

EFFECT OF ETHANOLIC EXTRACT OF IRAQI PROPOLIS AND HYDATID CYST FLUID IN SOME IMMUNOLOGICAL PARAMETERS IN ALBINO MALE RATS INFECTED WITH PROTOSCOLICES OF ECHINOCOCCUS GRANULOSUS PARASITE

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ABSTRACT

The current study was conducted for the period from October 2014 / until September 2015 /, which aims to assess the effect of ethanolic extract for Iraqi propolis either alone or mixed with hydatid cyst fluid in the some immunological parameters of albino male rats infected with protoscolices of the *Echinococcus granulosus* parasite . Results of the examination of some immunological parameters indicate the impact of the treatments to increase the percentage rate of the of phagocytosis index and is significant at the level of probability of less than 0.05 was the highest in the seventh group, which amounted 36.63% compared to positive control, which amounted to 25.4%. The results also showed a significant rise at the possibility of less 0.01 and 0.05 in the percentage of T-rosette formation coefficient for bone, spleen, lymph nodes and was the highest in the seventh group, which amounted to 18.7%, 27.5%, 15.3%, respectively, compared to positive control, which amounted to 9.2%, 11.1%, 9%, respectively. And the results of the mitotic index showed significant increase at the possibility of less 0.01 and 0.05 in the percentage of mitotic index of bone, spleen, lymph nodes and the highest percentage in the seventh group, which was 15.9%, 32.8%, 28.93, respectively, compared to positive control, which amounted to 18.06%, 20.1%, 9.46% respectively. The results of single radial immunodiffusion assay to estimate the concentration of some immunoglobulins in sera of albino male rats showed that the impact of the treatments led to stimulate the humoral immune response through significant increase at the possibility of less than 0.01 in the immunoglobulin concentration rates IgA, IgG, IgM. The highest concentration in seventh group, which amounted to (450.6, 3040.4, 941.7) g /dl, respectively, compared to the positive control, which was (412.77, 1266.7, 183.43) g /dl, respectively. The conclusion from this study that the ethanolic extract of propolis very effective in stimulating cellular and humoral immunity in albino male rats infected with protoscolices of *Echinococcus granulosus* parasite.

KEYWORDS: Iraqi Propolis, Protoscolices, *Echinococcus Granulosus*, Phagocytosis Index, T-Rosette Formation Coefficient, Mitotic Index