

いたらなかった。人工心肺におけるエラスポールの急性全身性炎症反応に対する効果は、術後肺障害が高率に予測される侵襲の大きな症例（緊急手術・循環停止症例）を対象に再検討する必要がある。

The prevention of organ injuries by the inhibition of leukocyte activation.

Yukio Sato^{1,2}, Yukinobu Goto², Shoko Sato², Shunsuke Endo¹, and Yasunori Sohara¹

- 1 Division of Thoracic Surgery, Department of Surgery, Jichi Medical School, Minamikawachi, Tochigi 329-0498, Japan
- 2 University of Tsukuba, Institute of Clinical Medicine, Tsukuba, Ibaraki, 305-8575, Japan

This research was funded by the University of Tsukuba Research Project and Jichi Medical School Young Investigator Award

ABSTRACT

The use of granulocyte-colony stimulating factor (G-CSF) for the recovery from neutropenia has been established; however, acute lung injury due to G-CSF induced polymorphonuclear leukocytes (PMN) activation is a serious complication. This study was designed to compare the activation of PMN with single bolus administration and continuous administration of G-CSF. Healthy volunteers (age, 33.8 ± 1.4 years, $n=6$) received a single bolus injection of 50 micrograms/m² of G-CSF (SI; $n=6$) or continuous subcutaneous injection of 50 micrograms/m² of G-CSF for 24 hrs (CI; $n=6$), and were followed for 48 hrs. Circulating leukocyte counts, markers of activation on PMN, and circulating levels of G-CSF, IL-6 and PMN elastase were measured. SI rapidly increased serum G-CSF levels that peaked at 4hrs, whereas CI gradu-

ally increased G-CSF levels, which remained at a steady level from 8 to 24hrs. SI caused a rapid decrease in PMN counts at 0.5hr followed by sustained increase to peak at 12hrs. CI gradually increased PMN counts, which peaked at 24hrs, but the peak values were not significantly different between the groups. SI induced activation of PMN, which was characterized by increased expression of CD11b, decreased expression of L-selectin, and increased F-actin content, lead to increases in serum IL-6 and PMN elastase level. Such changes were all attenuated with CI ($p < 0.05$). We conclude that continuous subcutaneous injection of G-CSF resulted in a similar marrow response as a single injection but yielded reduced PMN activation.

筋強直性ジストロフィーの分子病態と SIX5 標的遺伝子

細胞生物研究部 佐藤 滋

目的

筋強直性ジストロフィー1型 (DM1) は高頻度で見られる成人の神経筋疾患である。原因となる突然変異は19q13.3に位置するCTGリピートの伸長であり、リピート伸長は近接するSIX5遺伝子の発現量を低下させる。SIX5は骨格筋、水晶体、神経組織、性腺で発現するホメオドメイン型転写因子をコードしており、Six5遺伝子欠損マウスは白内障及び性腺機能低下症を発症するので、SIX5タンパク質の下流標的遺伝子の発現量の変動が一部のDM1症状の発症に関わっている可能性が高い。本研究では、SIX5標的遺伝子の体系的検索を行うことで、SIX5の発現量低下がどのような標的遺伝子の発現異常を引き起こし、DM1の発症に関わっているのか、その分子基盤の一端を明らかにすること目的とする。

方法

VP16タンパク質の強力な転写活性化ドメイ