

REVIEW ARTICLE

Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: Review of History, Clinical Features, and Controversies

Nigel Speight

Consultant Paediatrician, Durham, United Kingdom

Address for correspondence: Dr. Nigel Speight, "Southland" Gilesgate, Durham, DH1 1QN, United Kingdom.

E-mail: speight@doctors.org.uk

ABSTRACT

Myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) has been both a medical mystery and a source of controversy in Western medicine for over 50 years. This article reviews the major historical developments over this period, describes the clinical pattern and spectrum of severity, and then explores the current major controversies surrounding the subject.

Key words: Chronic fatigue and immune deficiency syndrome, chronic fatigue syndrome, myalgic encephalomyelitis

ظلت متلازمة الإرهاق المزمن لغزاً طبياً ومثاراً للخلاف طيلة الخمسين عاماً الماضية. المقال يستعرض التطورات التاريخية خلال هذه الفترة ويصف النمط السريري وحدة المرض ثم يناقش الآراء المختلفة حول المتلازمة.

HISTORY

The term myalgic encephalomyelitis (ME) was first coined by the Lancet in the context of an epidemic of viral encephalitis that occurred in north London in the mid 1950s. Many of the sufferers were left with a chronic disabling illness. The epidemic particularly affected medical and nursing staff at the Royal Free Hospital, to the extent that the illness was sometimes referred to as "Royal Free Disease." The clinical features of over 200 cases were well documented in classic papers by Dr Melvin Ramsay;^[1] a physician at the hospital. The clinical picture was found to be very similar to many sporadic cases. Many of the latter were found to follow viral infections and had previously been called "Post Viral Fatigue Syndrome."

Similar epidemics had been recognised in Los Angeles (1934) and Iceland (1947), and subsequently New Zealand and Lake Tahoe, Nevada.

Following Ramsay's work the chronic illness that he had described as ME was accepted as a basically organic illness for over a decade. In 1960, the WHO accepted it as a recognizable disease entity and placed it in the section on Neurology. One might have expected there to have been significant research efforts to find both a cause and a cure but these did not happen on the scale one would have expected. This was largely due to the controversy that was generated by a paper in 1970 by two psychiatrists, McEvedy and Beard.^[2] They conducted a notes review on the Royal Free patients. Without actually seeing any of the patients they then hypothesized that the whole epidemic and the subsequent disability suffered was based on no more than "mass hysteria." Their main argument for this was the absence of abnormal physical signs, the normality of many investigations and the fact that most of the patients were females! (At that time, the Royal Free Hospital discriminated positively in favour of female medical students so that 90% of them were females, together with 99% of the nurses). Despite vigorous rebuttals from Ramsay and his colleagues, this hypothesis retained some credence and contributed to much of the controversy that has dogged the subject to this day. Another factor is the reluctance of the various organ specialists who were to accept ME as part of their territory. With a few exceptions in the UK, neurologists, infectious disease specialists, and others declined to accept it as their responsibility.

Access this article online

Quick Response Code:



Website:

www.sjmms.net

DOI:

10.4103/1658-631X.112905

These factors allowed whole generations of doctors in the UK to choose to deny the existence of ME as an organic entity, with unfortunate consequences for the patients. Sociologists hypothesized that the syndrome was due to “the stress of living in the 20th century,” and in the same vein newspapers coined the term “Yuppie flu” and a “middle class” disease. Others labelled sufferers as malingerers and treated them unsympathetically. For some reason, the discipline of Psychiatry became heavily involved, and the virtual abdication of the other specialties left the field open to them.

Attempts were made to abolish the term ME, and to replace it with the term “Chronic Fatigue Syndrome”, and this has been vigorously opposed by the patient organisations. Currently, the terms are used synonymously in the UK. In the USA, the term “Chronic Fatigue and Immune Deficiency Syndrome” (CFIDS) has been used although transatlantic thinking is now more in favour of immune activation as part of the pathology.

