

Antistress and antioxidant effects of virgin coconut oil in vivo

ABSTRACT

Virgin coconut oil (VCO) has been consumed worldwide for various health-related reasons and some of its benefits have been scientifically evaluated. Medium-chain fatty acids were found to be a potential antidepressant functional food; however, this effect had not been evaluated in VCO, which is rich in polyphenols and medium-chain fatty acids. The aim of this study was to evaluate the antistress and antioxidant effects of VCO in vivo, using mice with stress-induced injury. The antistress effect of VCO (administered per os, at a dose of 10 ml/kg body weight) was evaluated using the forced swim test and chronic cold restraint stress models. VCO was able to reduce immobility time and restore oxidative stress in mice post-swim test. Furthermore, mice treated with VCO were found to exhibit higher levels of brain antioxidants, lower levels of brain 5-hydroxytryptamine and reduced weight of the adrenal glands. Consequently, the serum cholesterol, triglyceride, glucose and corticosterone levels were also lower in VCO-treated mice. These results suggest the potential value of VCO as an antistress functional oil.

Keyword: Antioxidant; Depression; Medium-chain fatty acids