Correspondence

Letter to the Editor

Stratification using biological factors should be performed in more CFS studies

The careful work of Roberts and colleagues (2009), in examining possible predictors in the response of Chronic Fatigue Syndrome (CFS) patients to Cognitive Behavioural Therapy (CBT), is to be welcomed. The results are consistent with findings reported by Jason *et al.* (2007). In a study of four non-pharmacological interventions (including CBT), they found that those with abnormal cortisol at baseline did not improve over time, while those with normal baseline cortisol recorded positive outcomes on a number of immunological and self-report measures (cortisol levels were considered abnormal if they continued to rise, were flat, or were at abnormally low over time). More recently, Jason *et al.* (2008) reported that baseline measures including immune function, as well as activity levels, sleep status and past psychiatric diagnosis significantly differentiated those participants who demonstrated positive change over time from those who did not. Those with a dominance of the Type 2 over the Type 1 immune response, as indicated by the patterns of lymphocyte subset distributions among those with CFS, did not improve over time.

Roberts *et al.* (2009) state that 'no studies have yet looked at whether there might be any biological factors that predict preferential response to CBT in CFS'. However, in 1991 Butler *et al.* (1991) found that there was a trend for patients positive for VP1 (a specific enteroviral antigen) to do worse, although this did not reach conventional statistical significance (Fisher's exact test=0.08). Lane *et al.* (2003) found an association between abnormal lactate response to exercise, reflecting impaired muscle energy metabolism, and the presence of enterovirus sequences in muscle in a proportion of CFS patients, providing a possible reason for the disappointing results for some patients from CBT programmes which are focused on increasing activity.

It is generally acknowledged that CFS covers a heterogeneous population (Jason *et al.* 2005). More research is required to elucidate the factors underlying neuroendocrine dysregulation in CFS, and to ascertain what treatment modalities may improve outcomes in individuals with evidence of endocrine and immunological abnormalities.

Declaration of Interest

None.

References

Butler S, Chalder T, Ron M, Wessely S (1991). Cognitive behaviour therapy in chronic fatigue syndrome. *Journal of Neurology, Neurosurgery and Psychiatry* **54**, 153–158.

Jason LA, Corradi K, Torres-Harding S, Taylor RR, King C (2005). Chronic fatigue syndrome: the need for subtypes. *Neuropsychology Review* **15**, 29–58.

Jason LA, Torres-Harding S, Brown M, Sorenson M, Julie D, Corradi K, Maher K, Fletcher MA (2008). Predictors of change following participation in non-pharmacologic interventions for CFS. *Tropical Medicine and Health* **36**, 23–32.

Jason LA, Torres-Harding S, Maher K, Reynolds N, Brown M, Sorenson M, Donalek J, Corradi K, Fletcher MA, Lu T (2007). Baseline cortisol levels predict treatment outcomes in chronic fatigue syndrome. *Journal of Chronic Fatigue Syndrome* **14**, 39–59.

Lane RJ, Soteriou BA, Zhang H, Archard LC (2003). Enterovirus related metabolic myopathy: a postviral fatigue syndrome. *Journal of Neurology, Neurosurgery and Psychiatry* **74**, 1382–1386.

Roberts ADL, Charler M-L, Papadopoulos A, Wessely S, Chalder T, Cleare AJ (2009). Does hypocortisolism predict a poor response to cognitive behavioural therapy in chronic fatigue syndrome? *Psychological Medicine*. Published online: 17 July 2009. doi:10.1017/S0033291709990390.

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