

論文内容要旨

Decreased intracellular histamine concentration
and basophil activation in anaphylaxis

(アナフィラキシーにおける

細胞内ヒスタミン濃度の減少と好塩基球活性の低下)

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主指導教員：志馬 伸朗教授

(医系科学研究科 救急集中治療医学)

副指導教員：廣橋 伸之教授

(原爆放射線医科学研究所 放射線災害医療研究センター)

副指導教員：田中 純子教授

(医系科学研究科 疫学・疾病制御学)

山賀 聡之

(医歯薬保健学研究科 医歯薬学専攻)

Background: To explore basophils as a potential marker and their involvement in the pathogenesis of anaphylaxis, we evaluated the intracellular histamine concentration and the degree of basophil activation in anaphylaxis patients.

Methods: We conducted a case-control study enrolling anaphylaxis patients and healthy controls. Basophil activation was evaluated by flow cytometry using up-regulation of CD203c expression.

Results: We enrolled 23 patients and measured their blood histamine concentration. Basophil activation was analyzed in seven of 23 patients. The median intracellular histamine concentrations at admission were significantly lower in patients compared with controls (16.4 ng/mL vs. 62.3 ng/mL; $p < 0.0001$). The median basophil number at admission was also significantly lower in patients compared with controls (2.21 cell/mL vs. 21.0 cell/mL; $p = 0.027$). CD203c expression was not up-regulated in any of the seven patients.

Conclusions: Anaphylaxis is associated with a decrease in intracellular histamine, and a reduced number and reactivity of peripheral basophils.