Total antioxidant capacity and the severity of the pain in patients with fibromyalgia.

Abstract
The purpose of the study was to determine the oxidative and antioxidative status of plasma in patients with fibromyalgia. Total antioxidant capacity (TAC) of plasma was significantly lower in patients with fibromyalgia (n = 20) than in healthy controls (n = 20) [1.5 (SD 0.3) and 1.9 (SD 0.3) mmol Trolox equiv./l, P = 0.001]. In contrast, the total peroxide level of plasma was significantly higher in patients than in healthy controls [37.4 (SD 6.7) and 33.0 (SD 2.7) micromol H2O2/l; P = 0.01]. The oxidative stress index (OSI) level was significantly higher in patients with fibromyalgia than in healthy controls [2.5 (SD 1.0) and 1.8 (SD 0.4); P = 0.007]. A significant negative correlation between visual analogue scale (VAS) and TAC level was determined (r = -0.79, P < 0.001). The present results indicate that patients with fibromyalgia are exposed to oxidative stress and this increased oxidative stress may play a role in the etiopathogenesis of the disease. Supplementation of antioxidant vitamins such as vitamins C and E to the therapy may be indicated.

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