Abstract

Cordyceps (Cordyceps militaris) exhibits many biological activities including antioxidant, inhibition of inflammation, cancer prevention, hypoglycemic, and antiaging properties, etc. However, a majority of studies involving C. militaris have focused only on in vitro and animal models, and there is a lack of direct translation and application of study results to clinical practice (e.g., health benefits). In this study, we investigated the regulatory effects of C. militaris micron powder (3 doses) on the human immune system. The study results showed that administration of C. militaris at various dosages reduced the activity of cytokines such as eotaxin, fibroblast growth factor-2, GRO, and monocyte chemoattractant protein-1. In addition, there was a significant decrease in the activity of various cytokines, including GRO, sCD40L, and tumor necrosis factor-α, and a significant downregulation of interleukin-12(p70), interferon-γ inducible protein 10, and macrophage inflammatory protein-1β activities, indicating that C. militaris at all three dosages downregulated the activity of cytokines, especially inflammatory cytokines and chemokines. Different dosages of C. militaris produced different changes in cytokines.