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Chronic fatigue syndrome - criteria for diagnosis, aetiology, treatment

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Abstract

Chronic fatigue syndrome is a disease that has been observed for a long time. It appeared under various names, often associated with the theory of the aetiology of CFS - chronic fatigue syndrome. Despite many studies, the causes of chronic fatigue syndrome have not yet been defined. The consequence of this are difficulties in diagnosis and then in the treatment of this disease.

Fatigue

Fatigue is a feeling known to every person, it occurs in both physiological conditions and also in the course of many diseases. However, if fatigue is excessive and dominates in the clinical

picture, we may have to do with chronic fatigue syndrome (CFS). Chronic fatigue syndrome was defined by the American Centre for Disease Control in 1988. Criteria for chronic fatigue have been described recently, but this condition was already present in many other names [1,2]. Fatigue is defined as a subjective feeling of lack of energy to start and sustain any activity, it is not related to depression or muscle weakness [3,4].

Criteria for diagnosis and CFS symptoms

The clinical picture of chronic fatigue is complicated, many symptoms of various diseases are imposed on it. The CFS symptoms are only subjective, reported by the patient, no specific diagnostic tools are available. In the majority of patients, CFS begins with a common cold, e.g. cough, fever or sore throat.

The diagnosis of chronic fatigue syndrome can be made after satisfying the following criteria:

1. Large criteria:

- Persistent or recurrent fatigue lasting for ≥ 6 months in a person who has not had similar symptoms before. Despite the rest, the feeling of tiredness does not go away and still directly affects the occupational, social and personal activity of the patient.
- Exclusion of the presence of other somatic or mental illness that can cause fatigue symptoms.

2. Small criteria:

- memory or concentration disorders,
- sore throat,
- enlargement of the cervical or axillary lymph nodes,
- muscle aches,
- pain in many joints,
- headaches of an unprecedented nature,
- insomnia or sleep without rest,
- feeling unwell after exercise lasting over 24 hours.

In order to diagnose CFS, the patient must meet the criteria of large and at least 4 small criteria [5,2].

Criteria that exclude the diagnosis of chronic fatigue syndrome:

1. Suspected or recognized active disease process.
2. Bipolar depression, schizophrenia (except unipolar mood depression).
3. Dementia syndromes.
4. Anorexia or bulimia nervosa.

5. Addiction to alcohol or other psychoactive compounds.
6. Significance of obesity [1].

Epidemiology

Chronic fatigue syndrome is more likely to affect women (65%), in particular Caucasian. It mainly applies to people between 20-50 years of age. The statistical patient belongs to the middle class, is educated and ambitious. This is a stereotypical description of the patient and there are many people who suffer from CFS who do not fit in with this framework. However, the incidence of this disorder among men or people with a different skin colour than white is much lower.

Data on the prevalence of chronic fatigue syndrome are not conclusive. According to data from various sources, CFS suffers from 0.002% to 1% of the population. These differences depend on the restrictiveness of the assessment of diagnostic criteria [2,5].

Aetiology

The aetiology of CFS has not yet been thoroughly studied, and the causative factor remains undetermined. Studies from 1985, published by two independent research groups, were of particular importance. Patients suffering from unexplained diseases who were mainly characterized by chronic fatigue were examined. Serological infection with Epstein-Barr virus (EBV) was detected during serological tests. It has been hypothesized that the EBV virus is responsible for the disease. Previously proposed names for this disorder took into account this theory, which is why formerly CFS was referred to as: a chronic syndrome associated with EB virus, chronic mononucleosis, a chronic mononucleosis syndrome. Attention was also paid to other viral infections as a potential etiological factor, for example viral infections caused, inter alia, by the Coxsackie B virus, HTLV-I (human T-cell lymphotropic virus I), CMV (cytomegalovirus), HHV-6 (human herpesvirus-6) , BDV (Borna disease virus), measles and rubella virus. The theory that the CFS pathogen is a viral infection has many supporters. It is supported by the fact that the presence of antibodies against antigens of individual viruses was statistically more frequent in patients suffering from chronic fatigue syndrome than in healthy people. Researchers also became interested in the possibility that causative factors are other types of microorganisms such as: bacteria (Brucella), rickettsia, toxoplasmosis or giardiasis (Giardia lamblia). However, viral or bacterial theories also have many opponents, some researchers believe that viral or bacterial diseases do not explain all the symptoms of the

syndrome and reject the hypothesis that CFS has an infectious aetiology. Also considered are hypotheses assuming that the mechanism of chronic fatigue syndrome is related to the issue of: immunological, neuroendocrine or neurological. Equally important seems to be the assumption that psychosocial factors (such as stress or conflicts) and psychological factors (such as personality, coping with stress) can be the cause of CFS incidence. This theory is strongly confirmed by studies by Kipen et al. They showed that chronic fatigue syndrome was relatively frequent among soldiers who served during Operation Desert Storm in the Gulf in 1991. Four years after the end of the war as many as 15.7% of veterans presented symptoms that met the criteria for CFS diagnosis [1, 2, 6].

