

Effect of bizhongxiao decoction (BZXD) on some cytokines in plasma of rats with C II -induced rheumatoid arthritis

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Objective: To investigate the influence of bizhongxiao decoction(BZXD) which is a Traditional Chinese medicine for RA including, on the plasma TNF- α and IL-1 β in rats with C II -induced arthritis (CIA) and explore the protective mechanism of BZXD in the treatment of rheumatoid arthritis .

Methods: 75 SD rats were divided into four groups randomly. Normal control group (n=5) not be treated any more. The CIA rat was established by subcutaneous injection with bovine II collagen(B II C) and complete Freund,s adjuvant(CFA) after 7d breeding. The CIA rats were divided into the CIA group(n=16)、 BZXD group (n=29) treated with BZXD and the MTX group(n=25) treated with methotrexate. All rats were killed after various intervals(25,30,35,40,or 45d). At the end of each time interval, we collected the blood of each rat. To detect TNF- α and IL-1 β in plasma with radio-immunity kit. Results: B II C and CFA can be used to copying CIA model. The incidence of arthritis was 88%. The plasma TNF- α and IL-1 β levels of CIA group, BZXD group and MTX group were notably higher than those of normal control group(p<0.05), moreover, the CIA group was higher than those of the MTX group and BZXD group at various interval (p<0.01). TNF- α and IL-1 β rose step by step in CIA group but decreased in BZXD group and MTX group gradually. Moreover, in BZXD group were lower than those in MTX group (p<0.05). Conclusion: TNF- α and IL-1 β play a very important role in the formation and development of RA. BZXD can notably decrease the plasma TNF- α and IL-1 β levels, which was better than MTX.

Key words: bizhongxiao decoction, methotrexate, arthritis, rheumatoid, TNF- α , IL-1 β

Rheumatoid arthritis (RA) is particular with chronic and symmetric arthritis which get along with joint damage and matrix erosion. But its mechanism has not been clear. The recent research has demonstrated that TNF - α and I L -1 β play key role in the disease of RA and made progress with matrix erosion. To explore the mechanism of the RA and the function of BZXD ,we make the collagen-induced arthritis rat and treated with BZXD, then detect the level of TNF- α and IL-1 β in plasma at various interval

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