

Plasma endothelin-1 levels in chronic fatigue syndrome

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Background: A previous study has shown increased endothelin-1 (ET-1) levels in patients with a diagnosis of fibromyalgia syndrome (FMS), concluding that this might contribute to some of the apparent vascular disturbances that characterise the syndrome. There is some overlap between the clinical presentation of FMS and other stress-associated disorders including chronic fatigue syndrome (CFS). The aim of present study was to investigate ET-1 levels in CFS.

Methods: The study included 47 patients who fulfilled the Centre for Disease Control 1994 criteria for CFS, as well as 34 age and sex-matched healthy controls. Supine blood pressure measurements were obtained after a standard rest period of 20 minutes, and ET-1 levels were measured by ELISA from a morning blood sample.

Results: No differences in plasma ET-1 levels were found between CFS patients and control subjects ($p=0.30$, unpaired t test). CFS patients had a mean ET-1 level of 0.49 pg/ml (range 0.11–1.02) and the control group had a mean ET-1 level of 0.44 pg/ml (range 0.16–0.92). In addition, no differences in blood pressure were found between CFS patients and control subjects.

Conclusions: Taken together, these experimental data challenge the concept that CFS and FMS are part of the same spectrum of illness. Normal ET-1 levels in CFS patients in conjunction with a previously-reported enhanced endothelial response to acetylcholine may predispose these patients to abnormal cardiovascular responses to orthostatic challenge.

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