Treatment

Unexplained aetiology of chronic fatigue syndrome, the lack of standardized diagnostic tools and subjective disease indicators significantly hamper the development of standards for therapeutic management. Therefore, CFS therapy is multidirectional, pharmacological treatment, psychotherapy and rehabilitation are applied.

Pharmacotherapy

The variety of symptoms of chronic fatigue syndrome necessitated taking treatment with medications from various groups. Unfortunately, the results of treatment were mediocre, because often the drugs that were used alleviated only one of the symptoms, not improving general well-being and health. Among others, low doses of tricyclic antidepressants and selective serotonin reuptake inhibitors were used, which resulted in relatively good results in selected groups. However, the use of fluoxetine (Prozac) did not bring any positive therapeutic effects. Also, therapies using antiviral drugs and high doses of gammaglobulin have been ineffective. Positive results of treatment noted during treatment with corticosteroids, however, also brought significant side effects in the form of inhibition of the adrenal cortex function. Attempts have also been made to treat medication from other groups. Patients also received ACE inhibitors (Captopril, Enalapril), antibiotics (Ceftriaxone, Ciprofloxacin, Doxycycline), antifungal agents (Ketoconazole), antihistamines (H2 blockers, terfenadine) and non-steroidal anti-inflammatory drugs (Naproxen). Mineral supplements (zinc) and vitamins (vitamin B and C) were also used and other substances were used, such as: evening primrose oil, ω-3 fatty acids or vasopressin. However, once again these therapies did not bring beneficial therapeutic effects, and even some of them caused serious side effects.

Psychotherapy

Psychotherapy offers people suffering from chronic fatigue syndrome an active involvement in the activities of a group of people with CFS. Patients and their families receive appropriate education there, which facilitates mutual relations. Research has shown that well-conducted, intensive psychotherapy brings better therapeutic effects in comparison to pharmacological treatment and relaxation therapy. The basic tasks of psychotherapy include:

• setting goals (greater social, professional and social activity),
• detailed patient education about the course of the disease,
• relaxing exercises,
• encouraging the patient to be active in various areas.

Rehabilitation

Physical fitness of persons suffering from CFS is not different from the average efficiency of a healthy person. It follows that the feelings of tiredness derive from CNS dysfunctions. In this case, physical activity will not be harmful to the patient, and can even bring positive effects. However, it should be remembered that at the beginning physical activity may exacerbate CFS symptoms, but then you will see an improvement [1, 2, 7].

Summary

The chronic fatigue syndrome remains unknown despite many studies. The essence of the problem lies in the unknown aetiology of the disease. Despite this, the researchers have made many attempts to treat patients suffering from CFS, unfortunately the results of the therapy are not satisfactory. This disease has a very strong impact on the patient's quality of life, so further exploration of knowledge about it seems to be an important scientific task.

Bibliography:

1. Wiszniewska M., Walusiak J., Wittczak T., Pałczynski C.: Zespół przewlekłego zmęczenia i jego znaczenie w medycynie pracy. Med. Pr., 2005; 56(5):387–394

2. Kurowski M., KunaP., Zespół przewlekłego zmęczenia., Alergia Astma Immunologia, 1997; 2(4), 223-228

3. Brola W, Ziomek M, Czernicki J., Zespół zmęczenia w przewlekłych chorobach neurologicznych. Neurol Neurochir Pol., 2007; 41:340–349

4. Wojtukiewicz M, Sawicki Z, Sierko E, Kieszkowska–Grudny A., Zespół przewlekłego zmęczenia u chorych na nowotwory poddawanych chemioterapii. Nowotwory J Oncol., 2007; 6:695-701

5. Komaroff A.L.: The biology of chronic fatigue syndrome. Am. J. Med., 2000; 108:169–171

6. Kulik A., Kulturowe uwarunkowania zespołów medycznie niewyjaśnianych na przykładzie przewlekłego zmęczenia. Sztuka Leczenia, 2013; 1–2, 33–40

7. Biegański P, Bitner A, Zalewski P, Tafil-Klawe M, Klawe JJ. Graded exercise therapy (GET) — forma nie farmakologicznego leczenia pacjentów z zespołem przewlekłego zmęczenia (CFS). Alerg. Astma Immun., 2014; 49: 413–416.