THE EFFECTS OF QINGCHANG WENZHONG DECOCTION ON TISSUE-RESIDENT MEMORY CD4+T CELLS IN MICE WITH ULCERATIVE COLITIS

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Qingchang Wenzhong Decoction (QCWZD) ameliorates dextran sulfate sodium-induced colitis in mice by reducing tissue-resident memory CD4+ T cells and inhibiting glycolytic metabolism through the LepR/HIF-1α signaling axis.

KEY POINTS

- In a mouse model of DSS-induced colitis, QCWZD intervention reversed body weight loss, rectal bleeding, and diarrhea, and decreased disease activity index scores.
- QCWZD significantly reduced the proportion of CD4+ TRM cells in the intestinal lamina propria, which were elevated in DSS-treated mice.
- QCWZD downregulated expression of glucose transporter genes (Glut1/2/4) and key glycolytic pathway enzyme genes (HK2, PKM2, G6PC, LDHA) in colonic tissue.
- The treatment downregulated LepR and HIF-1α mRNA expression, suggesting QCWZD regulates CD4+ TRM cell glycolytic metabolism through the LepR/HIF-1α signaling axis.
- This preclinical study may be relevant to researchers investigating immunometabolic mechanisms and traditional medicine approaches in inflammatory bowel disease.

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