

NJCFSA Medical Student Scholarship

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Fatigue is not a new affliction. Everyone has felt exhausted at some point. Usually rest and a good night's sleep is all it takes for a person to recover. However, there are people for whom rest and sleep are not enough. No matter how much rest they take, they never seem to recover. In the 19th century an American physician coined the term "neurasthenia" to describe the state of abnormal fatigue, muscle weakness, and other symptoms experienced by some of his patients.¹ This term continues to be used widely, especially in Asian cultures, and is even included in the Tenth revision of the World Health Organization's International Classification of Diseases (ICD-10). However, it was removed as an official diagnosis from the Diagnostic and Statistical Manual (DSM) in 1980.² In addition to *neurasthenia*, many other terms have been used over the years to describe unrelenting fatigue and its associated symptoms: myalgic encephalitis, Icelandic disease, nervous exhaustion, and Yuppie flu.³ However, it was not until the late 20th century that real progress started to be made in terms of the origin of this illness, and the optimal treatments for it.

Research into the cause for this type of fatigue began in earnest about 20 years ago, spurred by an outbreak of "chronic-mononucleosis-like syndrome" in Nevada.³ In 1988 researchers at the Centers for Disease Control (CDC) released the first formal case definition for this mysterious illness calling it "Chronic Fatigue Syndrome" (CFS).⁴ They chose this name because it does not hint at cause which has yet to be discovered. In 1994 the CDC released a revised, more specific case definition for CFS.⁵ It defined "fatigue" as severe physical and mental exhaustion that is not due to exertion, disease, lack of motivation, or somnolence. "Prolonged fatigue" lasts greater than 1 month. "Chronic fatigue" lasts for at least 6 months. Chronic fatigue syndrome includes chronic fatigue along with at least 4 of the following

symptoms which must also have been present for at least 6 months, but not longer than the fatigue:

Sore throat	Headaches
Tender cervical/axillary lymph nodes	Unrefreshing sleep
Muscle pain	Postexertional malaise lasting more than 24 hrs.
Multi-joint pain without swelling or redness	Impairment in short-term memory or concentration

Table 1 Symptoms associated with Chronic Fatigue Syndrome⁵

Idiopathic chronic fatigue is any unexplained fatigue that does not fit the criteria for CFS.

How will a patient with CFS present? Typically they report to their doctors complaining of a sudden onset of fatigue that was triggered by a flu or cold. This is one reason why CFS is thought to be caused by some sort of infectious agent. Once they recover from the initial illness, the fatigue persists and is exacerbated by ordinary physical activity for which they previously had tolerance.⁶ Some patients also report experiencing anorexia, nausea, night sweats, dizziness, and intolerance to substances that affect the central nervous system.⁷ As if persistent fatigue was not enough, patients also have considerable functional impairments such as problems with memory, concentrating, thinking, and sleeping.⁸ As one would imagine, these difficulties have a profound effect on the patient's relationships and everyday life. In a study of those diagnosed with CFS one-third reported being unable to work, and one-third could only work part-time.⁹ One study that surveyed patients with CFS showed that the level of incapacity they reported was worse than a comparable sample of patients with congestive heart failure.¹⁰ Although the term "Yuppie flu" has been used to describe the symptoms of CFS, research shows that this illness is not specific to any ethnic group or socioeconomic class.³ Population studies have shown that the prevalence of CFS is somewhere between 0.5% and 2%.¹¹ Research has even shown CFS to occur in children and adolescents.¹² The only risk factor that has been identified so far is

gender.¹³ CFS is about two to four times more likely to occur in women than in men.^{10,14} However, these statistics may be influenced by the fact that women may be more likely to seek help for these symptoms than men.¹⁵

One very important thing to note is that there are no tests for CFS. The only way to arrive at this diagnosis is to exclude all other possibilities. After all, the fatigue experienced in CFS is *unexplained*. So if there is a condition present that would account for the occurrence of chronic fatigue, CFS must be ruled out as a diagnosis. One of those reasons would be the presence of a medical condition that would cause chronic fatigue. Some examples include hypothyroidism, sleep apnea, and narcolepsy.¹⁶ Another explanation of fatigue would be having been previously diagnosed with an illness that would cause fatigue if not resolved. Examples of this include A diagnosis of the following at any point in a patient's life would also exclude CFS: major depressive disorder with psychotic or melancholic features, bipolar affective disorder, schizophrenia, delusional disorders, dementias, anorexia nervosa, and bulimia nervosa.⁵

It may be tempting to attribute the symptoms of CFS to depression. In fact, according to some, major depression is thought to be the most important factor in the differential diagnosis.⁹ It has been reported that two thirds of CFS patients have signs of major depressive illness, and that half of CFS patients have had at least one episode of major depression.¹⁵ However, CFS can be distinguished from depression because CFS patients do not exhibit anhedonia, guilt, or lack of motivation that normally occurs with depression, while they do experience physical symptoms, which are not generally associated with depression.³ When a patient presents with chronic fatigue, doctors should also inquire whether the patient is on any medications because the fatigue could be attributed to side effects.

