Campomanesia xanthocarpa REVERSE PARAMETERS ALTERED BY FRUCTOSE-INDUCED METABOLIC SYNDROME IN RATS

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INTRODUCTION: Cardiovascular diseases have been quite associated with metabolic disorders, and the metabolic syndrome (MS) is the most common. MS is characterized by grouping of cardiovascular risk factors such as hypertension, insulin resistance, hyperinsulinemia, glucose intolerance / type 2 diabetes, central obesity and dyslipidemia. Campomanesia xanthocarpa has been empirically used for its potential to reduce cholesterol triglycerides levels in blood, what was confirmed in a study with dyslipidemic patients. The objective was to evaluate the pharmacological potential of C. xanthocarpa aqueous extract in rats with metabolic syndrome induced by fructose.

MATERIAL AND METHODS: Male Wistar rats were used, 3 months, treated for 30 days, divided into 4 groups (n = 8 each), which were Control, Extract (gavage daily, 500 mg/kg), Fructose (30% in drinking water) and Extract + Fructose. The consumption of water and food, as well as the weight of the animals was monitored daily, systolic blood pressure (SBP) was measured by plethysmography and after treatment the animals were sacrificed and the blood was collected for biochemical analysis of total and HDL cholesterol, triglycerides, glucose, AST and ALT, urea and creatinine, using commercial kits. Data are expressed as mean±SEM and analyzed by Student t test, p< 0.05 was considered significant.

RESULTS: Treatment with extract of C. xanthocarpa showed similar parameter to control, since the animals that ingested fructose had increased of SBP (140.64 mmHg), glucose (275.3 mg/dL) and triglycerides (220.3 mg/dL), and decreased HDL cholesterol (27.3 mg/dL) and urea (46.4 mg/dL). Already concomitant treatment of extract and fructose showed normal values suchlike the control. The other study parameters were not altered by the treatments.

CONCLUSION: The aqueous extract of C. xanthocarpa was able to reverse the SBP and biochemical parameters altered by SM induced by fructose, so it can become a natural alternative for individuals with MS.

Palavras-chave: Campomanesia xanthocarpa; metabolic syndrome; fructose.