

# RELATIONSHIP BETWEEN CIRCULATING IMMUNE COMPLEXES AND DIABETES MELLITUS IN CARDIOVASCULAR DISEASE AT OLDER PATIENTS

Gianina Ioana Constantin<sup>1</sup>, Cătălina Monica Pena<sup>1</sup>, Simona Opriș<sup>1</sup>

<sup>1</sup>*“Ana Aslan” National Institute of Gerontology and Geriatrics, Bucharest, Romania*

## INTRODUCTION

Modifications in immunological function may play a role in both the pathogenesis of some types of diabetes as well as its associated complications.

## OBJECTIVES

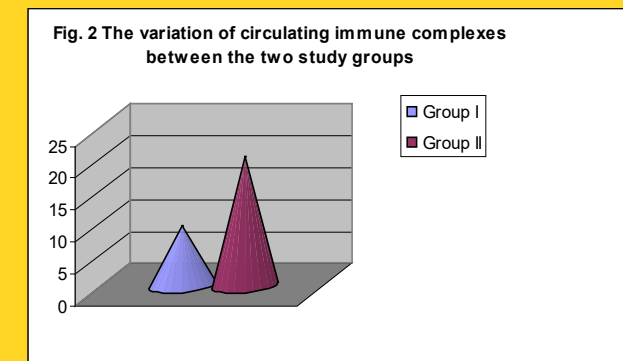
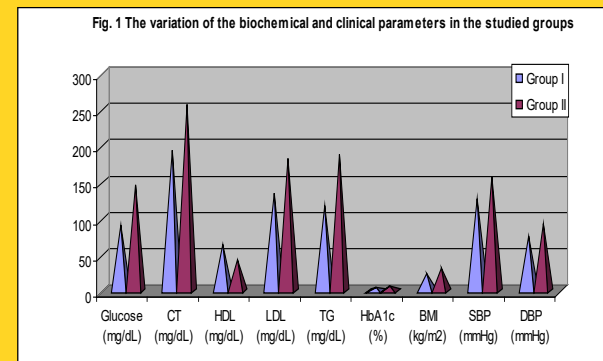
In the present study, we determined oxidatively modified lipoproteins of the circulating immune complexes in older patients with cardiovascular disease compared to a cardiovascular disease and type 2 diabetes group.

## MATERIALS AND METHODS

Studies were carried out in 76 patients aged  $71 \pm 5$  years divided in two study groups: a group I with cardiovascular disease (n = 28) and group II with cardiovascular disease and type 2 diabetes mellitus (n = 48). The LDL content of circulating immune complexes was evaluated from human serum by measuring the total cholesterol concentration in polyethylene glycol (PEG 8000) precipitate (immune cholesterol).  
Results are expressed in: -  $\mu\text{g}$  cholesterol /mL serum

## RESULTS

- significant differences between the two study groups for the determined clinical and biochemical parameters (Fig.1).
- high levels for the cholesterol of circulating immune complexes in group II compared to group I (20.06 vs 9.16  $\mu\text{g}$  cholesterol/mL serum ( $p < 0.001$ )) (Fig.2).



## CONCLUSIONS

Increased oxidative stress in diabetes may serve to reduce levels of endogenous antioxidants in LDL and thus contribute to an increased susceptibility to oxidation.

Thus, circulating immune complexes containing modified LDL are highly proinflammatory contributing to the progression of CVD in type 2 diabetes, indicating that their quantification has a higher predictive value than the traditional risk markers that are currently used.