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Abstract

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Serum ischemia-modified albumin and malondialdehyde levels and superoxide dismutase activity in patients with fibromyalgia.

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Abstract

BACKGROUND: The aim of the study was to determine serum ischemia modified albumin and malondialdehyde levels as markers of **oxidative stress** and serum superoxide dismutase activity as a marker of antioxidant defense and their associations with clinical outcomes in patients with **fibromyalgia**.

METHODS: 59 patients with **fibromyalgia** and 38 age and gender matched healthy controls were included in the study. The diagnosis of **fibromyalgia** was based on the classification criteria declared by American College of Rheumatology in 1990. All patients underwent the clinical assessment, consisting of evaluation for tender point count, visual analogue scale for pain, **fibromyalgia** impact questionnaire, multidimensional assessment of fatigue, Beck anxiety inventory, Beck depression inventory, and the health assessment questionnaire. Serum levels of ischemia modified albumin, malondialdehyde, and superoxide dismutase activities were measured using colorimetric methods.

RESULTS: Malondialdehyde levels of **fibromyalgia** patients were significantly higher than they were in the control group. Ischemia modified albumin levels in the **fibromyalgia** group were not significantly different from the control values. There was no significant correlation between ischemia modified albumin and malondialdehyde and clinical measures with the exception that malondialdehyde levels positively correlated with health assessment questionnaire scores.

CONCLUSIONS: We concluded that increased malondialdehyde levels in patients with **fibromyalgia** could be considered as a sign of increased **oxidative stress**. Ischemia modified albumin values were not in concordance with malondialdehyde levels and could not be considered as an **oxidative stress** marker in the follow-up of **fibromyalgia**. Further studies are needed to investigate IMA levels in newly diagnosed **fibromyalgia** patients.

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