

Abstract

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

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PURPOSE: The purpose of the study was to determine the oxidative and antioxidative status of plasma in patients with fibromyalgia.

RESULTS: 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).

CONCLUSION: 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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