In 2002, a Working Party set up by the Chief Medical Officer Sir Kenneth Calman^[3] concluded that ME was a “genuine” disease, and that “patients should not be dismissed as malingerers.” Despite this landmark, many patients in the UK still encounter disbelief and rejection by their medical attendants. Subsequently, the development of guidelines from the National Institute of Clinical Excellence (NICE) in 2006^[4] put such stress on the efficacy of Cognitive Behavioural Therapy (CBT) that the pendulum has swung somewhat back toward the psychiatric viewpoint (in my view most unfortunately).

Most recently an international group of physicians have published a document “the International Consensus Guidelines” which favour a biomedical/organic view of the illness.^[5]

Aetiology/pathology

It is safe to say that the aetiology of ME/CFS remains uncertain and until research establishes the answer, it is best to regard it as a clinical syndrome rather than a disease. Many organic theories exist, including persistent chronic infection, immune activation, and autoimmunity. Abnormalities on specialised brain scans (e.g., positron emission tomography) have been found but this remains a research procedure at present.

CLINICAL FEATURES

There is a wide spectrum of severity, from mild to moderate to severe to life threatening. All ages can be affected, with the most common onset in children in early adolescence,

and in adults of 20-30 year old age. Full recovery is definitely possible, and is more common in milder cases and in children. However, in some unfortunate adults the illness never remits completely. The illness is characteristically fluctuating and unpredictable, with a tendency to remission and relapse. Multiple symptoms are the norm, and severely affected cases may have more than 20 symptoms. Taken together, the symptoms form a clearly recognisable syndrome that “breeds true,” and therefore a positive clinical diagnosis can be made from taking a thorough history. This is preferable to regarding ME/CFS as a diagnosis of exclusion although obviously other important diseases need to be excluded. Hard physical signs are lacking and standard investigations are negative.

The main symptoms are as follows:

1. Low energy levels combined with undue fatigability: This worsening of fatigue following exertion can be regarded as the cardinal symptom of ME. It includes both physical and mental fatigue, and either physical or mental exertion can make the fatigue worse. Most importantly, exertion worsens all the other symptoms, so the term “post-exertional malaise” is appropriate. There may be a delayed reaction to a period of gradually increasing exertion and the recovery to baseline can be similarly delayed.
2. Headache: This is a prominent symptom in >90% of cases. It can be constant and generalised and in severe cases is extremely unpleasant. One of the alternative labels for ME in the past was “atypical migraine.”. Of course migraine can be superimposed on top of ME, so diagnosing it and treating it can be beneficial.
3. Myalgia: This is virtually a cardinal symptom. As stated above it is made worse by exertion. Sufferers describe having ME as like “running a marathon when suffering from influenza.” Severe cases can suffer “total body pain,” presumably due to myalgia of all muscle groups.
4. Abdominal Pain: This can be quite severe in the acute onset cases. Whether it is due to affection of the external abdominal musculature or intra-abdominal pathology is unclear.
5. Sleep Disturbance: In severe cases of sudden onset, there can be hypersomnolence, with sleep duration of 16-23 hours a day. During later stages of the illness, this can be replaced by sleep reversal, whereby the patient sleeps through until say 2 pm but cannot get to sleep again until after midnight.
6. Neurological symptoms:
 - a. Problems with memory, concentration, cognition, word recognition
 - b. Sensitivity to sound, light, smell, and touch
 - c. Paraesthesiae, muscle twitching

- d. Sudden attacks of severe generalized pain (“Sensory Storms”)
7. Autonomic symptoms: Problems with temperature control (feeling inappropriately hot or cold), and postural hypotension
8. Undue sensitivity to viral infections: Although this aspect is seldom mentioned in the literature, I have found this a classical symptom in mild or moderately affected children. A virus that sets a sibling back for 1 to 2 days may precipitate a relapse lasting weeks in an ME sufferer.

