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Th17/Treg cell expression in children with primary nephritic syndrome and the effects of ox-LDL on Th17/Treg cells

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ABSTRACT. To investigate the role of T-helper cells/Treg (Th17/Treg) and morbidity factors related to primary nephritic syndrome (PNS) in children, as well as the influence of ox-low density lipoprotein (ox-LDL) on Th17/Treg expression in children with PNS. To clarify the pathogenesis of PNS in children, 50 children with PNS treated in our hospital were enrolled in the study group. Additionally, 20 healthy children who came to our hospital for physical examination during the same period were enrolled in the control group. Th17 and Treg cells in children belonging to the two groups were detected by flow cytometry; the numbers of Th17/Treg cells in peripheral blood mononuclear cells at different concentrations of ox-LDL were detected simultaneously. Ox-LDL can affect the number of Th17/Treg cells in peripheral blood mononuclear cells, and both cell types decreased with increasing concentration of ox-LDL, with the numbers being significantly lower in the control group. However, the decrease in the number of Th17

cells was statistically insignificant ($P > 0.05$), whereas the decrease in Treg cells was more obvious and statistically significant ($P < 0.05$). The effect of ox-LDL the number of Treg cells was stronger than that on Th17 cells. We concluded that the imbalance of Th17/Treg cells influenced by high and low ox-LDL concentrations in children with PNS might be the immunological basis of the disease.

Key words: Ox-LDL; Th17/Treg cells; Primary nephritic syndrome; Children

