I Congresso Nacional

28 a 30
de outubro
2016
Bragança
Portugal

Ciências Biomédicas Laboratoriais

I Encontro Nacional
de Estudantes

Livro de Resumos

Com o alto Patrocínio de Sua Excelência O Presidente da República

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Association between bilirubin and lipid profile in Portuguese elderly individuals

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Resumo

Several studies showed that mildly elevated bilirubin blood concentration is associated to coronary artery disease (CAD). The most commonly mechanism contributing to CAD prevention is the bilirubin antioxidant effect, protecting several macromolecules from oxidation. Recently, other studies have found that higher serum bilirubin levels (BL) are associated with beneficial effects improving lipid profile and that might contribute to decrease cholesterol and triacylglycerol. In the meantime, a consistently negative association between BL and body mass index (BMI) was observed.

The aim of this study was evaluate the cardiovascular risk protection by bilirubin analyzing the association between bilirubin levels and lipid profile in elderly. Clinical data, anthropometric measurements (BMI, Visceral Fat and Body Fat Percentage), lipid profile (total cholesterol-TC; triglycerides-TG; high-density lipoprotein cholesterol-HDL-c; low-density lipoprotein cholesterol-LDL-c; apoliprotein A-Apo-A; apoliprotein B-Apo-B) were evaluated in 70 institutionalized elderly, 43 females (mean age= 88.2±5.5 years old) and 27 males (mean age= 87.7±7.7 years old). Anthropometric measurements were obtained by bioimpedance, using specific scale (Tanita BC Model: 545). The lipid parameters were performed in autoanalyzer (Cobas Mira S, Roche, Switzerland) using available commercial kits.

Correlation analysis revealed positive associations between BL and the HDL-c in males (total bilirubin: $r=0.51$; $p<0.007$) and no association in females ($r=0.40$; $p<0.50$). Positive associations were also found to TB levels and Apo-A (males: $r=0.40$; $p<0.50$ and females: $r=0.270$; $p<0.013$).

Interestingly, the conjugated bilirubin present a stronger positive association with this two parameters (male: $r=0.64$; $p<0.000$; female: $r=0.29$; $p<0.052$).

No associations were found between bilirubin and triglycerides; total cholesterol and anthropometric measurements.

Low levels of HDL-c are a risk factor for coronary heart disease. A similar association has been shown for Apo-A1.

These results suggest higher bilirubin is associated with higher cardioprotective agents, which indicates that the determination of total bilirubin should be included for more accurate cardiovascular disease risk assessment.

Palavras-chave:

Bilirubin, Lipid Profile, Cardioprotective.