

Protection mechanism of thrombotic formation though heme oxygenase-1 in stress response

メタデータ	言語: jpn 出版者: 公開日: 2021-05-17 キーワード (Ja): キーワード (En): 作成者: Morishita, Eriko メールアドレス: 所属:
URL	https://doi.org/10.24517/00061796

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 International License.



[< 課題ページに戻る](#)

2007 年度 研究成果報告書概要

生体侵襲時におけるヘムオキシゲナーゼ-1を介する血栓形成制御機構め解明

研究課題

研究課題/領域番号	18590523
研究種目	基盤研究(C)
配分区分	補助金
応募区分	一般
研究分野	病態検査学
研究機関	金沢大学
研究代表者	森下 英理子 金沢大学, 医学系研究科, 准教授 (50251921)
研究分担者	谷内江 昭宏 金沢大学, 医学系研究科, 教授 (40210281)
研究期間 (年度)	2006 - 2007
キーワード	ヘムオキシゲナーゼ1 / 血栓形成 / 炎症 / 組織因子 / PAI-1 / TNF- α / トロンボモジュリン / 血管内皮細胞

研究概要

【目的】ヘムオキシゲナーゼ(HO)はヘム分解の律速酵素であると同時に、細胞を酸化ストレスかによる傷害から守る細胞保護蛋白である。われわれが経験した世界第一例のHO-1欠損症患者は、持続する発熱、肝腫大、血管内皮傷害による溶血性貧血、DIC様の著明な凝固・線溶系の亢進を認め、さらには単球系の機能異常も認めた。そこで、今回の研究は、HO-1が血栓形成阻害に果たす役割を末梢血単球、血管内皮細胞(HUVEC)を用いて、明らかにすることを目的とした。【方法】1)ヘミン単独刺激の影響:HUVECにHO-1誘導剤であるヘミン(100 μ M)を添加し、2~8時間培養後HO-1、組織因子(TF)、PAI-1、トロンボモジュリン(TM)の各mRNA量を測定した。2)TNF- α 刺激に対するHO-1の効果:HUVECにヘミンを添加した群と添加しない群を作製し6時間培養後洗浄、その後さらにTNF- α (10ng/ml)を添加し0.5~3時間培養後、HO-1、TF、PAI-1、TMの各mRNA量を測定した。それぞれのmRNAは細胞からtotal RNAを抽出後、リアルタイムPCR法を用いて測定した。【結果】1)ヘミン単独刺激により、HO-1、TF、TM mRNA発現は増加し、PAI-1 mRNA発現は低下した。2)ヘミン刺激群では、非刺激群と比べてHO-1、TM mRNA発現は増加し、TF、PAI-1 mRNA発現は低下した。【考察】ヘミン刺激でHO-1を誘導した後、炎症性サイトカインであるTNF- α 刺激を加えたところ、HO-1を誘導していない群に比べてTM mRNA発現は増加し、TF、PAI-1 mRNA発現は低下した。以上の結果より、炎症性ストレス下において血管内皮細胞でHO-1が高発現していると、TF、PAI-1 mRNAの発現が抑制され、またTM mRNAの発現も促進され、結果として血栓形成抑制作用を示す可能性が示唆された。

研究成果 (73件)

	すべて	2008	2007	2006	その他
	すべて	雑誌論文	学会発表		
[雑誌論文] A case of factor X(FX)deficiency due to novel mutation V196M, FX Hofu.					2008
[雑誌論文] Clonal relationship between infiltrating immunoglobulin G4(IgG4)-positive plasma cells in lacrimal glands and circulating IgG4-positive lymphocytes in Mikulicz's disease.					2008
[雑誌論文] 血液凝固異常症の臨床と血液検査.					2008
[雑誌論文] 先天性血栓性素因が疑われたときに行う検査.					2008
[雑誌論文] Expression of annexin II in human atherosclerotic abdominal aortic aneurysms.					2008
[雑誌論文] Changes in molecular markers of hemostatic and fibrinolytic activation under various sampling conditions using vacum tube samples from healthy volunteers.					2008
[雑誌論文] case of factor X (FX) deficiency due to novel mutation V196M, FX Hofu					2008
[雑誌論文] Clonal relationship between infiltrating immunoglobulin G4 (IgG4)-positive plasma cells in lacrimal glands and circulating IgG4-positive lymphocytes in Mikulicz's disease					2008
[雑誌論文] Heme, heme oxygenase, and ferritin: how the vascular endothelium survives(and dies)in an iron-rich environment.					2007
[雑誌論文] Skin infiltration of CD56(bright)CD16(-)natural killer cells in a case of X-SCID with Omenn syndrome-like manifestations.					2007
[雑誌論文] Immunophenotypic analysis of Epstein-Barr virus(EBV)-infected CD8(+)T cells in a patient with EBV-associated hemophagocytic lymphohistiocytosis.					2007
[雑誌論文] Corticosteroid enhances home oxygenase-1 production by circulating monocytes by up-regulating hemoglobin scavenger receptor and amplifying the receptor-mediated uptake of hemoglobin-haptoglobin complex.					2007
[雑誌論文] Reactive peripheral blood plasmacytosis in a patient with acute hepatitis A.					2007
[雑誌論文] Role of T cells in the pathogenesis of type I diabetes mellitus: structure analysis of complementarity determining region 3 of circulating T cells.					2007

