Abstract

Hydatidosis is an important disease of humans and animals and has a global spread. The hydatid cyst is important for public health and economic issues in many parts of the world. The aim of this study was to evaluate the effect of Tamarix Dioica leaf extract on inflammatory response induced by hydatid cyst protoscolices injection in mice. Tamarix Dioica leaves were collected from the desert of sistan region and were identified with Herbarium number 13229 in university of Mashhad. To perform the Invitro study after preparing the hydro alcoholic extract of the plant, dilutions of 1 to 10, 1 to 100 and 1 to 1000 were prepared and then protoscolices were exposed at 5, 10 and 15 minutes at concentrations indicated by the plant extract. The results were recorded. Results and data were analyzed by SPSS software version 23 using Chi-square statistical test. The mortality rate of protoscolices was significantly correlated with control group and $p < 0.05$ was considered as a statistically significant difference. The most protozoal scalping properties were from dilution of one to ten and one to one hundred, which resulted in a decrease of 100% of proto-scollexes after 15 minutes. The results of this study showed that with increasing the time of exposure to proto-scollexes with extract of Tamarix-dioica leaves. Proto-scoliosis increased. For Invivo study, 30 mice, aged between 6 and 7 weeks, with an average weight of 27 g, were randomly divided into three groups: Frist group as a control received Serum Physiology, second group receved hydatid cyct fluid and third group received hydatid cyct fluid plus plant oral extract.They were kept for Three months and after an austerity, in addition to physical examinations, a blood sample was taken to prepare the serum for serologic tests. The tests for measuring INTERLEUKIN 1-B and TNF-MDA were based on the instructions of the kit and the ELISA method was measured. A recent study has shown that leaf extract of Tamarix-deuica reduced the amount of INTERLEUKIN 1-B and TNF-a, MDA in the treatment group compared to the control and patient groups, and there was a significant correlation between the values. For data analysis, SPSS software version 23 was used for statistical analysis of one-way ANOVA: POST HOC Tukey. $P < 0.05$ was considered as a significant statistical difference. Finally, the results of this study showed that the hydroalcoholic extract of the Tamarix-dioica leaves of the Sistan region has a high protoscolexcidal strength. Therefore, due to the anti-parasitic effect of the hydroalcoholic extract of Tamarix Dioika, the extract of this plant can be The combined title is considered to have an anti-proto-scoliosis effect of natural origin And further studies have been done. Also, the results showed that injection of Tamarix-deuica leaf extract could reduce the inflammatory response in hydatid cysts in rats, and this decrease was less than those that were infected but did not receive the extract. There was a significant difference. Therefore, the conclusion can be drawn that prescribing Tamarix Dioica leaves extract is effective in reducing the inflammatory response caused by hydatid cyst infection.

Keywords: Hydatid cyst - Tamarix-dioica plant - Inflammatory response - Mice - Proto Scolex

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Effect of Tamarix dioica leaf extract on inflammatory response in mice induced by to hydatid cysts protoscolices

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