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Anti-inflammatory effects of the aqueous extract of *Astragalus arbusculinus* gum in rat paw edema

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Background and Aims: The importance of inflammatory diseases and the side effects of conventional drugs, necessitate the finding of new anti-inflammatory agents from natural sources. In this study, anti-inflammatory effects of the aqueous extract of *Astragalus arbusculinus* gum (Anzaroot) was evaluated in paw edema model in rats.
Methods: 35 male wistar rats, divided to 5 groups and pretreated with different doses of Astragalus gum extract (100, 300, 1000 mg/kg) or normal saline or sodium salicylate as negative and positive control groups one hour prior to injection of formalin (0.2%). The paw edema was measured by plethysmometer at time zero and during 8 days after formalin injection. One-way ANOVA test was used for comparison of all groups. P value <0.05 was considered significant.
Results: The difference in paw volumes of different groups was not significant in the second day. But in the third day, the most inflammation was in normal saline and least inflammation in sodium salicylate groups respectively. The aqueous extract of *A. arbusculinus* gum reduced the inflammation in rat paw in a dose dependent manner. The inflammation in group receiving extract (1000 mg/kg) was comparable with sodium salicylate. No adverse effect was observed from *A. arbusculinus* in animals during experiment period
Conclusions: The aqueous extract of the gum of *A. arbusculinus* reduced the inflammation in a dose dependent manner. In highest dose, the effect of the gum extract is similar to the effect of established anti-inflammatory drug, sodium salicylate and so the gum of this plant can used for producing new anti-inflammatory drug.

Keywords: *Astragalus arbusculinus*; inflammation; paw edema