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EFFECT OF VIRGIN COCONUT OIL ON LIPID PROFILE AND ANKLE BRACHIAL INDEX OF PATIENTS WITH TYPE 2 DIABETES MELLITUS

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ABSTRACT

Introduction: Virgin coconut oil (VCO) is promoted as a dietary supplement for people with various illnesses. However, there are only few formal scientific studies validated its benefit for health. This study aims to determine the effect of the VCO on lipid profile and ankle brachial index (ABI) of patients with Type 2 Diabetes Mellitus (T2DM).

Methods: This was a quasi-experiment study with pre and post-test design with controlled group. 34 subjects were consecutively sampled, 17 is allocated into intervention group and 17 into controlled group. ABI was evaluated on the first visit and baseline laboratories data for lipid profile were taken including total cholesterol, triglyceride, LDL and HDL. Each subject in the intervention group took 15 ml VCO before meals daily. After 15 days, blood sample for lipid profile examination were taken and ABI were measured. Adverse effect were reported during the trial. The data were analyzed using paired T-test with significance level α ≤ 0.05.

Results: This study found a significant decrease on LDL which ranged from 16.88 mg/dl – 59.42 mg/dl (p = 0.002) and increase of HDL which ranged from 1.03 mg/dl – 17.76 mg/dl (p = 0.031). However, this study found that VCO did not have effect on the decrease of total cholesterol (p = 0.127), triglyceride (p = 0.880) and the increase of ABI (p = 0.653).

Conclusion: This study concludes that the consumption of VCO could increase HDL and decrease LDL, but it does not give an effect on the decrease of total cholesterol and triglyceride, and the increase of ABI for T2DM patients.

Keywords: VCO, Lipid Profile, ABI, T2DM