Analysis of paihophysiology of thiombosis through the adhesion molecules : the relationship between heterogeneities in lupus anticoagulant antibodies and release of adhesion molecules in vitro.

2003 Fiscal Year Final Research Report Summary

Analysis of paihophysiology of thiombosis through the adhesion molecules : the relationship between heterogeneities in lupus anticoagulant antibodies and release of adhesion molecules in vitro.

Research Project

Project/Area Number

14570970

Research Category

Grant-in-Aid for Scientific Research (C)

Allocation Type

Single-year Grants

Section

一般

Research Field

Hematology

Research Institution

KANAZAWA UNIVERSITY

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Keywords

antiprothrombin antibody / lupus anticoagulant / adhesion molecules / VCAM-1 / ICAM-1 / E-selectin / thrombosis

Research Abstract

Antiphospholipid syndrome(APS) is an autoimmune disease characterized by recurrent thromboses and pregnant morbidity, although pathophysiologies of these clinical features have not been clarified yet.Recent papers reported that adhesion-molecules including intercellular adhesion molecule-1(ICAM-1) and P-selectin play important roles in thrombosis of patients with APS.We also reported that anti-prothrombin antibodies(anti-PT), which is one of major antiphospholipid antibodies (aPL), have 4

subtype of anti-PT and that anti-PT #1, which bound to human prothrombin only in the presence of anionic phospholipid and calcium ions, was significantly associated with thromboses. From these findings, we evaluate the association of the release of adhesion molecules including VCAM-1, ICAM-1 and E-selectin by human umbilical vein endothelial cells(HUVEC) and these subtypes of anti-PT.Medium levels of VCAM-1, ICAM-1, and E-selectin were significantly higher in addition of anti-PT#1 compared with those of normal IgG.($p<0.001$, <0.001, and <0.005, respectively).Medium ICAM-1 levels but not VCAM-1 and E-selectin significantly increased on anti-PT#2($p<0.05$)compared with normal IgG.Those medium levels did not increased on anti-PT#3 or #4. These results suggested that heterogeneities of anti-PT occurred to different releases of adhesion molecules and that those differentiations may be associated with the different activations of endothel, monocytes, and platelets, which induced to heterogeneity of clinical features on APS.

Research Products (42 results)

All Other

All Publications

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