原著

防己黄耆湯の関節炎に対する抗炎症効果の基礎的検討

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要旨：防己黄耆湯（TJ-20）は関節リウマチ（RA）および変形性関節症（OA）患者の膝関節の水腫や腫脹・疼痛に使用され，消炎鎮痛剤（NSAIDs）と異なり長期間の投与によっても胃腸障害は稀であり，使いやすい．今回，我々はRA患者滑膜組織から得られたRA滑膜細胞（NLC：ナース様細胞）株と健常人末梢血単核細胞（PBMC）との共培養系を用いて，防己黄耆湯の抗炎症効果を検討した．

PBMCは，防己黄耆湯内服前に採血（pre PBMC）し，また，採血後直ちに1日量を内服し1時間後に再び採血（post PBMC）した．NLCはRA患者滑膜組織から得られた細胞株を使用した．NLCとPBMCを共培養後，培養上清中に分泌されたIL-6，IL-8蛋白濃度，および培養細胞のIL-6，IL-8の発現量についてmRNAレベルを定量した．

NLCとPBMCの共培養で検出されるIL-6，IL-8量は，post PBMCを用いた共培養系で，pre PBMCの共培養に比べてIL-6，IL-8の蛋白産生が97%，98%，また，mRNA発現が85%，68%それぞれ抑制されていた．

防己黄耆湯は内服により速やかに血球成分に作用し，血球と滑膜細胞との相互作用に影響を及ぼして抗炎症作用を発揮することが示された．

索引用語：防己黄耆湯（TJ-20），炎症性サイトカイン，IL-6，IL-8，RA滑膜細胞,ナース様細胞（NLC）

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Anti-inflammatory Effect of Boiogito (TJ-20) on Arthritis

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Abstract: To investigate anti-inflammatory effect of boiogito (TJ-20), we used coculture of synoviocytes from patients with rheumatoid arthritis, named NLC, and peripheral blood mononuclear cells (PBMC) from healthy donors. We previously reported that cocultured NLC and PBMC drastically induced a larger amount of IL-6 and IL-8 production and expression than cultured NLC alone or cultured PBMC alone. In the present study, we obtained PBMC twice: before and 1 hour after giving 1 day dose of boiogito (TJ-20). Each PBMC was named as pre and post, respectively. After coculture of NLC and pre or post PBMC, we collected supernatant fluids and cells and measured IL-6 and IL-8 protein concentration and mRNA expression. Cocultured NLC and post PBMC produced only 3% of IL-6 protein and 2% of IL-8 protein and expressed only 15% of IL-6 mRNA and 32% of IL-8 mRNA of cocultured NLC and pre PBMC. These results indicate that boiogito (TJ-20) may influence promptly on PBMC and then on the interaction of NLC and PBMC to inhibit expression and production of inflammatory cytokines, suggesting that boiogito (TJ-20) may be as useful medicine to use for inflammatory disease as non-steroidal anti-inflammatory drugs.

Key words: boiogito (TJ-20), inflammatory cytokine, IL-6,IL-8, RA-synovial cell, nurse-like cell (NLC)

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