Study of the Antioxidant and Antidiabetic Activity of Coconut Water From Green Dwarf Variety (*Cocos nucifera* L.)

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The imbalance between excess of free radicals and deficiency in the body’s antioxidant defense induces biochemical alterations in macromolecules and may be an etiological factor for several chronic human diseases such as diabetes mellitus. This study aimed to evaluate the antioxidant and antidiabetic activity of coconut water and caffeic acid in alloxan induced diabetic rats during 15 days. The blood glucose level, protein, cholesterol and urea in plasma were measured; TBARS, NO and GSH were measured in brain and in plasma. The treatment showed significant reduction (p<0.05) of the blood glucose in group that received coconut water (180.7±4.6mg/dL) and caffeic acid (261.5±60.8mg/dL) to levels comparable to that of the group diabetic (407.8±171.9mg/dL). Coconut water and caffeic acid resulted in a significant increased in GSH levels in plasma (p<0.05) as compared with group non-diabetic (84.8±13.5, 103.7±31.4 and 45.7±8.7µmol/mg, respectively). The urea concentration in plasma (p<0.05) was higher in group diabetic (226.1±14.9mg/dL) compared with group coconut water (99.7±9.4mg/dL) and caffeic acid (96.7±3.7mg/dL). In brain there wasn’t statistically significant difference among the group control, diabetic and pretreated with coconut water and caffeic acid in GSH, protein and NO levels. The results suggest that use of coconut water and caffeic acid maintained of blood glucose levels, increases the reserves of endogenous of GSH and can reduces the risk of diabetic complications.

Word Keys: Coconut water, antioxidant activity, Diabetes
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