

Abstract

Crohn's disease is one of the chronic inflammatory diseases that are affected by genetic, environmental and nutritional factors. Sulfasalazine treatment is one of the effective treatments with many side effects. In this research, 20 female Wistar rats weighing 140 grams were divided into 5 groups of 4 (control, with Crohn's disease, with and treated with sulfasalazine (500 mg/Kg), with and treated with pantothenic acid (25 mg/Kg) and Affected and treated with the combination of sulfasalazine and pantothenic acid (25+500mg/kg) were divided. In order to induce Crohn's disease, endomethacin (5% in sodium bicarbonate) was used at the rate of 7.5 mg/kg twice a day for 2 consecutive days. After 14 days of treatment, weight changes, disease severity chart, myeloperoxidase test, nitric oxide test, TNF- α and IL-1 β cytokine levels were evaluated on homogenized colon tissue samples. The results showed that weight changes, disease severity, myeloperoxidase test, nitric oxide test, measurement of TNF- α and IL-1 β cytokine levels on homogenized samples of colon tissue in the group treated with sulfasalazine and pantothenic acid drug combination, have had less than other groups. As the weight changes and myeloperoxidase test of the group treated with drug combination had significant changes ($P < 0.05$) with other treatment groups, but the other two treatment groups did not show any significant difference with each other ($P > 0.05$). Also, there were significant changes compared to other treatment groups in the test of disease severity index, relative organ weight index, and measuring the level of cytokines TNF- α and IL-1 β on homogenized samples of colon tissue. In this way, it can be concluded that the group treated with drug combination had more therapeutic effects than other groups.

Keywords: Crohn's disease, indomethacin, sulfasalazine, pantothenic acid, anti-inflammatory, auto-inflammatory