Expression and clinical significance of CD4+CD45+ peripheral blood T cells in patients with ulcerative colitis

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ABSTRACT. The objectives of this study were to explore the expression of peripheral blood CD4+CD45+ T cells in patients with ulcerative colitis (UC) and determine its clinical value. We selected 80 patients with UC from the First Affiliated Hospital of Liaoning Medical University from March 2012 to December 2013. Of these, 27 had mildly active, 28 moderately active, and 25 severely active UC. We also recruited 80 subjects to constitute the healthy control group. The percentages of CD4+CD45+ molecules on the peripheral blood T cell surfaces of patients were detected using flow cytometry and were compared between patients to determine the severity of illness. The percentage of peripheral blood CD4+CD45+T cells in the UC group was 52.93 ± 3.64% and in the controls it was 41.34 ± 2.94%; the UC group percentages were significantly higher ($t = -22.159$, $P < 0.05$). The average percentages in patients with mild, moderate, and severe activity were 50.99 ± 1.45, 52.66 ± 1.41, and 55.18 ± 2.18%, respectively; the moderate activity percentage was higher than that of mild activity, and the severely active stage percentage was overall the highest. Comparison between groups showed a statistically significant
difference, $F = 39.850$, ($P < 0.05$). The expression levels of peripheral blood CD4+CD45+ T cells in the UC group were higher than those in the control group. Overall, our results showed that with the aggravation of disease the peripheral blood CD4+CD45+ T cell percentages were significantly increased, which might be useful as a marker for clinical diagnosis.

**Key words:** Ulcerative colitis; CD4+CD45+ regulatory T cells; Flow cytometry; Immune regulation.