Other factors that would lead to exclusion of the diagnosis of CFS are substance abuse within 2 years of onset of chronic fatigue and after onset, and severe obesity (body mass index > 45).⁵ Ruling out particular causes for chronic fatigue can be a daunting task. The differential diagnosis must include everything from anemia and heart failure to chronic infections, sleep disorders, and neurological problems.¹⁶ It would be futile to attempt to list here all the processes that must be considered, because no list could be truly comprehensive. Chronic fatigue as well as CFS can occur along with other functional illnesses such as fibromyalgia, multiple chemical sensitivities, irritable bowel syndrome, and temporomandibular joint disorder.⁹ A functional illness is one whose disease process is invisible to current testing or one whose cause is thought to be non-organic.¹⁶ This fact makes it even more difficult to discern whether CFS is the right term for the patient's symptoms, especially since functional illnesses have many overlapping symptoms.¹⁶ The fact that CFS can occur along with other unexplainable illnesses makes diagnosis more complicated.

Since it is not yet possible to directly target the cause of CFS, current treatments are aimed at alleviating the symptoms. Among the pharmacological interventions that were studied, few if any have been proven consistently effective. These treatments vary depending on what symptoms the patients present with. Those whose main problems are due to profound inactivity seem to benefit from the use of monoamine oxidase inhibitors. Administration of antidepressants as a default treatment is not warranted for all who suffer from CFS. However, they have been proven beneficial in the treatment of fibromyalgia, which can occur in a patient along with CFS. For those who have significant musculoskeletal difficulties, non-steroidal anti-inflammatories can provide relief.⁹ Glucocorticoids provide short-term benefits when given in low doses, but are associated with adverse side effects in higher doses.¹³ A randomized

controlled trial using Growth Hormone replacement therapy found no evidence of benefit.¹⁷ Immunological interventions have not proven to be beneficial in treating CFS.⁹

With regard to non-pharmacological treatments, studies have shown that two in particular have proven particularly beneficial: cognitive behavior therapy (CBT) and graded exercise therapy (GET).¹⁸ CBT attempts to challenge the patient's perception that his illness is incurable, and helps to establish healthy coping skills.¹⁵ It has been used successfully in treating depression, and chronic pain.⁹ Recent trials have found that 70% of patients who received at least 13 sessions of CBT improved in their physical and mental functioning. This is compared to 20%-27% of participants who improved using relaxation or typical medical care.⁹ One randomized controlled trial found that both CBT and counseling had a similar effect for CFS patients. There are no adverse effects associated with CBT.¹⁸ Studies evaluating the effectiveness of alternative treatments are few and far between. One randomized controlled trial of massage therapy showed a beneficial effect, and was not associated with any adverse side effects.¹⁸

Randomized controlled trials compared GET with flexibility or relaxation techniques. They reported that the GET regimen resulted in marked improvement in functioning, and in the fitness of the patient.⁹ One problem in engaging a CFS patient in an exercise program is that physical activity often exacerbates or is perceived by the patient to exacerbate his symptoms. Thus, patients may become stuck in a vicious cycle of avoiding physical activity, which leads to deconditioning, which will lead to reduced capacity for exertion, and to worsening of symptoms. The best way to undertake GET is to have an exercise schedule that will prevent patients from over-exerting themselves. This therapy is generally aimed at patients who are not confined to

bed, and who may already be doing minimal exercises. The types of exercises should be those that use the major muscles groups such as walking, jogging, swimming, and cycling.¹⁹

The prognosis for those diagnosed with CFS is generally positive. This syndrome is not associated with increased mortality, and long term studies have shown improvement over time. In children, the outcome is even better. Studies have shown that over a period of 6 years, as many as 2/3 of the adolescent CFS patients fully recovered. In general, 54% to 94% of children with CFS will improve or completely recover. The following have been identified as predictors of poor prognosis: advanced age, presence of a psychiatric disorder, and a belief in a physical cause for symptoms.¹² Research has shown that CFS patients' perceptions of themselves and of their symptoms lead to persistence and worsening of their physical and mental problems.⁹ Studies also show that treatment is an important factor in improving the prognosis.¹²

Over the last two decades the world has become very familiar with the phrase "Chronic Fatigue Syndrome." It has been covered in popular media, and has even been incorporated into television and movie plot lines. CFS is a crippling illness with many complications with respect to the patient's daily life. Those who are afflicted are often unable to work full time. This not only has an impact on the patient but also on his family. What if the patient is the sole provider? How can he put food on the table, if he cannot work? Will disability insurance cover him? Many patients have trouble convincing family and friends that they indeed have a real illness. It is conceivable that some even have trouble convincing their doctors.

It is very tempting to label these problems as psychosomatic. The symptoms associated with CFS cannot be tested for, and so are based solely on the patient's report. It is very important for doctors to be understanding of the patient's problems and concerns. Patients suddenly have no tolerance for their usual daily activities, they have trouble with work, people

who are close to them may have trouble believing them, and they don't know what is wrong with them. Doctors should perform a thorough history and physical to help arrive at the proper diagnosis. With diagnosis in hand, they should make the patient aware of available treatments. A healthy doctor-patient relationship is the foundation for helping patients cope with this illness.

References

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