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Zaburzenia snu jako problem zdrowia publicznego

Streszczenie

Zaburzenia snu to obok chorób cywilizacyjnych, palenia tytoniu, picia alkoholu, otyłości oraz niskiej aktywności fizycznej jeden z najczęstszych czynników prowadzących do utraty zdrowia. W Polsce kłopoty ze snem podobnie jak w innych krajach Europy dotyczą ponad dwudziestu procent populacji kraju. Najczęściej występującym zaburzeniem snu jest bezsenność, która stanowi około czterdziestu procent wszystkich zaburzeń. Rzadziej występujące aczkolwiek równie niebezpieczne w skutkach są zespół obturacyjnego bezdechu sennego (OSAS) oraz narkolepsja. Ponadto, liczne dane wskazują, iż ilościowe bądź jakościowe zaburzenia snu mogą zwiększać ryzyko stanów depresyjnych, cukrzycy, nadciśnienia tętniczego oraz problemów z utrzymaniem prawidłowej masy ciała (BMI). Ważnym wskaźnikiem jest także jakość życia wynikająca ze stanu zdrowia (HRQL), która ulega znacznemu obniżeniu u osób sypiających zbyt krótko. Niepokojący jest fakt, iż jedynie 1/3 osób deklarujących zaburzenia snu zgłasza je lekarzowi. Taka postawa pacjentów jest dziś obok niewłaściwego postępowania diagnostycznego lekarzy główną przyczyną nieefektywnej walki z tym problemem. Niezwykle ważna wydaje się więc rola sektora zdrowia publicznego, podejmującego odpowiednie działania w zakresie prewencji, edukacji, prowadzenia badań przesiewowych i/lub okresowych dotyczących zaburzeń snu. Nie można zapominać także o promocji prawidłowej higieny i nawyków związanych ze snem. Działania te w szczególności powinny być kierowane do grup podwyższonego ryzyka występowania zaburzeń snu.

Słowa kluczowe: zaburzenia snu, zdrowie publiczne, bezsenność, narkolepsja, depresja, nadciśnienie tętnicze, BMI.

Sleep disorders as a public health problem

Abstract

Sleep disorders are alongside civilization diseases, tobacco smoking, alcohol drinking, obesity, and low physical activity, one of the most frequent factors leading to health problems. In Poland, likewise in other European countries, sleeping disorders concern over twenty percent of the country population. The most frequent sleep disorder is insomnia, which stands for about forty percent of all disorders. Less common, however equally dangerous in results, is Obstructive Sleep Apnea and narcolepsy. Moreover, numerous data indicate, that quantitative or qualitative sleep disorders can increase the risk of depression, diabetes, arterial hypertension and difficulties with maintaining the correct body mass index (BMI). The important indicator is also the health-related quality of life (HRQL) that decreases significantly in people who sleep too short. The fact that a mere 1/3 of people declaring sleep disorders consult them with their doctor is alarming. Such attitude of the patients is today, alongside the doctors' incorrect diagnostic procedure, the main reason for the inefficiency of the struggle with the problem. Thus incredibly important seems to be the role of public health sector, taking appropriate actions as far as prevention, education, screening and/or periodical investigations relating to sleep are concerned. Also hygiene and correct sleeping habits cannot be neglected. Such actions should be directed especially at groups of increased risk of sleep disorders.

Key words: sleep disorders, public health, insomnia, narcolepsy, obstructive sleep apnea syndrome, depression, hypertension, BMI.

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INTRODUCTION

Sleep disorders nowadays are serious health problem in Europe, and as well in the whole world [1]. According to the European Centre for Environment and Health in Bonn, only in the European Union approx. 80 million people suffer from sleep disorders, and they account for 20% of its population [2]. Sleep disorders, alongside civilization diseases, tobacco smoking, alcohol drinking, obesity, and low physical activity, is one of the most frequent factors leading to a breakdown [3]. Due to diversity and etiology of those illnesses, which very often remain unexplained, the classification of sleep disorders is undoubtedly problematic. A logical attempt to classify those disorders was formulated in the fourth revision of the American psychical disorders classification (DSM-IV, Diagnostic and Statistical Manual Fourth Edition). It divides sleep disorders into: dyssomnias - disorders in the quality and quantity of sleep; parasomnias - sleep epilepsies, sleep disorders caused by other mental illnesses, both organic or inorganic; sleep disorders related to taking medicines and harmful substances, as well as other types of sleep disorders, e.g. hypersmonias [4,5].

