Effects of jabuticaba skin (*Myrciaria cauliflora*) on lipid metabolism in rats with high-fat diet-induced NAFLD

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Introduction: NAFLD is the most common cause of chronic liver disease, regarded as a hepatic manifestation of metabolic syndrome. It has been shown that the amount and type of fatty acids in the diet can modulate cell signaling pathways and thus alter metabolism. Currently, there is a growing demand for functional foods that may be beneficial in preventing its effects. The jabuticaba (*Myrciaria cauliflora*) is a native fruit of Brazil and your skin contains bioactive compounds, such as fiber and phenolic compounds with the potential to promote health benefits. **Objective:** To evaluate the effects of flour jabuticaba skin (*Myrciaria cauliflora*) on lipid metabolism in rats fed with a high-fat diet. **Materials and Methods:** 40 rats were divided into five experimental groups and treated by 8 weeks: C and CJ (standard diet), HF and HFJ (32% lard and 1% cholesterol) and HFR (high-fat diet plus 20 mg/kg/day resveratrol via gavage). The CJ and HFJ groups were treated with 4% flour jabuticaba skin. Serum total cholesterol, HDL cholesterol, non-HDL fraction and triacylglycerols levels, AST and ALT activity were quantified using commercial kit. Histopathological analysis was performed in liver sections stained with H&E. The data were analyzed by one-way analysis of variance (ANOVA) followed by the Tukey post hoc test considering significant when $p<0.05$. **Results and Discussion:** The results demonstrated that high-fat diet was efficient in cause hepatic steatosis, significantly reduced levels of HDL cholesterol, increased levels of total cholesterol, non-HDL fraction and transaminases activity. The supplementation with 4% flour jabuticaba skin reduced levels of total cholesterol and AST activity in serum. Moreover, the rats that received jabuticaba and resveratrol showed decreased macrovesicular steatosis in liver. **Conclusion:** Taken together, these results demonstrate that the treatment with jabuticaba skin improved lipid profile in serum and attenuated hepatic steatosis, as well as resveratrol.

Keywors: NAFLD, jabuticaba, resveratrol, lipid metabolism.
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