CHRONIC FATIGUE SYNDROME **MEDICAL APPENDIX**

DEFINITION

1. The term Chronic Fatigue Syndrome (CFS) encompasses a range of disorders which share the common features of unexplained fatigue, or post-exertional malaise, and the absence of any objective sign of illness. It is characterised further by the complaint of musculoskeletal pain, sleep disturbance and poor concentration.

2. Nomenclature has varied widely in the past, and the illness has variously been termed neurasthenia, myalgic encephalomyelitis and post-viral fatigue syndrome.

3. Three widely used definitions have been developed as operational criteria for research but they differ significantly in their approach to the problem of underlying pathology. However they share the requirement for the presence of unexplained fatigue of new onset, of at least six months' duration.

4. The diagnostic definition developed in 1994 remains the most widely used (the Fukuda criteria). It is defined by the presence of clinically evaluated, medically unexplained fatigue of at least six months' duration that is of new onset, is not as a result of exertion, is not substantially alleviated by rest, and represents a substantial reduction in previous levels of activity. In addition, the occurrence of four or more of the following symptoms should be present: subjective memory impairment, tender lymph nodes, muscle pain, joint pain, headache, unrefreshing sleep and postexertional malaise.

5. A number of exclusion criteria are identified under these criteria, including active disease likely to cause fatigue, depression, psychosis, dementia and alcohol or substance abuse.

CLINICAL FEATURES

6. Fatigue is disproportionate to the level of any exertion, and is excessive and disabling. It may immediately follow any activity, or occur in a delayed pattern, in which the person complains of fatigue occurring hours or even days after exertion.

7. A lack of interest in pleasurable or recreational activities, irritability, and emotional lability are also commonly present. It is important to note that the fatigue is not confined to a sensation of physical tiredness, but sufferers frequently complain also of mental fatigue, lack of concentration and often, some degree of short-term memory impairment.

8. As in multiple sclerosis and depression, fatigue is experienced as a subjective sensation and neurophysiological studies are usually normal in comparison to the objectively measurable fatigue of myasthenia gravis.

9. Muscle pain is variable in nature and severity and it may or may not be provoked by activity. There is significant clinical overlap in this and other respects between CFS and fibromyalgia syndrome (FMS).

10. Sleep disturbance is common, and may play a role in the development of symptoms.

11. Day-to-day fluctuations in the severity of symptoms are often described, and longer periods of remission with eventual relapse may also be a feature.

12. Diagnosis is made by a process of exclusion and in addition relies heavily on the person's self-report. Patients often complain that their disability goes unrecognised because there are no visible or objective signs of illness.

13. A combination of cognitive behavioural therapy and graduated exercise is at present the mainstay of treatment.

14. Prognosis varies widely between different centres, but in general is better where there is a definite history of an acute viral infection at the outset and where the illness occurs against an uncomplicated psychological background. The outlook is also better where there is early diagnosis and a management regime which encompasses physical, psychological and social elements.

15. The risk factors for poor prognosis include an older age, the onset of symptoms without any clear precipitating factor and a background of adverse psychological and social factors. Other adverse indicators include a management regime which either over-emphasises the importance of complete rest or which advocates a rapid return to pre-illness levels of physical activity. Individuals who carry the conviction that their fatigue is due to a single physical cause, to the exclusion of all others, will have a less favourable outcome.

AETIOLOGY

16. The cause is unknown. A large number of possible aetiological factors have been proposed, but their role is largely speculative. Nevertheless it is evident that a proportion of individuals, due to the nature of their personality and other factors may be predisposed to develop chronic fatigue, and they do so in response to certain stressors which may be psychological, social or infective.

17. Much attention has been focused on viral and immunological explanations. The role of infection is unclear. CFS can occur after certain bacterial or viral infections, particularly Epstein-Barr virus, but whether this is specific to the nature of the infection or merely a reaction to the infective episode as a generic stressor is unknown. There is no evidence that chronic infection perpetuates the symptoms.

18. Systematic assessment of many individuals with chronic fatigue reveals that they fulfil the diagnostic criteria for depressive and anxiety disorders. This, combined with behavioural and psychosocial factors may explain the symptoms of CFS in a significant proportion of people with the condition.

19. Some patients do show immunological abnormalities, but these are non-specific and inconsistent. The possibility that they may be linked to inactivity, depression or distress has not been excluded.

20. No consistent association with muscle abnormality has been found, and muscle function is generally normal. However inactivity, to which a proportion of these patients often subject themselves, does cause well-researched muscle and cardiovascular changes. Even brief periods of inactivity in healthy young males results in muscle wasting, changes in the cardiovascular response to effort and consequent intolerance of activity.

21. CFS is now generally regarded as a heterogeneous spectrum of disorders, multifactorial in origin and sharing a similar symptom complex. At one end of the scale are the (uncommon) cases where there is a very clear history of the sudden onset of fatigue after a proven infection, such as Epstein Barr virus; at the other, cases strongly associated with current or pre-existing psychiatric disorder.

CONCLUSION

22. Chronic fatigue syndrome is a condition characterised by unexplained fatigue in the absence of any objective signs of illness. It is also characterised by poor concentration, sleep disturbance and muscle pains. The aetiology is unknown but it is probable that the disorder is multifactorial and arises in vulnerable individuals in response to a variety of stressors, which may be infective, psychological or social.

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