep quality. The most prevalent sleep complaints were regular night-time awakenings (37.2%), too early awakenings every morning (7.1%), and difficulties in falling asleep (6.9%). Coronary artery disease, arterial hypertension or depressive mood were more frequent among persons with sleep complaints.

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Jurgita Andrušienė, Giedrius Varoneckas, Arvydas Martinkėnas

MIEGO SUTRIKIMAI, JŲ SĄSAJOS SU IŠEMINE ŠIRDIES LIGA, ARTERINE HIPERTENZIJA IR DEPRESINE NUOTAIKA TARP VAKARŲ LIETUVOS REGIONO GYVENTOJŲ

S a n t r a u k a

Miego sutrikimai siejami su didesne psichikos ir somatinių sutrikimų rizika. Tyrimo tikslas buvo iširti nusiskundimų miegu pasireiškimo dažnį tarp Palangos miesto gyventojų ir nustatyti jų sąsajas su išemine širdies liga, arterine hipertenzija ir depresine nuotaika. Iširti 1602 atsitiktinai atrinkti 35–74 metų Palangos miesto gyventojai, tarp jų 600 vyrų ir 1002 moterys. Miego sutrikimams išaiškinti naudotas Šiaurės šalių miego klausimynas. Kardiovaskulinė būklė vertinta remiantis Rose anketa, elektrokardiografinio tyrimo duomenimis, arterinio kraujo spaudimo matavimo ir klinikinio tyrimo rezultatais. Depresinei nuotaikai nustatyti naudotas PSO (5) geros savijautos testas.

Palangos miesto gyventojai dažniausiai skundėsi prabudimais kiekvieną naktį (37,2%), pernelyg ankstyvu prabudimu kiekvieną rytą (7,1%), sunkiu užmigimu kiekvieną vakarą (6,9%). Asmenys, kuriems nustatyta arterinė hipertenzija ir išeminė širdies liga, dažniau nei tiriamieji, kuriems išeminė širdies liga ir (arba) arterinė hipertenzija nenustatyta, skundėsi kasdieniu sunkiu užmigimu ir prabudimais kiekvieną naktį ($p < 0,05$).

Sunkiu užmigimu kiekvieną vakarą, prabudimais naktį, pernelyg ankstyvu prabudimu kiekvieną rytą, mieguistumu ryte ir sumažėjusiu darbingumu dieną dažniau skundėsi asmenys, kuriems nustatyta depresinė nuotaika, lyginant su tiriamaisiais, kuriems depresinė nuotaika nenustatyta, atitinkamai 11,5% ir 5,1%, 46,7% ir 33,5%, 10,6% ir 5,7%, 21,7% ir 8,6% bei 5,1% ir 0,4%, $p < 0,001$.

Išvados. Nepasitenkinimą miego kokybe išreiškė beveik pusė (49,0%) Palangos miesto gyventojų. Miego sutrikimai buvo susiję su arterine hipertenzija, išemine širdies liga ir depresine nuotaika.

Raktažodžiai: miego sutrikimai, išeminė širdies liga, arterinė hipertenzija, depresinė nuotaika