[雑誌論文] 造血幹細胞移植後のT細胞再構成と免疫不全症候群	2007	▼
[雑誌論文] ヘムオキシゲナーゼと生体防御機構;抗炎症治療のパラダイムシフト	2007	▼
[雑誌論文] Sequential measurement of fecal parameters in a case of non-immunoglobulin E-mediated milk allergy.	2007	▼
[雑誌論文] Somatic revertant mosaicism in a patient with leukocyte adhesion deficiency type 1.	2007	▼
[雑誌論文] プロトロンビン時間正常活トロンボテスト低値の症例とループスアンチコアグラント	2007	▼
[雑誌論文] 東海・北陸地域におけるフローサイトメーターを用いたCD4陽性Tリンパ球測定に関するアンケート調査および模擬精度管理調査.	2007	▼
[雑誌論文] 先天性凝固異常症の臨床と病態解析	2007	▼
[雑誌論文] 特発性深部静脈血栓症における経口抗凝固薬3ヶ月投与群と1年間投与群の比較試験.特集データブック-血栓症の大規模臨床試験PART2.	2007	▼
[雑誌論文] Analysis of MPO-ANCA subtypes in a patient with propylthiouracil-induced vasculitis with multiple	2007	▼
[雑誌論文] heme oxygenase, and ferritin : how the vascular endothelium survives (and dies) in an iron-rich environment. Antioxid Redox Signal	2007	▼
[雑誌論文] Skin infiltration of CD56(bright) CD16(-) natural killer cells in a case of X-SCID with Omenn syndrome-like manifestations	2007	▼
[雑誌論文] Immunophenotypic analysis of Epstein-Barr virus (EBV)-infected CD8(±) T cells in a patient with EBV-associated hemophagocytic lymphohistiocytosis	2007	▼
[雑誌論文] Corticosteroid enhances heme oxygenase-1 production by circulating monocytes by up-regulating hemoglobin scavenger receptor and amplifying the receptor-mediated uptake of hemoglobin-haptoglobin complex	2007	▼
[雑誌論文] Reactive peripheral blood plasmacytosis in a patient with acute hepatitis A	2007	▼
[雑誌論文] Role Of T cells in the pathogenesis of type I diabetes mellitus : structure analysis of complementarity determining region 3 of circulating T cells	2007	▼
[雑誌論文] Clonotypic analysis of T cell reconstitution after haematopoietic stem cell transplantation (HSCT) in patients with severe combined immunodeficiency	2007	▼
[雑誌論文] Heme oxygenase and its role in defense system ; paradigm shift of anti-inflammatory therapy	2007	▼
[雑誌論文] Sequential measurement of fecal parameters in a case of non- immunoglobulin E-mediated milk allergy	2007	▼
[雑誌論文] Somatic revertant mosaicism in a patient with leukocyte adhesion deficiency type 1	2007	▼
[雑誌論文] No interplay between the pathways mediating coagulation and inflammation in tissue factor-induced disseminated intravascular coagulation in rats.	2006	▼
[雑誌論文] Immunoglobulin preparations attenuate organ dysfunction and hemostatic abnormality by suppressing the production of cytokines in lipopolysaccharide-induced disseminated intravascular coagulation in rats.	2006	▼
[雑誌論文] Effects of sarpogrelate hydrochloride in a patient with chronic graft-versus-host disease: a case report.	2006	▼
[雑誌論文] Rituximab therapy for Epstein-Barr virus-related chronic hepatitis following living donor kidney transplantation.	2006	▼
[雑誌論文] Human tyrosine kinase 2 deficiency reveals its requisite roles in multiple cytokine signals involved in innate and acquired immunity. Immunity.	2006	▼
[雑誌論文] Omenn syndrome-review of several phenotypes of Omenn syndrome and RAG1/RAG2 mutations in Japan. Allergol Int.	2006	▼
[雑誌論文] Somatic revertant mosaicism in a patient with leukocyte adhesion deficiency type 1.	2006	▼
[雑誌論文] Neuromyelitis optica associated with myasthenia gravis: characteristic phenotype in Japanese population.	2006	▼
[雑誌論文] Cytomegalovirus-associated protracted diarrhea in an immunocompetent boy.	2006	▼
[雑誌論文] A second-site mutation in the initiation codon of WAS(WASP)results in expansion of subsets of lymphocytes in an Wiskott-Aldrich syndrome patient.	2006	▼
[雑誌論文] 血管内皮細胞における凝固線溶制御因子の発現に与えるHMG-CoA還元酵素阻害剤の影響.	2006	▼
[雑誌論文] 基礎疾患別にみたループスアンチコアグラント陽性率の検討-当院における依頼検体の現状-.	2006	▼
[雑誌論文] Analysis of MPO-ANCA subtypes in a patient with propylthiouracil-induced vasculitis with multiple complications.	2006	▼
[雑誌論文] No interplay between the pathways mediating coagulation and inflammation in tissue factor-induced disseminated intravascular coagulation in rats	2006	▼
[雑誌論文] Immunoglobulin preparations attenuate organ dysfunction and hemostatic abnormality by suppressing the production of cytokines in lipopolysaccharide- induced disseminated intravascular coagulation in rats	2006	▼
[雑誌論文] Effects of sarpogrelate hydrochloride in a patient with chronic graft-versus-host disease : a case report	2006	▼
[雑誌論文] Rituximab therapy for Epstein-Barr virus-related chronic hepatitis following living donor kidney transplantation	2006	▼

