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The effect of Allium ampeloprasum on nociceptive response intensity in diabetic rats

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Abstract

Background & Objective: Hyperalgesia is considered as one of the marked signs of subchronic diabetes mellitus that could affect the life style of the patients. Considering the evidence on antidiabetic effect of Allium ampeloprasum (AA), this study was designed to investigate the analgesic effect of Allium ampeloprasum on formalin-induced nociceptive response in streptozotocin (STZ)-induced diabetic rats.

Materials & Methods: 45 male rats were randomly divided into control, AA-treated control, diabetic, sodium salicylate (SS)-treated diabetic, and AA-treated diabetic groups. For induction of diabetes, STZ was used at a 60mg/kg dose. The treatment groups received oral administration of AA-mixed pelleted food (6.25%) for one month. After one month, for all animals, blood glocuse concentration and formalin test measured. Data analyzed with using student paird t-test and ANOVA.

Results: The results showed that diabetic rats exhibited a higher score of pain at both phases of the formalin test ($p<0.05$) and AA treatment for one month did cause an improvement in this regard ($p<0.05$). Meanwhile, SS administration significantly reduced pain score only at chronic phase of the test ($p<0.05$).

Conclusion: This study indicated that one month administration of Allium ampeloprasum could attenuate nociceptive score in an experimental model of diabetes mellitus.

Key Words: Allium ampeloprasum, Diabetes mellitus, Pain, Formalin test, Rat