Bioresonance study of the genetic mechanisms of the relationship of stress, sleep disorders, aging, healing and rejuvenation of the body

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It is known that the deeper the sleep, i.e. the state of inhibition of metabolism (hypobiosis), the higher the efficiency. This is due to the fact that in the phase of deep sleep, recovery ("repair"), healing and "antiaging" of the body develops [1]. However, as they age, most of the population suffers from insomnia, ranging from falling asleep disturbances to frequent awakenings during the night. At the same time, working capacity is significantly lost, the quality of life deteriorates, various diseases develop, and the aging process accelerates [2]. Being engaged in bioresonance study of the human genome [3], we assumed that the processes of “antiaging” during sleep are associated with the activation of special genes that support the circadian biorhythm “sleep-wakefulness”. These are genes of the Period family (Per 1, 2, 3, etc.). Recently, American scientists have established that the Per 3 gene expresses glucocorticoids with a peak in the early morning hours. Simultaneously, the Per 2 gene is also activated, which also regulates the diurnal biorhythm [4, 5]. Moreover, the recently discovered "insomnia gene" DEC 2, which may work due to homeostatic mechanisms. In particular, it removes special proteins that contribute to falling asleep [6]. The gene for familial insomnia has also been found [7].

On the other hand, it has been established that the use by some peoples (hunzakuta) of hypobiosis, special sleep states (Tamil sidhi) contributes to a significant preservation of health, prevention of aging diseases and prolongation of life. Thus, an employee of Moscow State University S. Begim [8] gives a list of 31 people who allegedly lived from 200 to 2000 (!) Years. Some of them are still alive. I have been to India many times, got acquainted with the practices of Tamil sidhas and I think that their phenomenon should be taken seriously. The sidhis themselves believe that the basis of their supernatural health and longevity is the daily exit to a special state of controlled sleep, such as nirvana. V.V. Savinov [9] gives a lot of examples of spontaneous rejuvenation for 30–40 years after severe acute stress, shock, clinical death, etc. At the same time, gray hair disappeared, wrinkles were smoothed, menstruation was restored at 70–80 years old and even childbirth took place. According to the calculations of scientists, over 100 such people currently live in different countries.

The aim of the work was to use a bioresonance approach to studying genes that regulate the sleep-wake cycle and antiaging in people with high levels of stress, insomnia and accelerated aging in comparison with those involved in special oriental health practices, as well as with ordinary healthy people.

Materials and research methods

The study involved 46 people, divided into 3 groups. The first group included 25 people (aged 40–63 years) with signs of accelerated aging (appearance that does not correspond to age), suffering from persistent

insomnia - code for the international classification of diseases (ICD-10): F51.0. - Insomnia; F51.2. - Disorder of sleep and wakefulness; F51.8 - Other nonorganic sleep disorders; F51.9 - Unspecified non-organic sleep disorder The second group - 6 people (aged 38–64) who have been practicing oriental health-improving practices (tai-chi-chuan, qigong, yoga) for many years and were distinguished by short sleep (6–6.5 hours), high working capacity, excellent health no health complaints. The third group - 15 people (aged 38–61) served as a control. It included ordinary, practically healthy people who did not have health complaints and sleep disturbances. All subjects studied the activity of frequency-resonant preparations of genes of the Period family (Per 1, 2, 3), BMAL1, DEC2, ABCC9, antiaging genes (SIRT1, 3), gene telomerase according to the method described in our previous work [10]. In addition, diagnostics was carried out using the ART "IMEDIS-TEST" method on the "IMEDIS" equipment, - biological age, stress level, adaptive reserves, etc. D12, D30, D60, D100, D200), a test for epigenetic disorders, biological age using the Inner Skan apparatus from Tanita (Japan), the Omega hardware and software complex (Russia) and other techniques we have outlined earlier.

Research results and discussion

It was found that out of 26 people of the first group with different types of insomnia, 19 were found to have impaired activity of some of the studied genes. Moreover, there was a correlation with the level of stress in almost all genes, but it was significant only for genes Per 1 ($r = 0.82$; $p < 0.05$), Per 3 ($r = 0.84$; $p < 0.05$) , DEC2 ($r = 0.76$; $p < 0.05$). This was especially clearly seen in the early morning hours (7-9 o'clock) and less noticeable in the daytime and evening. In parallel, there was a correlation with the activity of genes of the SIRT family and the activity of the telomerase gene, and in three individuals changes in gene activity reached 72–83% ($p < 0.05$). In particular, the activity of the antiaging gene SIRT 3 correlated with the DEC2 gene ($r = 0.79$; $p < 0.05$), and the Per 3 gene with the telomerase gene ($r = 0.68$; $p < 0.05$). No significant correlation was found in seven people. In all cases, the biological age, adaptation reserves of the organism, the level of stress, and epigenetic disorders changed similarly to the activity of the controlling genes. For example, indicators of stress load were more correlated with the activity of genes DEC2, BMAL1, and ABCC9. This may reflect the fact that disruption of these genes inhibits antiaging and disrupts sleep recovery.

Interesting results were obtained in the second group, where all subjects showed a positive correlation between the activity of the clock genes (Per 1, 2, 3, BMAL1), the ABCC9 gene, genes of the SIRT family (SIRT1, SIRT3) and the activity of the telomerase gene. This correlation turned out to be the most reliable when comparing the data for each individual subject. For the entire group, due to the high scatter of the data and the small sample, these data were somewhat lower. All of these individuals have low stress levels, excellent

indicators on the SAN test (well-being, activity, mood), very high adaptation reserves of 4–5 degrees. Low indicators of biological age (8-15 years below the passport). This appears to be due to their many years of training and use of concentration and meditation. It should be borne in mind that all these people were specially selected from several hundred persons engaged in health-improving practices, precisely because of the high screening indicators of the body's reserves and low biological age. Moreover, they all studied special health centers in India and China.

