DECISION MAKING, COGNITIVE FUNCTIONING AND METABOLIC RISK FACTORS IN CORONARY HEART DISEASE AND DEPRESSION

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Background: The contribution of cardiovascular risk factors to cognitive dysfunction is an active area of research, but relatively few studies have addressed specifically if they are related to decision-making abilities, an important determining factor in daily functioning.

Aim: To determine the relationship between decision-making (DM), general cognitive functioning, emotional and cardiovascular risk factors.

Methods: Outpatients with coronary artery disease (n=30), or with depression (n=17) and comparable healthy individuals (n=7) were evaluated with the IOWA gambling and Game of Dice tasks, Montreal Cognitive Assessment (MOCA), Beck Depression Inventory, a quality of life survey (SF-36), weight, height, body mass index, waist perimeter, arterial blood pressure, total cholesterol, LDL cholesterol, HDL cholesterol, triglycerides and glucose.

Results: Among coronary patients, positive correlations were observed between LDL level, total cholesterol and depressive symptoms (r=0.507 p< 0.008; r=0.515 p< 0.004). Beck Depression score was inversely related to perceived general health (r=-0.491; p=0.008) and social functioning (r=-0.413; p=0.029) in this patient group. MOCA score in patients with depression was related to performance in the Game of Dice task (r=0.702; p< 0.001) whereas IOWA was inversely related to fasting glycemia (r=-0.758 p< 0.011). Overall, performance in both DM tests was better in coronary than in depression patients (p=0.022).

Conclusions: General cognitive performance, metabolic factors, depressive symptoms, and DM seem to have a complex relationship among persons with coronary heart disease or depression. Depressive symptoms influence self-reported quality of life in them, rather than cognitive and DM abilities.