

숙지황 추출물의 NC/Nga 마우스에서의 아토피 피부염 억제 효과  
한국한의학연구원 : 성윤영, 윤태숙, 장자영, 양원경, 김호경\*

**Topical application of *Rehmannia glutinosa* extract inhibits mite allergen-induced atopic dermatitis in NC/Nga mice**

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**Objectives**

*Rehmannia glutinosa* (*R. glutinosa*) is known in Asia as a traditional herbal medicine with anti-inflammatory properties. Atopic dermatitis is an inflammatory skin disease associated with enhanced T-helper 2 (Th2) lymphocyte responses to allergens that results in elevated serum IgE levels and leukocyte infiltration. Although some studies have shown that *R. glutinosa* extract (RGE) has anti-inflammatory and anti-allergic activities, these properties have not been demonstrated in atopic dermatitis. This study investigated the effectiveness of RGE as a therapeutic candidate in an atopic dermatitis model.

**Materials and Methods**

The dried bark of RG (50 g) was extracted twice with 70% ethanol (with a 2-h reflux), and the extract was then concentrated under reduced pressure. The decoction was filtered, lyophilized, and serially stored at 4°C. The yield of dried extract from starting crude materials was approximately 26.82%. The extract was dissolved in saline for experiments. The effects of RGE on mite allergen (*Dermatophagoides farinae*)-treated NC/Nga mice were evaluated by skin symptom severity, ear thickness, and production of serum IgE and histamine.

**Results**

RGE treatment of NC/Nga mice significantly reduced dermatitis scores, ear thicknesses, and serum histamine levels. Histological analyses demonstrated decreased thickening of the epidermis/dermis as well as dermal infiltration by inflammatory cells. The results from this study suggest that RGE may be used as a therapeutic agent for the treatment of atopic dermatitis.

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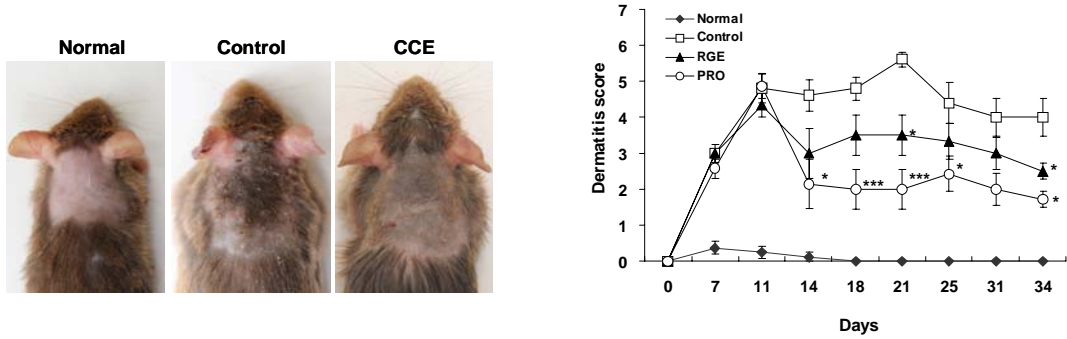


Fig. 1. Effect of RGE on the development of dermatitis in NC/Nga mice.

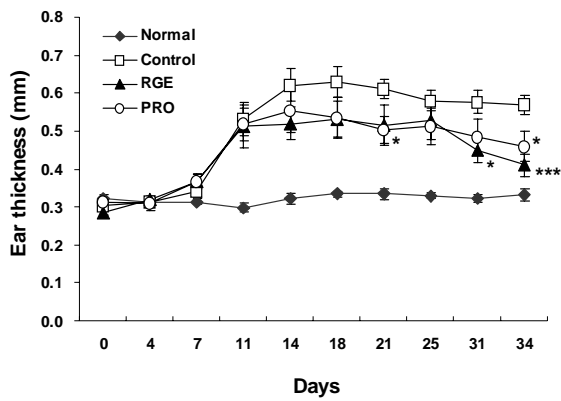


Fig. 2. Effects of RGE on DfE-induced increase in ear thickness in NC/Nga mice.

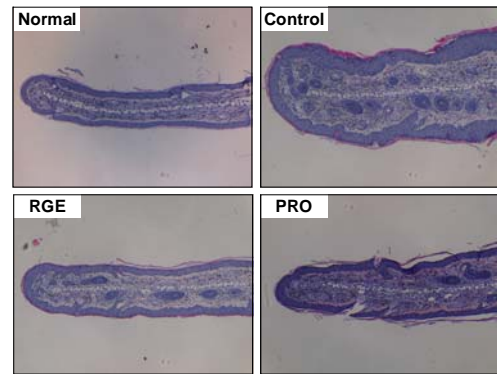


Fig. 3. Histological features of the ears of NC/Nga mice.

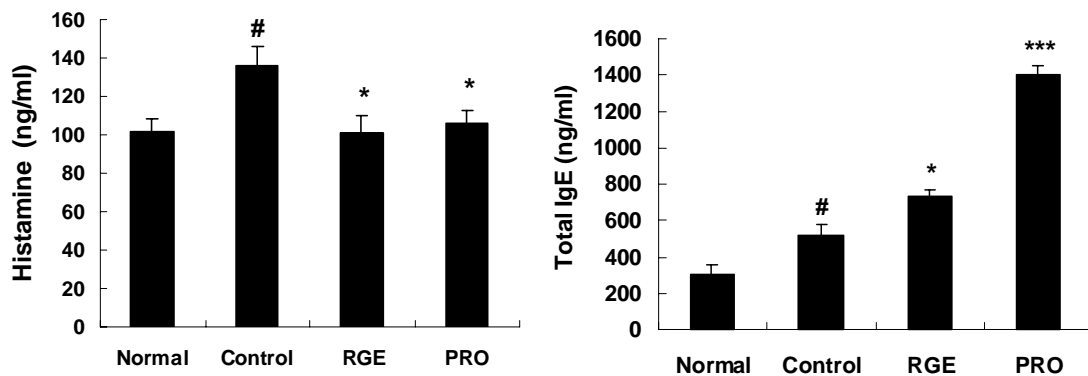


Fig. 4. Effect of RGE on serum histamine and total IgE levels.