In the control third group of healthy individuals, although there was a moderate correlation between the activity of clock genes (Per 1, 2, 3, BMAL1) with genes of the SIRT family (SIRT1, SIRT3), telomerase gene, increasing with age, it was significant only for each individual person. , and not as a whole for the group.

The most interesting was the comparison of the results of the second and third groups of persons. It turned out that systematic practice of oriental health-improving practices and, especially, yoga contributes to a significant reliable activation of the studied clock genes. Thus, the activity of the Per 1 gene turned out to be increased compared to the control by 65.2% ($p < 0.05$), Per 2 by 61.7% ($p < 0.05$), Per 3 by 73.2% ($p < 0.05$), BMAL1 by 48.4% ($p < 0.05$). This correlated with a sharp rise in the activity of the SIRT1 genes by 53.2% ($p < 0.05$), SIRT3 by 61.2% ($p < 0.05$), and the telomerase gene by 49.2% ($p < 0.05$). American researchers recently identified 30 people called "Supermen". Indeed, they slept for only 4–6 hours, while they completely got enough sleep, had an extremely high working capacity, tone and excellent health. All were found to have a change in the DEC2 gene, which regulates the sleep-wake cycle [11]. German chronobiologists [12] studied 4251 people from 7 European countries who had short sleep. All have special copies of the ABCC9 gene and low energy consumption. Scientists believe that it was this gene that caused the low sleep duration in Napoleon (3-4 hours), Leonardo Da Vinci (5 hours), Winston Churchill (5 hours). Among our contemporaries, those who sleep little can be referred to: Silvio Berlusconi (2 hours), Madonna (4 hours), Bill Clinton (5-6 hours). Leonardo Da Vinci (5 hours), Winston Churchill (5 hours). Among our contemporaries, those who sleep little can be referred to: Silvio Berlusconi (2 hours), Madonna (4 hours), Bill Clinton (5-6 hours). Leonardo Da Vinci (5 hours), Winston Churchill (5 hours). Among our contemporaries, those who sleep little can be referred to: Silvio Berlusconi (2 hours), Madonna (4 hours), Bill Clinton (5-6 hours).

In pilot studies, potentiated resonance frequency drugs (VFR genes) have been studied in the treatment of insomnia. At the same time, the VFDs of those genes that controlled the stress level and the sleep-wake cycle were always effective. Thus, the VFR of the Per3 gene made it possible to eliminate persistent long-term insomnia in three people, the VFR of the Per 1 gene - in two people, and the VFR of the BMAL1 gene - in one person. The key gene that was involved in the pathogenesis of insomnia in a particular patient turned out to be active. Currently, dozens of genes have been identified that control the “sleep-wakefulness” rhythm and, possibly, affect the development of sleep disorders. A large-scale study [13] of 1350 (!) Genes involved in the regulation of sleep, metabolism, activity, behavior, and receptor sensitivity showed that a large association of these genes, which do not change much, but in a coordinated manner it can play a role in the development of insomnia. Our data confirm these studies and the hypothesis of a multigenic mechanism of sleep disorders, although, of course, variants of insomnia associated with a qualitative change in even one gene are possible.

However, such monogenic insomnia is much less common - in our study, only six out of twenty-six examined. Similar patterns, apparently, exist for the aging and antiaging mechanisms. Probably, each person has a “limiting” gene that determines the effectiveness of the sleep-wake cycle, restoration of working capacity, the intensity of aging and antiaging. This may be due to the fact that the genes studied by us control many dozens of other genes and are at the beginning of the branched chain aging-antiaging process. Apparently, it is precisely on them that the years of persistent training and restructuring of the entire way of life in persons of the second group are aimed. Indeed, many years of practicing qigong, tai chi chuan, yoga asanas, a special diet,

The use of the IMEDIS equipment significantly speeds up, objectifies and controls these processes. Thus, there are prospects for prolonging life and real rejuvenation for all of humanity.

Conclusions:

1. Patients with insomnia have a negative correlation between the genes of the sleep-wake cycle (Per 1, 2, 3), BMAL1, DEC2, on the one hand, and the antiaging genes (SIRT1, 3) and the telomerase gene, on the other hand. The resulting changes are parallel to the level of stress, mental stress, adaptation reserves of the body and biological age. This indicates the predominance of chronic stress and aging over the processes of recovery and antiaging in chronic insomnia.

2. In healthy people engaged in special health-improving complexes techniques (qigong exercises, tai chi chuan, yoga), a positive correlation was found between the activity of genes (Per 1, 2, 3), BMAL1, DEC2, on the one hand, and antiaging genes (SIRT1, 3) and the telomerase gene , on the other side. This indicates the predominance of anti-aging and rejuvenation processes over aging processes.

3. In practically healthy people of the normal population there is a correlation between the studied groups of genes, increasing with age. This may reflect the predominance of aging processes over "antiaging".

4. Diagnostics using the ART method allows you to identify the pathogenetic relationship between stress level, sleep duration, health status and characteristics of the human genome.

5. The research results give reason to believe that even at the present the level of development of science with the help of IMEDIS equipment, it is possible not only to eliminate stress, insomnia, stop aging, the development of chronic diseases, but also to control the processes of rejuvenation of the body.

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