The changes of CD4+CD25+FoxP3 and which related inflammatory factors in the peripheral blood of patients with early Parkinson’s

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Objective: To observe the changes of CD4+CD25+FoxP3 and IL-2, IL-6, IL-10, TNF-α inflammatory factors in the peripheral blood of the early PD patients and to further explore the correlations about CD4+CD25+FoxP3 and IL-2, IL-6, IL-10, TNF-α inflammatory factors in peripheral blood of the early PD patients whether the level of CD4+CD25+FoxP3 and IL-2, IL-6, IL-10, TNF-αin different years, sex, grade and depression or not is different.

Methods: CD4+CD25+FoxP3 were measured in 15 PD patients by the direct immunofluorescent staining technique and which related inflammatory factors were measured by ELISA and compared with 30 normal controls.

Results: The levels of CD4+CD25+FoxP3 in PD were depressed as compared with healthy controls (p<0.01). The levels of IL-2, IL-6, IL-10 and TNF-α in PD were higher than healthy controls (p<0.05). Different ages, different grade, presence or absence of depression among PD patients, peripheral blood CD4+CD25+FoxP3 and which related inflammatory factors were not significantly different (p>0.05). IL-10 was significantly different between men and women in the PD group, the female level of IL-10 was higher than the male (p<0.05), CD4+CD25+FoxP3 and the rest of the inflammatory factors were not different (p>0.05), the changes of CD4+CD25+FoxP3, IL-2, IL-6, IL-10 and TNF-α in peripheral blood were in no significant correlation compared with age, sex, grade and depression.

Conclusion: CD4+CD25+FoxP3 immune functional decline and imbalance of IL-2, IL-6, IL-10 and TNF-α inflammatory factor were observed in early PD patients. The cellular immune function in patients was no significant among different ages, different classification and depressive symptoms or not but the level of IL-10 exists difference between male and female groups, CD4+CD25+FoxP3 and IL-2, IL-6, IL-10, TNF-α may be involved in the pathogenesis of early Parkinson's disease in the pathophysiology and pathogenesis of PD has played a certain role.

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