

RESEARCH ARTICLE

Evaluation of Anti-inflammatory Effect of Topical Serratiopeptidase in Mice

ABSTRACT:

Proteolysis enzyme therapy plays a key role in treating a wide range of nutritional and genetic diseases. Serratiopeptidase is a proteolytic enzyme with pain-relieving and anti-inflammatory effects. It is applied topically to guarantee that the enzyme reaches the therapeutic activity.

A total of fifteen healthy adult male white mice were used in this study. They were divided into three groups. All mice have injected a formalin to induce edema in the mouse paw. The first group was left untreated control; the second and third groups were applied 1 and 2 percent serratiopeptidase ointment, respectively, topically to the mouse's right-hand paw.

Results: By analyzing Stage 1 licking time (pain reaction time) at 1 and 2%, the proportion of edema production and inhibition in the serratiopeptidase groups significantly differed from the appearance of the control group. The ointment made a substantial difference in serratiopeptidase concentrations (22.66 ± 1.45), (20.3 ± 2.6) having been applied at various quantities in when compared to just the ointment (61.66 ± 9.93) seconds. While the difference between different Serratiopeptidase ointment concentrations, in the first stage, the percentage of inhibition at the time of licking was (63.25%) and (67.07%) in Serratiopeptidase ointment (1.2%), respectively. In contrast, in stage 2, the percentage of inhibition at the time of licking was (37.24 %)(72.04%) when using a 2 % concentration.

Conclusion: Topical use of serratiopeptidase ointment was found to be effective. It contains anti-inflammatory properties as well as modest analgesic properties.