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# Inhibitory Effect of Korea Red Ginseng (JungKwanJang) in Experimental Allergic Mice

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The inhibitory effects of Korea red ginseng (steamed root of *Panax ginseng* C.A. Meyer, family Araliaceae) (KRG), and its saponin (KRGS) and polysaccharide fractions (KRGP) in experimental allergic mice were measured. Orally administered KRG and KRGS potently inhibited PCA reaction induced by IgE-antigen complex, but KRGP did not inhibit it. The KRG and KRGS also the most potently inhibited β-hexosaminidase release from RBL-2H3 cells induced by IgE-antigen complex. KRGS suppressed ear swelling in oxazolone-induced mouse contact dermatitis and scratching behaviors induced by compound 48/80. Its constituents ginsenosides Rg3 and Rh2 also potently suppressed mouse ear swelling and scratching behaviors. However, KRGP did not suppressed mouse ear swelling and scratching behaviors. These ginsenosides Rg3 and Rh2 also significantly reduced mRNA expression levels of cyclooxygenase (COX)-2, IL-1β, TNF-α and IFN-γ increased in oxazolone-applied mouse ears. The ginsenoside Rh2 more potently inhibited COX-2 and cytokine expressions on liphopolysaccharide- stimulated RAW264.7 cells. Based on these findings, KRG may improve allergic reactions, such as atopic dermatitis and rhinitis, and, of constituents contained in KRG, saponin fraction, particularly ginsenosides Rg3 and Rh2, is suggested to improve allergic diseases by the expression regulation of cytokines.

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