Ginsenoside compound K ameliorates the severity of imiquimod-induced psoriatic pathology by inhibiting REG3A/Reglity in mice

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Psoriasis is a chronic inflammatory skin disease. Ginsenoside compound K (CK) is an active ingredient of ginseng which is reported to exert beneficial effects on inflammation. However, the biological role of ginsenoside CK in psoriasis is still unclear. Our aim was to investigate the effect of ginsenoside CK on the proliferation of keratinocytes and the expression of human regenerating slat-derived protein 3A (REG3A) and its mouse homolog Reglity as well as the inhibitory effect of ginsenoside CK on IMQ-induced psoriasis-like mice. The effect of ginsenoside CK on the proliferation of HaCaT cells and NHEK cells was measured by MTT. The apoptosis of HaCaT cells induced by ginsenoside CK was analyzed by flow cytometry. The inhibitory effect of ginsenoside CK on RAG1A induced by IL-1β in HaCaT cells was identified by WB and qRT-PCR. Psoriatic models in mice were induced by imiquimod cream. The thickness of mouse ear and skin epidermis was measured based on hematoxylin and eosin (HE) of tissues. The expression of Reglity protein in lesional skin of psoriatic mice was measured based on hematoxylin and eosin (HE) of tissues. The expression of REG3A protein stimulated by IL-1β in NHEK cells was inhibited by ginsenoside CK in HaCaT cells. In the mouse model of psoriasis, the topical application of ginsenoside CK significantly decreased the epidermis thickness of lesional skin of psoriatic mice and the expression of Reglity protein. Ginsenoside CK inhibited the proliferation of HaCaT cells and NHEK cells as well as attenuated imiquimod-induced psoriasis-like pathology in mice by reducing the expression of RAG1A/Reglity protein. These results indicated that ginsenoside CK exhibited therapeutic effects in psoriasis.

A case of wong-type dermatomyositis with Anti-TIF1-γ antibody

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Anti-transcription intermediary factor 1 (TIF1)-γ antibody have been identified in cases with cancer-associated DM. We report the first case of positive anti-TIF1-γ antibody in Wong-type DM associated with paroxial gland tumor and demonstrated the importance of detection of serum anti-TIF1-γ antibody and screening tumor in Wong-type DM. The titer of the antibody was also closely correlated with the severity of cutaneous and the prognosis of the disease. Dynamic observation of serum anti-TIF1-γ antibody levels would be helpful in predicting the course and facilitating better therapeutic targeting.

HRTC in accessing of interstitial lung disease in dermatomyositis with positive expression of anti-MDAS autoantibody

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Objective: A newly described autoantibody to a 140-kDa nuclear protein, identified as melanoma-differentiation associated gene 5 (MDA5), was closely associated with life-threatening ILD in DM. Occult lung disease by HRTCT (high-resolution computed tomography) seems to be a good alternative to conventional screening of ILD. This study examined the antibody in the sera of patients with DM/CADM and described HRTCT scores and findings in patients with positive anti-MDAS antibody. Methods: We screened 79 patients with various CTDs, including 38 with DM/CADM (22 of DM, 16 of CADM). Anti-MDAS antibody were detected by enzyme-linked immunosorbent assay (ELISA) and in the lab-datory were collected. Results. The level of anti-MDAS antibody shown by the ELISA was significantly greater in the samples from patients with CADM than in those from patients with classic DM (194.9±377.5 vs 37.2±161.1, P<0.002). ASCP was complicated more frequently in DM/CADM-positive patients than in those of DM/CADM-negative patients (66.7% vs 0, P<0.001). The HRTCT scores of the MDA5 positive subset were increased compared with those MDA5-negative group (122.9±54.8 vs 70.0±59.8, P=0.041) and correlated with anti-MDAS antibody level (r=0.514, P=0.012). Conclusion. Anti-MDAS antibody was found at an unusually high frequency in this group of Chinese patients. HRTCT diagnosis should combine with the detection of anti-MDAS antibody, which will help us to determine the pathologic type and prognosis of patients with DM/CADM.

Elucidating the mechanism(s) of silica nanoparticle induced immunomodulation in contact hypersensitivity

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Nanoparticle (NP) enabled consumer products and biomedical devices have become ubiquitous. Many examples exist of NP based products in the cosmetic, sunscreen, and textile industries. While currently used as an anti-aging agent in cosmetics and foods, silica NPs have been the focus of numerous transdermal drug delivery studies, which can lead to increased dermal exposure. Research on the lungs and gastrointestinal tract have highlighted a potential immunomodulatory capacity of NPs; however, additional research into the health effects of NPs following pulmonary and gastrointestinal exposure. Research on the lungs and gastrointestinal tract have highlighted a potential immunomodulatory capacity of NPs; however, additional research into the health effects of NPs following pulmonary and gastrointestinal exposure. We screened 79 patients with various CTDs, including 38 with DM/CADM (22 of DM, 16 of CADM). Anti-MDAS antibody were detected by enzyme-linked immunosorbent assay (ELISA) and in the lab-datory were collected. Results. The level of anti-MDAS antibody shown by the ELISA was significantly greater in the samples from patients with CADM than in those from patients with classic DM (194.9±377.5 vs 37.2±161.1, P<0.002). ASCP was complicated more frequently in DM/CADM-positive patients than in those of DM/CADM-negative patients (66.7% vs 0, P<0.001). The HRTCT scores of the MDA5 positive subset were increased compared with those MDA5-negative group (122.9±54.8 vs 70.0±59.8, P=0.041) and correlated with anti-MDAS antibody level (r=0.514, P=0.012). Conclusion. Anti-MDAS antibody was found at an unusually high frequency in this group of Chinese patients. HRTCT diagnosis should combine with the detection of anti-MDAS antibody, which will help us to determine the pathologic type and prognosis of patients with DM/CADM.

Topical application of caffeoyl prolyl histidine amide suppresses 2,4-dinitrochlorobenzene-induced atopic dermatitis-like symptoms in BALB/c mice

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In an effort to develop a topical agent to treat atopic dermatitis (AD) pathogenesis, we sought to elucidate the mechanism by which 2,4-dinitrochlorobenzene (DNCB) skin sensitization elicits AD-like symptoms. CA-PH alkylation DNCB-induced AD-like symptoms. CA-PH alleviated DNCB-induced AD-like symptoms quantified by dermatitis score, scratching behavior, and immunology dysregulation, and pruritus. Considering the oxidative stress impacts on three main factors, we hypothesized antioxidant agents could be an effective treatment option in AD. To evaluate the effect of caffeoyl-prolyl histidine amide (CA-PH) on AD-like symptoms, we employed an established mouse model of AD. AD-like symptoms were assessed by scoring the degree of skin lesions, scratching response, and immune cell infiltration in dermis and also found that CA-PH reduced serum IgE, and the mRNA levels of TSLP, interleukin (IL)-4, IL-25, and IL-31, and IL-33 in the skin. This study showed that topical CA-PH could be a therapeutic option for AD.