It will be seen that there is much more to this condition than simple fatigue, which is why patient groups so dislike the latter term. A further reason is that unless one insists on the cardinal symptom of post-exertional worsening then there is a danger that people with simple depression are diagnosed as having CFS/ME, and this issue may have clouded much of the research into the condition.

MANAGEMENT

There is currently no curative treatment available, and this has led to controversy about different possible approaches. Much research has been done on cognitive behavioural therapy (CBT) and graded exercise treatment (GET). Most studies have been on relatively mild cases and may have included cases of simple depression i.e., they were not ME as defined above. There is no evidence that these approaches to management are effective in moderate or severe cases, and indeed too forceful regimes of GET are potentially harmful. The patient groups all prefer an approach called “pacing” in which the patient lives within his limits and does not attempt to force the pace.

Two RCTs have shown evidence of efficacy for immunoglobulin^[6,7] and surprisingly these have been virtually ignored and no further research performed on this treatment.

Most recently, a RCT from Norway showed major sustained improvements in 10 out of 15 cases of moderate ME/CFS treated with the drug rituximab (a monoclonal antibody to B cells).^[8]

While accepting the current lack of curative therapy there is much practical support and advice that

doctors can give patients with ME/CFS, as with any other unpleasant chronic condition. Patients can be extraordinarily grateful just to have their symptoms validated and taken seriously. Symptomatic treatment for pain and sleep disturbance is appropriate, together with advice against over-exertion or attempts to “fight one’s way” out of the illness.

Possible relevance to middle eastern medical practice

Given the history in western medicine it is likely that any cases of ME/CFS in Saudi Arabia are at risk of not being diagnosed. It would be reasonable to assume that cases exist and deserve diagnosis and support along the above lines. Hopefully research along biomedical lines will uncover the cause or causes, and this will lead to the development of effective treatments.

REFERENCES

1. Royal Free Hospital Group. “An outbreak of Encephalomyelitis”. *Br Med J* 1957;11:895-904.
2. McEvedy CP, Beard AW. A controlled follow-up of cases involved in an epidemic of ‘benign myalgic encephalomyelitis’. *Br J Psychiatry* 1973;122:141-50.
3. Report of Working party of the Chief Medical Officer, 2002, HMSO. Available from: <http://www.scotland.gov.uk/Publications/2005/01/20577/50677>. [cited in 2013 Jan 2].
4. NICE Guidelines on CFS/ME, 2006. Available from: <http://www.nice.org.uk/nicemedia/live/11630/34192/34192.pdf>. [cited in 2013 Jan 2].
5. Carruthers BM, van de Sande MI, De Meirleir KL, Klimas NG, Broderick G, Mitchell T, *et al.* Myalgic encephalomyelitis: International Consensus Criteria. *J Intern Med* 2011;270:327-38.
6. Lloyd A, Hickie I, Wakefield D, Boughton C, Dwyer J. A double-blind, placebo-controlled trial of intravenous immunoglobulin therapy in patients with chronic fatigue syndrome. *Am J Med* 1990;89:561-8.
7. Rowe KS. Double-blind randomized controlled trial to assess the efficacy of intravenous gammaglobulin for the management of chronic fatigue syndrome in adolescents. *J Psychiatr Res* 1997;31:133-47.
8. Fluge Ø, Bruland O, Risa K, Storstein A, Kristoffersen EK, Sapkota D, *et al.* Benefit from B-lymphocyte depletion using the anti-CD20 antibody rituximab in chronic fatigue syndrome. A double-blind and placebo-controlled study. *PLoS One* 2011;6:e26358.

How to cite this article: Speight N. Myalgic encephalomyelitis/chronic fatigue syndrome: Review of history, clinical features, and controversies. *Saudi J Med Med Sci* 2013;1:11-3.

Source of Support: Nil, **Conflict of Interest:** None declared.