

CORRELATION BETWEEN OXIDIZED LOW DENSITY LIPOPROTEINS AND METABOLIC SYNDROME IN OLDER PATIENTS

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INTRODUCTION

Metabolic syndrome is a complex disorder that combines several risk factors responsible for the onset and development of type 2 diabetes and cardiovascular disease. People with metabolic syndrome have a higher risk of developing diabetes mellitus.

OBJECTIVES

In the present study, we determined the low density lipoproteins susceptibility to lipid peroxidation (LDL ox) in older patients with metabolic syndrome associated with type 2 diabetes mellitus compared to a control group.

MATERIALS AND METHODS

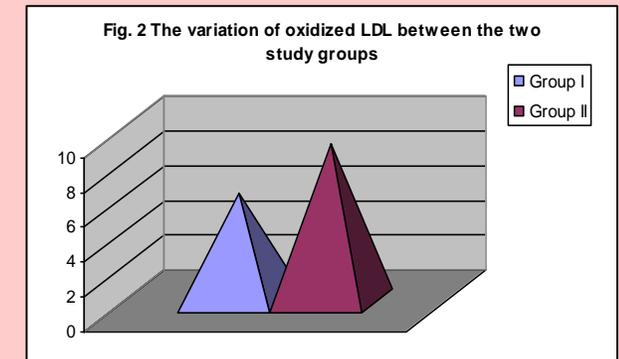
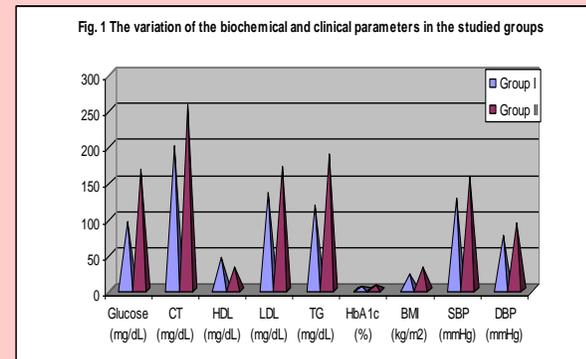
Studies were carried out in 77 patients aged 71 ± 7 years divided in two study groups: a control group (group I) (n = 32) and a with metabolic syndrome associated with type 2 diabetes mellitus (group II) (n = 35).

The LDL susceptibility to in vitro induced lipid peroxidation was evaluated from human serum following its incubation with a FeSO₄/ascorbic acid prooxidant system

Results are expressed in: - mmoles MDA/dL serum

RESULTS

- significant differences between the two study groups for the determined clinical and biochemical parameters (Fig.1).
- high levels for the susceptibility of LDL to in vitro oxidation in group II compared to group I (9.07 vs 6.19 mmoles MDA/dL serum ($p < 0.01$)) (Fig.2).



CONCLUSIONS

Some studies evaluated that oxidative stress is associated with metabolic syndrome, type 2 diabetes mellitus and its components. Thus, oxidized LDL, being a marker of oxidative stress, plays an important role in initiating and increasing the risk of metabolic syndrome and type 2 diabetes, especially in the elderly population frequently affected by the multitude of cardiovascular and metabolic risk factors that constitute the syndrome.