

Radix Saposhnikovia Suppresses Allergic Contact Dermatitis in Mice by Regulating DCs Activated Th1-Type Cells

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Abstract : Allergic contact dermatitis (ACD) is a commonly clinical type IV allergic skin disease, with the pathological features of infiltration by mononuclear cells and tissue necrosis. Traditional Chinese medicine Radix Saposhnikovia (RS) is traditionally employed to treat exogenous evils, rubella, itching, rheumatism and tetanus. Meanwhile, it is an important component of the commonly used anti-allergy compound. It's now widely used as an immuno-modulating agent in mixed herbal decoctions to treat inflammation. However, its mechanism of anti-allergy remains unknown. RS was found to reduce ear thickness, as well as the infiltration of eosinophils. The proliferation of T lymphocytes was inhibited significantly by RS, markedly decreased IFN- γ levels in the supernatant of cells cultured and serum were detected with the treatment of RS. RS significantly decreased the amount of DCs in the mouse lymph nodes, and inhibited the expression of CD4 0 and CD86. Meanwhile, T-bet mRNA expression was down remarkably regulated by RS. These results indicate that RS cures Th1-induced allergic skin inflammation by regulating Th1/Th2 balance with decreasing Th1 differentiation, which might be associated with DCs.

Keywords : allergic contact dermatitis, Radix saposhnikovia, dendritic cells, T-bet, GATA-3, CD4+ CD25+ Foxp3+ treg cells

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