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Relationship between musculoskeletal symptoms and blood markers of oxidative stress in patients with chronic fatigue syndrome.

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In 21 patients with chronic fatigue syndrome (CFS) versus 20 normal subjects, we investigated the oxidant/antioxidant balance and its correlation with muscle symptoms. Patients versus controls showed significantly: lower Lag Phase and Vitamin E (Vit E) concentrations in plasma and low-density lipoproteins (LDL), higher LDL thiobarbituric acid reactive substances (TBARS), higher fatigue and lower muscle pain thresholds to electrical stimulation. A significant direct linear correlation was found between fatigue and TBARS, thresholds and Lag Phase, thresholds and Vit E in plasma and LDL. A significant inverse linear correlation was found between fatigue and Lag Phase, fatigue and Vit E, thresholds and TBARS. Increased oxidative stress and decreased antioxidant defenses are related to the extent of symptomatology in CFS, suggesting that antioxidant supplementation might relieve muscle symptoms in the syndrome.

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