日本香粧品学会誌　Vol. 32, No. 3, pp. 203–206 (2008)

〈シンポジウム I〉

『毛髪研究の最前線：毛包幹細胞から毛髪特性まで』

ストレスと毛髪―神経・免疫・内分泌と皮膚・毛髪の関係―

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Hair and Emotional Stress
―Association between Hair/Skin and Immunology/Neuroendocrinology―

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Abstract

Emotional stress may affect on the clinical features of skin disorders, such as atopic dermatitis (AD) and alopecia areata (AA). We actually see the patients of AD who get worse by some emotional stresses. Some AA patients are suffered from severe hair loss after having emotional stresses. However, there has been still not enough evidence why emotional stresses result in getting worse of skin diseases. Recent studies reveal that emotional stress changes neurological, endocrinological and immunological systems in skin and its appendix. Human has hypothalamic-pituitary-adrenal (HPA) axis. If human has some emotional stresses, CRH is secreted from hypothalamus that induces the production of ACTH and catecholamines. Then, adrenal cortex secretes glucocorticoids that may protect the human body from some stresses. The same and functional HPA axis was found in human hair follicle itself, and the relationship can be speculated between stresses and hair loss through hair follicle HPA axis. In addition, substance P or neuropeptides may be associated with skin immune systems. In conclusion, neuroendocrinological system may contribute skin immune system, and its collapse may induce skin disorders. Therefore, psychological treatments should do together to take care of skin disorders with anti-inflammatory treatments.

Key words: hair follicle, atopic dermatitis, HPA axis, CRH.