What is in a name?
Post-exertional “malaise”: the essence of ME (Myalgic Encephalomyelitis).
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Abstract

The accuracy and relevance of the diagnostic criteria for Myalgic Encephalomyelitis (ME) and/or chronic fatigue syndrome (CFS) are subject of debate. A recent study established severe impairment in CFS, both objectively and subjectively. Based upon their comparison of the outcomes of subjective and objective measures of symptom burden in those only meeting the CFS criteria and those also fulfilling the original criteria for ME or the 2003 Canadian criteria, the authors conclude that the diagnostic criteria are of little relevance to clinicians.

Despite its great relevance, this study fails to address a crucial issue: a subdivision of patients with post-exertional “malaise”: a prolonged increase of “fatigue”, cognitive deficits, pain etc. after minimal (physical or mental) exertion, labelled ME patients, and those without, labelled CFS patients. There is evidence that ME and CFS patients are distinct symptomatological and immunological patient subgroups. This distinction and an accurate diagnosis, based upon objective measures, have important implications for the effect of proposed effective therapies, e.g. graded exercise therapy.

Keywords
Myalgic Encephalomyelitis, chronic fatigue syndrome, assessment, post-exertional malaise, exercise

What is in a name?
Post-exertional “malaise”: the essence of ME (Myalgic Encephalomyelitis).

A recent study (1) provides a wealth of data on the level of impairment in Myalgic Encephalomyelitis (ME) / chronic fatigue syndrome (CFS), both assessed subjectively as objectively. Based upon the outcomes of subjective and objective measures in those only meeting the CFS criteria and those also fulfilling the criteria for ME, as defined by Ramsay et al., or the 2003 Canadian criteria, the authors conclude that ‘[I]t seems that clinicians should not bother too much about the diagnostic criteria, as long as either the 1994 CDC criteria [for CFS] or the Canadian criteria [for ME/CFS] are used’ (1).
While the study is indisputably of great relevance, it fails to address a crucial issue (2): the distinction between patients with post-exertional malaise, a prolonged increase of “fatigue”, cognitive deficits, pain etc. after minimal exertion, and patients without this phenomenon (3). As Meeus et al. (1) did with other symptoms, e.g. cognitive deficits, muscle power and recovery, the most crucial feature of ME (2), post-exertional malaise, should be assessed objectively, e.g. by a) by using repeated exercise tests (4,5); b) comparing scores on (specific) cognitive tests before and after a single exercise test (6,7); c) assessing cognitive test scores at various degrees of orthostasis (8,9); and d) comparing the scores of two cognitive tests with 4-24h rest in-between. Post-exertional “malaise”, e.g. as indicated by a decline in oxygen uptake at the anaerobic threshold and/or at peak exercise (5), is present or not. Subjective measures, e.g. visual analog scales scores (1), are inadequate, since healthy controls also report to experience post-exertional “malaise” (10).

Post-exertional “malaise” is reflected by distinctive immunological abnormalities (11). A recent study established unique immunological abnormalities in patients meeting the ICC criteria for ME (12), in which post-exertional “malaise” is obligatory, and patients only fulfilling the criteria for CFS, and highly significant correlations between the physical status and immune parameters in ICC patients (13). Another study (14) observed neuroinflammation in widespread brain areas in ME patients (12), which was associated with the severity of neuropsychological symptoms. Johnston et al. (15) found that patients meeting the ICC criteria for ME reported significantly lower scores for physical functioning, physical role, bodily pain, and social functioning than those that only meeting the CFS criteria. Since there is debate about the name (1), the diagnostic criteria, and the distinction between ME and CFS (2), the lack of a comparison of patients with post-exertional malaise (11), established objectively, with patients without this anomaly is a missed opportunity.

Since ‘the lack of power to compare those fulfilling the [original] ME criteria and those who did not prohibits drawing firm conclusions regarding these criteria’ (1) and the fact that there were no comparisons made between the clinical picture of patients with and without post-exertional malaise and other potentially essential criteria of ME (12), the conclusion that ‘clinicians should not bother too much about the diagnostic criteria’ (1) is very premature at the least. As noted, post-exertional “malaise” is obligatory for the diagnosis ME according to the recently published International Consensus Criteria for ME (12). Whether these criteria are too restrictive with regard to other essential symptoms (10) remains to be elucidated.

In conclusion, without investigating the differences in the clinical picture of (ME) patients with post-exertional “malaise”, and CFS patients without this symptom objectively and with sufficient statistical power, it is preliminary to conclude that diagnostic criteria have little relevance. It seems likely that exercise therapies will intensify the symptoms in patients with long-lasting post-exertional “malaise”: ME patients. Therefore an accurate diagnosis using objective measures is crucial (2).