EPIDEMIOLOGICAL SITUATION

In Poland approx. 23.7% of the population suffers from sleep disorders [6]. According to the questionnaire conducted in the group of 1,000 Polish citizens, 39% of all sleep disorders are caused by insomnia. The research results are similar in other countries: France - 46%, Germany - 36%, Great Britain - 32%, Italy - 30% [7]. Besides, the respondents complain mostly about: having problems with falling asleep (70%), discontinuation of sleep (52%), early wake-ups (48%), as well as poor quality of sleep (38%). The fact that only 1/3 people declared that they described those disorders to their doctors is alarming. Another scientific conclusion that follows from the conducted research was the fact that the occurrence of insomnia, and other problems connected with sleep disorders, was most frequently declared by women [5]. A greater predisposition of the female sex to certain sleep disorders are proved by other studies [8]. The opinion pool conducted by the Europe Health, 2008, among respondents from eleven countries, shows that every third one suffers from insomnia and sleep disorders. The results of the same research done in Poland confirmed that, along with stress and depression, sleep disorders are the most common health problem in Europe [9]. The Obstructive Sleep Apneas Syndrome (OSAS) and narcolepsy are other serious sleep disorders. According to the National Heart Lung and Blood Institute, OSAS occurs in one in every 25 persons [4]. Nevertheless, the study conducted on 1,254 American women by the National Sleep Foundation indicated that one out of four women is exposed to the risk of falling ill with OSAS [10]. Narcolepsy, is one of the hypersomnic disorders. It is characterized with frequent falling asleep for a short time - a few to several minutes - and gives a transient feeling of rest. It is estimated that in the United States it appears in approx. 0.045% of the country population [11]. The study in Japan, however, points that the prevalence of narcolepsy among the adult population is evaluated at approx. 0.16%-0.18% [12]. The most dangerous syndrome of narcolepsy is cataplexy. It is a double-sided loss of muscular tone that appears because of an emotional stimulus. It occurs in approx. 70 (out of 100) cases. People with symptoms of cataplexy are especially exposed to road accidents [13, 14].

SLEEPING DISORDERS AND HEALTH RISK

Numerous facts indicate that the lack or poor-quality of sleep may increase the risk of depressive disorders, diabetes, arterial hypertension, or difficulties with maintaining the correct body mass index (BMI) [15]. Nowadays, circulatory system diseases, as a result of the civilization development, are the principal reasons of morbidity, and in consequence – of death. Arterial hypertension is one of the diseases with the highest morbidity rate in Poland, as well in the world. Taking into consideration the fact of the serious health problems, due to there illness, sleep disorders should be analyzed also as one of those factors with can act in the pathomechanizm of this illness. Scientific, research conducted on all over the world, shows that those with OSAS are especially prone to experience that illness [16]. A considerably heightened risk of arterial hypertension occurs also among those who suffer from sleeplessness; nevertheless, it grows bigger among those who sleep less than five hours as day [17, 18]. Excessive fragmentation of sleep may contribute to the occurrence of this kind of illness, too [19]. A lot of research indicated a positive correlation between sleep disorders and dysphoria. Depression is one of the most widespread psychical disorders. Everybody, at least once during their life, experienced a feeling of sadness, discouragement, or apathy for which there seems to be no “effective cure” in those particular situations. If this state is not chronic, it is only a gentle depression state [4]. However, if the disorders persist for longer period of time, they may significantly affect everyday functioning. They can cause excessive feeling of pain and tiredness, lead to many diseases and generate different kinds of problems connected with sleep [20]. Sleep disorders belong to the depression syndrome elements, and in atypical depression they may be the main or the only symptom. At the same time, sleep disorders may be preceded by depression with all of its symptoms [21]. According to the study presented at the 39th Polish Psychiatrists Congress, the risk of depression among those who suffer from sleeplessness is four times higher than among those who do not have such problems [22]. According to American research on the group of 1,500 people (adolescents) who suffered from sleeplessness at the time of the study, it was observed that the problems connected with depression and dysphoria occurred frequently among the young who went to bed not later than 22.00. The team of scientists from the Pean State College of Medicine, Harrshey, conducted other research and identified other negative effects connected with sleep deficiency [23, 24]. According to them, sleeplessness or insufficiently

long sleep may cause incorrect glucose metabolism in the organism, its worse toleration, and in consequence – diabetes.

