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Relationship between myeloperoxidase and metabolic syndrome at older patients

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Abstract

Background: Myeloperoxidase (MPO) is the most abundant protein in human neutrophils, being involved in the pathogenesis of various diseases, implicitly also in the metabolic syndrome (MetS). The MetS is a serious health condition characterized by a group of metabolic risk factors (central obesity, high blood pressure, high fasting glucose, and dyslipidemia) responsible for the onset and development of cardiovascular disease and diabetes. **Objective:** This study aimed to evaluate the levels of myeloperoxidase in two study groups of older patients (69.73 ± 7.14 years): a group of patients with metabolic syndrome compared to a group of control patients. **Methods:** MPO levels were determined in serum by immunoenzymatic assay and spectrophotometric detection at 450 nm. **Results:** Our results showed the serum MPO level was significantly increased in the group of patients with MetS compared with a control group (61.14%). **Conclusion:** In conclusion, serum MPO levels are elevated in individuals with MetS. This indicates that the MPO is an pro-inflammatory enzyme, which plays an important role in the initiation and progression of acute and chronic inflammatory diseases, suggesting a correlation between activation of MPO and metabolic disorders in MetS patients. **Key words:** myeloperoxidase, metabolic syndrome, older patients