

# Relationship between myeloperoxidase and metabolic syndrome at older patients

Gianina Ioana Constantin<sup>1</sup>, Simona Opreș<sup>1</sup>, Cătălina Monica Pena<sup>1</sup>,  
<sup>1</sup>“Ana Aslan” National Institute of Gerontology and Geriatrics, Bucharest, Romania

## OBJECTIVES

The study has proposed to evaluate the levels of serum myeloperoxidase in a group of older patients with metabolic syndrome compared to a group of control subjects.

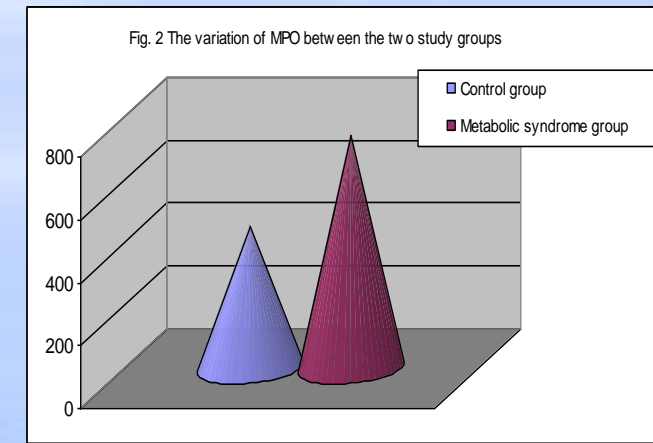
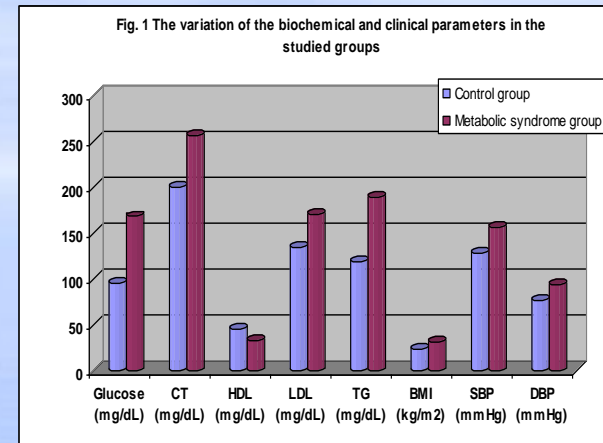
## MATERIALS AND METHODS

Studies were carried out in 79 patients (men and women) aged  $69.73 \pm 7.14$  years, divided in two study groups: a control group (n = 41) and a metabolic syndrome group (n = 38).

Serum determinations of biochemical parameters were performed by laboratory tests using standardized methods. MPO levels were determined in serum by immunoenzymatic assay and spectrophotometric detection at 450 nm.

## RESULTS

- significant differences between the two study groups for the determined clinical and biochemical parameters (Fig.1).
- high levels in serum MPO level at patients with metabolic syndrome compared to control group ( $p < 0.001$ ) (Fig.2).



## DISCUSSIONS

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.

## CONCLUSIONS

Our results suggest that MPO is a 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.