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Regulatory effect of β-sitosterolonatopic dermatitis-like skin lesions

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A-sitosterol (BS) is one of the most common forms of phytosterols and has anti-cancer, anti-oxidant, anti-bacterial, and anti-inflammatory effects. However, the effect of BS on atopic dermatitis (AD) has not been elucidated. In the present study, weinvestigated whether BS would be an effective treatment against AD. We treated BS on 2,4-dinitrofluorobenzene (DNFB)-inducedAD-like skin lesions in NC/Nga mice and anti-CD3/anti-CD28-stimulated splenocytes. BS decreased the clinical symptoms in DNFB-treated NC/Nga mice. Infiltration of eosinophils, mast cells, CD4+ T cells, and macrophages and number of scratching were clearly decreased in the BS-treated group compared with the DNFB-treated group. BS significantlydecreased the protein and mRNA levels of inflammation-related genes in the AD skin lesions. BS significantly decreased the levels ofinterleukin-4,IgE, and histamine in the serum of DNFB-treated NC/Nga mice. The activation of mast cell-derived caspase-1was reduced by treatment with BS in the AD skin lesions. BS also significantly decreased the production of inflammatory cytokine from the stimulated splenocytes. These results provide additional evidence thatBS may be considered an effective therapeutic drug for the treatment of AD.

Biography

Hyun-JaJeong has completed Postdoctoral studies with a major in Molecular Biology from Chonbuk National University. She has published more than 200 papers in reputed journals and serving as a Deputy Editor of international journal, TANG (*Humanitas Medicine*).

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