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Spatholobus Suberectus Column Extract Suppresses Dendritic cell Maturation and has Therapeutic Potential for Psoriasis

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Spatholobus suberectus column extract (SSCE) is a natural product from the plant *Spatholobus suberectus* Dunn, a kind of traditional Chinese medicine, which is widely used to invigorate the circulation of blood and replenish blood, has antitumor and anticoagulant properties, and improves hematopoiesis. This study evaluated the clinical effects of *Spatholobus suberectus* column extract (SSCE) in an imiquimod (IMQ)-induced psoriasis mouse model and investigated its role in regulating the differentiation and maturation of dendritic cells (DCs). BALB/c mice were used to establish the animal model for psoriasis-like skin lesion; SSCE at 12 mg/kg (high), 6 mg/kg (medium), 3 mg/kg (low), respectively, were intragastrically administered. Psoriasis area and severity index (PASI) was used to evaluate the skin lesions. Histological changes, the thickness of epidermis, and the quantity of CD11c+ DCs in skin lesion and spleens were measured. In vitro experiments, bone marrow cells of mice were obtained, and CD11c+ cells were isolated. DCs with a mature state in differentiation and function were identified by flow cytometry. The influence of DCs on proliferation of allogenic lymphocytes was analyzed with CCK-8. SSCE treatment alleviated psoriasis-like skin with the decreased Psoriasis Area and Severity Index (PASI) score and obviously reduced the vertical thickness of epidermis. Besides, SSCE treatment decreased the quantity of CD11c+ DCs in skin lesions and spleens. Furthermore, SSCE reduced R848-induced murine bone marrow–derived DC maturation, characterized by reduced expression of CD80/86, and inhibited the alloproliferation of T cells. SSCE inhibited DC function and had potential as a therapeutic agent for psoriasis.

Biography:

Wang Yan was born in 1982, China. She received D.S.A from Beijing University of Traditional Chinese Medicine in 2017. Now she is a research associate in Beijing Hospital of Traditional Chinese Medicine and Beijing Institute of Traditional Chinese Medicine. She is also a research fellow in Beijing Key Laboratory of Clinic and Basic Research with Traditional Chinese Medicine on Psoriasis. Her main research interest is TCM on autoimmune dermatosis.