Abnormal metabolism and oxygen deficiency that repeatedly accompany sleep disorders may also lead to the loss or rise of body mass [25, 26]. One of those disorders is the night eating syndrome (Kleine-Levin's) [27]. It is characterized by long sleep interrupted by sudden hunger attacks. Those behaviors have mostly episodic character, and the diagnosed diseases lasted for no more than nine years, so far [28]. Numerous studies proved that OSAS occurs more frequently and has a much more severe course among people with overweight and obesity [29]. It was also proved that too little sleep causes proportional an increase in fatty tissue. American research on the group of 3,000 senior citizens (≥67 years old) showed that both women and men who slept less than five hours a day had higher BMI than those who slept 7-8 hours [30]. Apart from the significance for the development and course of many diseases, sleep disorders also affect the quality of life. A study of this relationship is possible by using the HRQL (Health-Related Quality of Life) indicator. The study shows that too little sleep per day undoubtedly causes a significant decrease in the quality of life. In 2001-2003, in Spain, a group of 3,834 people were examined The result indicated that those who slept five hours, or even less, a day, in the third year of this study had worse both physical and psychological indicators than those who slept longer. On the other hand, a decrease in those indicators consequently causes a decrease in HRQL [31]. According to some researchers, sleep disorders may also be an indicator of an increased risk of death [32]. In a group of men observed for nine years, among those who slept less than six hours a day, the death rate was higher up to 70% than in the group that slept longer [31]. Another study proved the connection of fatal accidents with the occurrence of different sleep disorders. Besides, people who worked in shifts, or during the night, were subject to more accidents of that kind [33].

THE ROLE OF THE PUBLIC HEALTH TO PREVALENT THE CONSEQUENCES OF SLEEP DISORDERS

Sleep disorders as factors, and at the same time, symptoms of many civilization diseases, deserve special attention in the sector of public health [34]. They disturb health, social and family functions, briefly speaking - they have an influence on every sphere of social life. Apart from the immediate consequences, the indirect "costs" connected with sleep disorders turn out to be substantial. A large proportion of those costs are connected with road accidents and occupational accidents. Callculating those costs in practice is not an easy task, because of numerous factors that may influence the occurrence of sudden cases. Sleep disorders also cause lower efficiency among workers and theirs absence. American research, which lasted seven years, indicated that the losses incurred due to the absence in work caused by chronic insomnia were estimated at 15-17.7 million dollars [35]. Another type of costs is that connected with sleep disorders that cause the formation and development of the mentioned diseases, including the costs pharmacotherapy and additional visits to s doctor. By diagnosing and curing sleep disorders it is possible not only to reduce the intensity of the underlying illness, but also to prevent the occurrence of complications, which further reduces the total cost of the patients' treatment [36]. A correct diagnostic procedure seems to be invaluable. It should be based on an accurate anamnesis, basic medical tests, electroencephalography (EEG), polisomnography (PSG). It can not be forgotten that in sleep disorders like insomnia, pharmacotherapy should be an extremity. It should be stressed that there are non-pharmacological methods of treating sleep disorders:

- Education referring to sleep physiology and sleep hygiene rules, also as a part of cognitive-behavioral therapy,
- Relaxation techniques,
- Psychotherapy,
- Phototherapy,
- Chronotherapy.

In spite of the existence of effective diagnosing methods and different ways of treating sleep disorders, the quality of counseling in this field, both in Poland and in other countries at a similar civilization level, is not satisfactory. It is believed that the patients who do not tell their problems with sleep are responsible for this state of affairs [30]. It seems justified that patients with chronic sleep disorders should undergo PSG checkups more frequently than only once in five years. The test is financed by the National Health Fund. In the contemporary society, many people devote several hours a day for work, and remain ready for action almost all the time. Work that demands long-lasting watching, working in shifts, and is connected with the change of time zones, is a factor that increases the risk of accidents related to the circadian rhythm. It was proved that 25% lorry drivers who took long rides fall asleep at least once while driving [37]. That is why it seems justified to survey those with a higher risk of sleep disorders, and especially those who are exposed to greater occupational hazards. This group includes not only drivers, but also medical rescuers and other people who work in shifts, or work longer than eight hours a day. Thus, it seems to be recommended that EEG or PSG checkups, which diagnose serious problems with sleep, should be included in periodic medical examination, and should be obligatory in high-risk professions. A separate and already discussed issue is the patient's quality of life that, thanks to sleep disorders therapy, rises remarkably. Considering the scale of the phenomenon of sleep disorders, screening tests in this area could provide valuable information. It is also not without significance that very little time is devoted to education in the area of sleep disorders in universities, including medical ones. This state of affairs occurs not only in our country. The situation in the United States is similar, despite the fact that they occupy the leading position with respect to resources allocated for studies of the sleep issue. During the 1990's, in the US medical universities, the average number of hours dedicated to this issue was 1.6 in the pre-clinical curriculum,

and 0.96 in the clinical curriculum. Education on sleep disorders should not be limited to students of medical universities but cover the general public. Campaigns, social advertising, school curricula concerning the rules of sleep hygiene, might lead to a decrease in sleep disorders [37, 38].

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