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The Thesis Submitted For the Degree of M.Sc In the field of food hygiene and quality control

Frequent study of contamination of fertile hydatid cysts in slaughtered animals in Zahedan slaughterhouse in spring and summer 2019

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Abstract

Hydatidosis is a common disease between humans and animals and has a global spread. Hydatid cysts are important for public health and economic issues in many parts of the world. This study was conducted to determine the prevalence of hydatid cysts in 3586 livestock, which was carried out from April to September 2017 in Zahedan Industrial Slaughterhouse. Of these, 1,078 were infected with the hydatid cyst. During the slaughterhouse inspection process, all carcasses were inspected for hydatid cysts and the infected organs were transferred to the parasitology laboratory of the Zahedan Veterinary Organization for laboratory examination. In the laboratory, all the cysts obtained were examined in terms of size and type of cyst. After separating calcific and purulent cysts, sediment was prepared from other cysts after hydatid fluid discharge and then stained with 0.1% eosin solution. They were microscopically tested for fertility and sterility. In this study, the prevalence of hydatid cyst infection was determined with a 95% confidence interval using the Bootstrap method. The months of the year, age, sex, species, and indigenous or imported animals were considered as independent variables, and their effect on the prevalence of hydatid cyst infection was determined using the Kai square test. Due to the large amount of data in this study and in order to avoid the second type of error, the appropriate sample size was determined for this study and the data were weighted based on the determined sample size. Due to the lower age of the male animals than the female animals and to observe the net effect of sex, the age of the animals was controlled using the Cochran-Montel Hanzel test. Version 25 of SPSS statistical software was used for statistical analysis of data. A significant level of P <0.05 was considered. In this study, out of 2076 slaughtered cows, 654 heads (31.5%) out of 1027 slaughtered camels, 277 (27%) and among 330 slaughtered sheep. 138 head (41.8%) and 9 out of 153 killed goats (5.9%) had hydatid cysts. Also, in the age group of less than 2 years, the percentage was very low (1.2%) in the age group of 2 to 4 years (22%) and in (92.6%), which was statistically significant (p <0.001). Also, in this study, the rate of infection with hydatid cysts in native animals was 18.1% and the rate of infection with cysts in imported animals from Pakistan was 40.1%. In this study, infection with cysts increases with increasing age of animals, so that at the age of less than 2 years in the male sex is 1.2% and the female sex is 2.7% and at the age of 2 to 4 years the male sex is 20.2% and the sex The female was 38.4% and at the age of four, the male was 90.7% and the female was 94.4%. Statistically significant (P < 0.001) the prevalence of hydatid cyst infection in cattle was 31.5% in camels, 27.0% in sheep, 41.5% in sheep and 5.9% in goats. Also, the fertility rate in cattle lungs was 18.4% in camel lungs, 29.7%, but in the lungs, none of the livestock and sheep were born. The fertility rate in sheep liver cysts was 21.9% in goat liver, 12.5% in cow liver and 1.6% in camel liver.

Keywords: Cyst Hydatid, Echinococcus Granulose, Zeonose, Zahedan