Results: Among 108 patients, 58 were males and 50 were females, with an average age of 41±14 years. Compared with the normal control group, total T cells, total B cells, Th cells, Ts cells, Th1 cells, Th17 cells, Th1/Th2, Th17/Treg in patients with autoimmune uveitis were higher than those in healthy control group (P < 0.05), while Th1 cells and Treg cells were lower than those in healthy control group (P < 0.05). After IL-2 treatment, the number of Treg cells increased from 21.90±15.29 /ul to 51.54±41.86 /ul (P < 0.05), the Th17/Treg ratio decreased from 2.04±0.27 to 0.33±0.23 (P < 0.05), and both serum sedimentation rate and CRP decreased compared with before treatment (P < 0.05).

Conclusion: Treg cells are involved in the pathogenesis of autoimmune uveitis. Low dose of IL-2 selectively elevates Treg cells, regulates Th17/Treg balance and improves the condition of the disease.

References:

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AB0049 IMMUNE DYSFUNCTION IN ANKYLOSING SPONDYLITIS (AS) AND THE POTENTIAL OF TUMOR NECROSIS FACTOR-A (TNF-α) INHIBITOR ANBAINUO AS AN EFFECTIVE TREATMENT

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Background: Studies into ankylosing spondylitis (AS) and its relationship with immune function are controversial, and the correlation between the efficacy of TNF-α inhibitor and changes in immune function is unclear.

Objectives: We conducted a prospective study of T-cell and B-cell subset distribution and analyzed lymphocyte function in AS patients to further clarify changes to the immune system caused by AS and to explore the possibility that could contribute to disease progression.

Methods: A total of 40 immune cells were tested with flow cytometry, and the results of 105 HC (healthy control) subjects, 177 active-stage AS patients, and 23 AS cases before and after 12 weeks of Anbainao therapy were analyzed.

Results: Compared with the HC group, the proportion of immune cells, such as naive and central memory CD4+ T cells, in AS increased (p<0.0001), but effector memory and terminally differentiated CD4+ T cells were decreased (p<0.01 and 0.0001, respectively). Naive, central memory, and effector memory CD8+ T cells were increased (p<0.001, 0.0001, and 0.01, respectively), and terminally differentiated CD8+ T cells were decreased (p>0.001). Th1 cells (helper T-1), Th1 cells (toll-like receptor T cells), Th2 cells (cytotoxic T cells), and Tregs (regulatory T cells) were lower (p<0.01, 0.05, 0.0001, and 0.001, respectively), but Th17 cells, Th17 cells, and Te cells were higher (p<0.001, 0.0001 and 0.001, respectively). The proportions of total B cells and class-switched B cells were increased (p<0.05), but non-switched B cells, plasma cells, memory B cells, and immature Bregs (regulatory B cells) were lower (p<0.01, 0.0001, 0.0001, and 0.0001, respectively). After Anbainao therapy, the percentage of Tregs and B10 cells (IL-10-producing regulatory B cells) had increased (p<0.01 and 0.05, respectively), and the increase in Tregs was positively correlated with the decrease in CRP (C-reactive protein) (r=0.489, p=0.018).

Conclusion: We found that, in terms of both innate and acquired immunity, active-stage AS patients have an immunity imbalance involving multiple types of immune cells, including CD4+ T cells, CD8+ T cells, Th cells, Tfh cells, Tc cells, Tregs, Bregs, and B cells. Anbainao can not only help to inhibit disease activity and partial immune function imbalance in AS but can also increase the number of negative regulatory cells in inflammation.

References: