学位論文審査結果の要旨

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（学位論文審査結果の要旨）

Differential Roles of Dendritic Cells in Expanding CD4 T Cells in Sepsis

【主論文審査結果の要旨】

著者らは論文において下記の内容を述べている。

Sepsis is a systemically dysregulated inflammatory syndrome, in which dendritic cells (DCs) play a critical role in coordinating aberrant immunity. The aim of this study is to shed light on the differential roles played by systemic versus mucosal DCs in regulating immune responses in sepsis. We identified a differential impact of the systemic and mucosal DCs on proliferating allogenic T lymphocytes (CD4 T cells) in a mouse model of sepsis. Despite the fact that the frequency of CD4 T cells was reduced in septic mice, septic mesenteric lymph node (MLN) DCs proved superior to septic spleen (SP) DCs in expanding allogeneic CD4 T cells. Moreover, septic MLN DCs markedly augmented the surface expression of Major Histocompatibility Complex class II (MHC-II) and Cluster of differentiation 40 (CD 40), as well as the messaging of interleukin-1β (IL-1β). Interestingly, IL-1β-treated CD4 T cells expanded in a dose-dependent manner, suggesting that this cytokine acts as a key mediator of MLN DCs in promoting septic inflammation. Thus, mucosal and systemic DCs were found to be functionally different in the way CD4 T cells respond during sepsis. Our study provides a molecular basis for the differential nature of DCs activity in acute phase of sepsis, depending on location; potentially inducing septic inflammation or immune-paralysis.

敗血症の急性期では腸管膜リンパ節と脾臓における樹状細胞の CD4 T 細胞を活性し増殖を誘導する能力が異なることを明らかにした論文であり、学術上極めて有益であり、学位論文として価値あるものと認めた。

【掲載雑誌名及び著者名を最後に以下のとおり記入】

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