

CHRONIC FATIGUE SYNDROME

MARCEL PEREANU¹

¹“Lucian Blaga” University of Sibiu

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Abstract: Chronic fatigue syndrome is characterized by unexplained fatigue, lasting 6 months or more, impairment of cognitive functions, quality of sleep, and of somatic symptoms, such as recurrent sore throat, myalgias, arthralgias, headache and postexertional malaise. The cause of chronic fatigue syndrome is unknown, although there are many theories ranging from viral infections to psychological stress. No specific treatment has been found. Medication focuses on symptom relief and cognitive behavioural therapy.

INTRODUCTION

Chronic fatigue syndrome (CFS), also known as myalgic encephalitis is a disease characterized by persistent fatigue lasting at least 6 months in adults (3 months in children and adolescents). Fatigue is not produced by physical exercises, it is not significantly improved by rest and it is not caused by other similar medical conditions.(1,2)

History

Chronic fatigue syndrome (CFS) term has been used in the medical literature since 1987 to replace the old name for benign myalgic encephalitis (produced especially by poliovirus).

In 2006, the Center for Disease Control in the United States (US) have recognized the disease and started a national programme to educate the American public and health professionals about the main aspects of the disease.

Epidemiology

The disease affects approximately 0.2-0.7% of the population of the Western countries. The Center for Disease Control in the US reports that over 1 000 000 US citizens show signs of CFS and that about 80% are not diagnosed (in the United Kingdom, it is estimated that there are approximately 250 000 cases). The disease occurs most often in people between 40-59 years old and it is more common in women (60-85%). The prevalence in children and adolescents is lower. 1st degree relatives of patients were more likely to show signs of disease. There are no signs that the disease could be contagious.(3)

Etiology

CFS etiology is not known yet exactly, but there may be a combination of factors affecting the population born with a predisposition to developing the disease.(4)

Among the studied factors, one can mention:

- Viral infections (Epstein Barr, herpes, polio etc.). Feeling tired is common after a viral infection, but it does not explain why symptoms persist or worsen in CFS.
- Immune system problems.
- Hormonal disorders.(5)
- Psychiatric problems, such as stress and emotional trauma.
- Genetic factors (some people have a hereditary

tendency to develop CFS).

Clinical picture

The onset of this disease is usually sudden, but sometimes, symptoms may appear gradually over weeks or months. The complaints are very different and vary from day to day.

Chronic fatigue syndrome is defined by the following symptoms (6):

1. Unexplained, persistent chronic fatigue or, which occurs in relapses and remissions with new and defined onset (it did not exist throughout the patient's life); it does not appear as a result of physical exercise and it is not substantially improved after sleep and results in a dramatic reduction in performing the daily activities.
2. Co-occurrence of 4 or more of the following signs and symptoms:
 - short-term memory and concentration impairment;
 - recurrent sore throat;
 - stiff neck or axillary lymph nodes;
 - unexplained muscle pain;
 - joint pain without signs of inflammation;
 - headache;
 - bad sleep;
 - extreme exhaustion lasting more than 24 hours after physical or mental strain.

If the severity of the disease or the diagnostic criteria for Chronic Fatigue Syndrome are not met, the disease is considered idiopathic chronic fatigue.

Paraclinical examinations

There is no examination to be specific for CFS. Laboratory tests and neuroimaging studies are indicated to confirm or rule out other etiological possibilities.

- laboratory examinations are generally normal. In some cases, more specific examinations can be performed, such as: antinuclear antibody (ANA) (to exclude lupus erythematosus), rheumatoid factor, HIV test, tests for Lyme disease, tuberculin skin test, tests for hepatitis A, B and C;
- sleep disorders can be studied by polysomnography;
- psychiatric and psychological tests to highlight a number of conditions which may be the origin of fatigue (especially

¹Corresponding author: Marcel Peraanu, Str. Patrioților, Nr. 7, Sibiu, România, E-mail: marcelpereanu@yahoo.com, Phone: +40269 220292

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depression);

- cranial imaging investigations (Computed Tomography, Magnetic Resonance Imaging, MRI, Single Photon Emission Computed Tomography, Positron Emission Tomography).

Evolution

Much of patients with chronic fatigue syndrome feel better with time, but most of them are functionally affected for a period of several years.

Differential diagnosis

There must be excluded a series of conditions that bring about symptoms similar with the chronic fatigue syndrome:

- adrenocortical insufficiency;
- malignancy;
- HIV infection;
- liver or kidney disease;
- lyme disease;
- fibromyalgia;
- hepatitis A, B and C;
- thyroid diseases.

Treatment

Because CFS has unknown etiology, treatment aims at rather relieving symptoms than at curing. The goal of therapy is to regain as much as possible of the pre-existing functioning and approaching the wellbeing status. Many patients with CFS do not quickly return to a satisfactory level of health. Patients who expect a rapid improvement and have no patience may experience the worsening of symptoms, they become frustrated and less responsive to the rehabilitation programme.(7-15)

Drug treatment refers to:

- Pain relievers (ibuprofen, naproxen, celecoxib) to treat arthralgia and headaches;
- Narcotic pain relievers (codeine, morphine, tramadol) in case the pain is severe. Because of the addictive risk, they are used only for a short time;
- Anticonvulsants (gabapentin, pregabalin) to relieve pain and improve sleep;
- Tricyclic antidepressants (doxepin, amitriptyline, nortriptyline) for pain relief and improve sleep;
- Other antidepressants (fluoxetine, sertraline, paroxetine, venlafaxine);
- Anxiolytic agents (alprazolam, lorazepam);
- Antibiotics especially in patients with *Campylobacter*, pneumonia in particular with the high IgM titre (doxycycline);
- Antiallergic treatment, where applicable, with non-sedating antihistamines (desloratadine).

Other therapeutic methods:

- Acupuncture;
- Gymnastics;
- Autogenous training;
- Yoga;
- Cognitive behavioral therapy.

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