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Induced immune tolerance of autoantigen loaded immature dendritic cells in homogenic lupus mice

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ABSTRACT. This study investigated the induced immune tolerance of autoantigen dendritic cells (imDCs) in homogenic lupus mice to support the use of dendritic cell treatment against autoimmune diseases, such as systemic lupus erythematosus. A lupus mouse was used to model based on *in vitro* cell culture. An immunohistochemistry assay was used to assess $CD8^+$, $CD4^+$ cell ratio in mouse spleen cells. The ratio of $CD4^+CD25^+$ cells in mouse spleen lymphocytes was detected by flow cytometry, whereas the kidney was directly measured by immunofluorescence. After the injection of mouse antigen loaded bone marrow-derived antigen imDCs with a homogenetic background, mouse nucleoprotein immune with a homogenetic background was carried out. The results were compared against the simple mouse nucleoprotein immune model with a homogenic background. The 24-h urine protein, serum antinuclear antibody and anti-ds-DNA antibodies

of the simple mouse model were lower compared to group S1. The $CD4^+CD25^+$ cell percentage of spleen was higher in the simple mouse model compared to group S1. In the spleen, the number of lymphocyte $CD8^+$ cells declined, whereas the number of $CD4^+$ cells increased. In conclusion, after autoantigen uptake, imDCs are able to induce immune tolerance to the antigen by reinfusion, which appears to prevent or mitigate systemic lupus erythematosus-like illness.

Key words: Immature dendritic cells; Lupus mice; Autoantigen; Immune tolerance