[雑誌論文] Human tyrosine kinase 2 deficiency reveals its requisite roles in multiple cytokine signals involved in innate and acquired immunity	2006	▼
[雑誌論文] Omenn syndrome-review of several phenotypes of Omenn syndrome and RAG1/RAG2 mutations in Japan	2006	▼
[雑誌論文] Somatic revertant mosaicism in a patient with leukocyte adhesion deficiency type 1	2006	▼
[雑誌論文] Neuromyelitis optica associated with myasthenia gravis : characteristic phenotype in Japanese population	2006	▼
[雑誌論文] Cytomegalovirus-associated protracted diarrhoea in an immunocompetent boy	2006	▼
[雑誌論文] second-site mutation in the initiation codon of WAS (WASP) results in expansion.of subsets of lymphocytes in an Wiskott-Aldrich syndrome patient	2006	▼
[雑誌論文] Expression of annexin II in human atherosclerotic abdominal aortic aneurysms		▼
[雑誌論文] Changes in molecular markers of hemostatic and fibrinolytic activation under various sampling conditions using vacuum tube samples from healthy volunteers		▼
[学会発表] 先天性第X因子欠損症の遺伝子解析.	2007	▼
[学会発表] 先天性複合ヘテロ接合体プロトロンビン欠乏症(Prothrombin Kawaguchi)の一例.	2007	▼
[学会発表] The first case of human HO-1 deficiency; its clinical profiles as a disease of immune dysregulation.	2007	▼
[学会発表] The first case of human HO-1 deficiency ; its clinical profiles as a disease of immune dysregulation	2007	▼
[学会発表] 血液凝固異常症の臨床と血液検査	2007	▼
[学会発表] Clinical significance of platelet-derived microparticle(PDMP)in APS: plasma levels of PDMP were significantly elevated in APS patients with arterial thrombosis.	2007	▼
[学会発表] Pathophysiological mechanisms of vasculopathy in systemic scleroderma(SSc): Platelet activation induced by antiphospholipid antibody(aPL)is associated with arterial thromboses and digital pitting scar in SSc patients.	2007	▼
[学会発表] Clinical significance of platelet- derived microparticle (PDMP) in APS : plasma levels of PDMP were significantly elevated in APS patients with arterial thrombosis.	2007	▼
[学会発表] Pathophysiological mechanisms of vasculopathy in systemic scleroderma (SSc) : Platelet activation induced by antiphospholipid antibody (aPL) is associated with arterial thromboses and digital pitting scar in SSc patients	2007	▼
[学会発表] スタチン製剤の多面的作用-凝固線溶系に及ぼす影響-.	2007	▼
[学会発表] Inherited thrombotic and hemorrhagic disorders:Clinical manifestation and molecular mechanism(シンポジウム)	2006	▼
[学会発表] Roles of adhesion molecules in the development of antiphospholipid syndrome: Key roles of E-selection in the induction of antiphospholipid antibodies.	2006	▼
[学会発表] Roles of adhesion molecules in the development of antiphospholipid syndrome : key roles of E-selection in the induction of antiphospholipid antibodies	2006	▼
[学会発表] 家族性地中海熱(Familial Mediterranean Fever; FMF)が疑われた周期熱症候群の一例.	2006	▼
[学会発表] HMG-CoA還元酵素阻害剤内服が高脂血症患者の凝固線溶系に及ぼす影響.	2006	▼

URL: https://kaken.nii.ac.jp/report/KAKENHI-PROJECT-18590523/185905232007kenkyu_seika_hokoku

公開日: 2010-02-03