A05-4 The efficacy of adapalene in non-inflammatory acne model of Kyoto Rhino Rat (krh)

Takashi Yoshimasa*, Chikako Kaminaka, Nobuo Kanazawa, Yuki Yamamoto, Fukumi Furukawa

Department of Dermatology, Wakayama Medical University

Acne vulgaris is considered as a disorder of pilosebaceous unit of the skin, and the mechanisms is still obscure. Kyoto Rhino Rat (krh) was made in mutagenesis by ethylnitrosourea (ENU) which is a chemical mutagen at Institute of Laboratory Animals Graduate School of Medicine Kyoto University. Krh is an excellent candidate of a new model for non-inflammatory acne (comedone) with abnormality of hair follicle and sebaceous glands. Krh were used in this study at 12 weeks of age (n=12). Comedone were mildly seen at 12 weeks of age of krh. Krh were treated with adapalene and vehicle 6 times a week for 12 weeks. Skin lesions were clinically and pathologically investigated after 6 weeks and 12 weeks of the treatment. Comedone was much exacerbated and exfoliation of stratum corneum was seen vehicle group compared with adapalene group after 6 and 12 weeks of treatment however those of adapalene group were slightly exacerbated compared with those of pre-treatment. Adapalene group showed significant increased epidermal thickness compared with vehicle group after treatment of 6 weeks and 12 weeks. Furthermore, comedone area was also significantly decreased in adapalene group compared with vehicle group. Cytokine productions such as TNF-α, IFN-γ, IL-12, IL-10 were increased in the comedone with adapalene group compared with that of vehicle group. Krh represents a new model for non-inflammatory acne. We are investigating the expression of transglutaminase in the comedone with krh.