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Serum prolidase enzyme activity and oxidative status in patients with fibromyalgia.

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Abstract

OBJECTIVE: This study was performed to investigate serum prolidase enzyme activity and **oxidative stress** in patients diagnosed with **fibromyalgia** (FM).

METHODS: The study population consisted of 40 patients with a previous diagnosis of FM and 30 healthy subjects. We measured serum **prolidase enzyme activity, total antioxidant status (TAS), total oxidative status (TOS), oxidative stress index (OSI), and paraoxonase-1 (PON-1) levels.**

RESULTS: On average, FM patients were diagnosed within 3.2 years of symptom onset, and patients had a mean of 14 tender points. There were no significant differences between patients and controls in age, body mass index, serum TAS, or PON-1 levels. However, **patients with FM demonstrated higher serum prolidase activity, TOS, and OSI than the control group.** Serum prolidase activity was positively correlated with serum TOS, OSI, and visual analog scale pain and fatigue scores. No correlation was found between serum prolidase activity and FM duration or the average number of tender points.

DISCUSSION: Our results demonstrate a previously unreported association between serum prolidase enzyme activity and FM. Increased prolidase activity may contribute to the pathogenesis of FM, and measuring serum prolidase enzyme activity may be a useful FM biomarker.

KEYWORDS: Fibromyalgia; Oxidative status; Prolidase

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