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Sporodela polyrrhiza inhibits expression of proinflammatory cytokines in microglial cells

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Sporodela polyrrhiza has efficacy of clear away heat (熱) and toxic material (毒) (清熱解毒), and dispel pathogenic factors from the exterior of the body to make a sweat (發汗解表), also promote subsidence of swelling to induce diuresis (利水消腫). *Sporodela polyrrhiza* has been used as a traditional anti-inflammatory herbs in traditional Korean medicine. Since these effects are regarded totally as anti-inflammatory functions, this herb may affect production of nitric oxide (NO), one of the key parameters of inflammation in microglial cells. This study was investigated the effects of the *Sporodela polyrrhiza* extract on NO production and proinflammatory cytokines from LPS-stimulated microglial cells. In order to investigate anti-inflammatory effects of *Sporodela polyrrhiza* on the LPS-induced BV2 microglia cells. We studied the effect of *Sporodela polyrrhiza* on NO production. *Sporodela polyrrhiza* inhibited the secretion of NO and expression of iNOS mRNA in BV2 microglia, without affecting cell viability. And *Sporodela polyrrhiza* also reduced production of PGE₂ and expression of COX-2 mRNA. Proinflammatory cytokines were inhibited by *Sporodela polyrrhiza*.

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Sungmagalkuntang(升麻葛根湯) inhibits histamine release and IL-4 mRNA expression on the RBL-2H3

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Objectives: We investigated the effect of Sungmagalkuntang(SGT) on the allergy.

Methods: We conformed compound 48/80-induced active systemic anaphylactic shock, anti-dinitrophenyl IgE-mediated passive cutaneous anaphylaxis and ovalbumin-induced anaphylactic shock. Also observed IL-4 and GM-CSF mRNA expression in ovalbumin-induced allergic lung tissue and RBL-2H3. Histamine release is measured in RBL-2H3.

Results: SGT inhibited active systemic anaphylactic shock, passive cutaneous anaphylaxis and ovalbumin-induced anaphylactic shock by oral administration. We observed that SGT was concentration-dependently reduced IL-4 and GM-CSF mRNA expression in ovalbumin-induced allergic lung tissue and RBL-2H3 by SGT. In addition, SGT reduced histamine release in RBL-2H3.

Conclusions: These results indicate that SGT has anti-histamic effect and controls IL-4 and GM-CSF mRNA expression on allergy.