## 神経・免疫・内分泌のトライアングルから見た漢方

## 大澤仲昭\*

**要旨**:慢性疼痛,ストレス,不定愁訴といった中枢神経系の症状に対し,漢方薬は優れた効果を発揮するが,現在の我が国の医療に定着するにはEBMに基づいた西洋医学的な評価が求められる.漢方薬の鎮痛作用の機序について,中枢神経系への直接効果,例えば牛車腎気丸のダイノルフィン放出によるオピオイド $\kappa$ 受容体の活性化といった機序の他に,我々は漢方薬の多くが免疫系を賦活する作用(Biological Response Modifier:BRM)を有することに注目し,免疫系を賦活して放出される種々のサイトカインが中枢神経系に作用を及ぼすことにより,疼痛,ストレス,不定愁訴などを軽減する効果があることを認めた.この様な機序は,最近明らかになった生体機能の調節機構として,神経・免疫・内分泌系のトライアングルが確立されたことにより解明できるようになったと考えられる.

索引用語:漢方薬,鎮痛効果,神経·免疫·内分泌相関,BRM,サイトカイン

## PAIN AND KAMPO MEDICINE Vol. 14 (2004)

Neuro - immuno - endocrinology of Kampo medicine Nakaaki Ohsawa\*

**Abstract**: Recent findings support the idea that the neuro-immuno-endocrine system integrating the central nervous system, the immune system and the endocrine system regulates the physiological and pathological functions in human, through the effects of such mediators as neurotransmitters, cytokines and hormones.

Although the effect of Kampo medicine on the central nervous system to relieve pain is supposed to be its direct action, the above findings suggest that its indirect action may also serve as stimulating the immune system to release cytokines which in turn exert their effects on the central nervous system. It is well known that Biological Response Modifiers (BRM) including bacterial endotoxin (LPS), OK432, PSK, lentinan etc. reveal their beneficial effects relieving fatigue, pain and appetite loss through the potentiating action on the immune system to release various cytokines. Many Kampo drugs have the immune potentiating activities and are treated as BRM.

Thus, the neuro-immuno-endocrinology of Kampo medicine will give us a fruitful field of research.

Key words: Kampo medicine, pain, neuro-immuno-endocrine system, BRM, cytokine

<sup>\*</sup> Aino Institute for Aging Research

Offprint requests to: Nakaaki Ohsawa, Aino Institute for Aging Researchl. 3-9-25, Ohta, Ibaraki-shi, Osaka, 567-0018, Japan