

# THE IMPACT OF OBESITY ON SERUM ATHEROGENICITY AND CARDIOVASCULAR RISK

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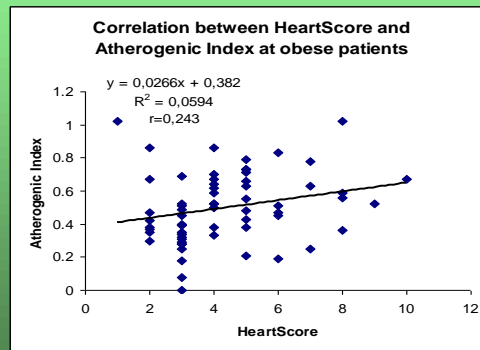
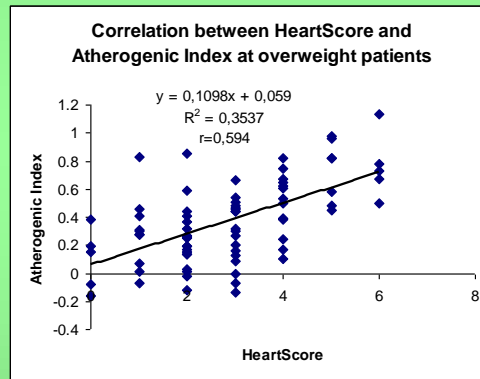
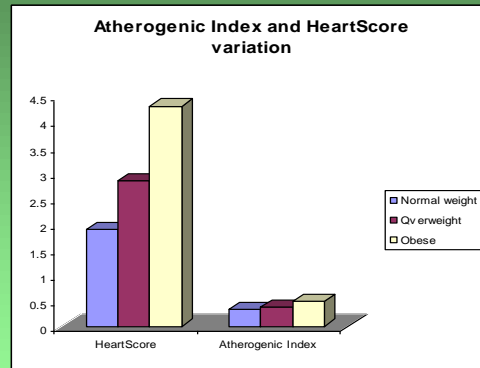
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## OBJECTIVES

Our research aimed to investigate the impact of obesity on atherogenic index (AI) and HeartScore, at patients with coronary artery disease.

## METHODS

Observational cross-sectional study included 168 elderly patients (over 60 years) with coronary artery disease divided: Group 1-normal weight patients - as control group; Group 2-overweight patients; Group 3-obese patients. Atherogenic index was computed as  $\log(TG/HDL)$  and HeartScore from a cardiovascular disease risk assessment system.



## RESULTS

- Higher HeartScore in obese and also overweight vs. control patients ( $p < 0.0001$ );
- Increase AI obese vs. control patients ( $p < 0.005$ );
- Increase AI obese vs. overweight patients ( $p < 0.001$ );
- HeartScore correlates with BMI at control patients ( $r = 0.54$ ,  $p < 0.001$ );
- HeartScore correlates with BMI at overweight patients ( $r = 0.24$ ,  $p < 0.01$ );
- AI correlates with BMI at overweight patients ( $r = 0.34$ ,  $p < 0.0001$ );
- HeartScore correlates with AI at overweight patients ( $r = 0.59$ ,  $p < 0.0001$ );
- HeartScore correlates with AI at obese patients ( $r = 0.24$ ,  $p < 0.05$ ).

## DISCUSSIONS

These positive correlations reaffirmed the role of lipids in the pathophysiology of obesity as well as increasing accumulation of lipids with aging. Our study confirms that obesity affects serum lipoprotein profile- i.e. lipid ratio AI and that, in presence of obesity, it leads to higher cardiovascular risk.

## CONCLUSIONS

AI could be useful in diagnosis and prognosis of cardiovascular disease and could be helpful in the management of clinical treatments. AI and HeartScore together may contribute to preventing future major cardiac events.