University of Zabol

Graduate of School

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The Thesis Submitted for the Degree of M.Sc

(In the field of Veterinary)

Macroscopic and histopathological examination of liver and lung lesions in camels slaughtered in Zahedan slaughterhouse

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Abstract

Camels are multi-purpose animals that have long been of interest to humans, These animals are bred for the production of milk and meat, wool and leather, as well as for riding and transportation. The aim of this study was to evaluate the frequency of lung and liver lesions of camels slaughtered in Zahedan abattoir grossly and histopathologically; the effect of two factors of age and sex on the frequency of lesions was measured. In this study, after examining the liver and lungs of 400 slaughtered camels, the livers and lungs containing macroscopic lesions were recorded and then tissue sections were removed from different parts of them with a scalpel. These tissue sections were transferred into 10% formalin as fixative. After tissue fixation, they were prepared by histotechnical methods and stained by H&E method to obtain microscopic slides. These slides were then observed for definitive diagnosis with a light microscope. Among them, 143 lungs had lesions and histopathological results showed that the relative frequency of pulmonary lesions are(percent): hyperemia & emphysema(81.1each), atelectasis(61.5), purulent-fibrinopneumonia(28.7), bronchiolitis(25.2), purulent-bronchopneumonia(23.8), hemorrhage(22.4), pulmonary-edema(21.7), hydatid-cyst(19.6), interstitial-pneumonia(17.5), abscess(16.1), Pleuritis(12.6), fibrinous-bronchopneumonia & calcification(9.8 each), pleuropneumonia, granulomatous-pneumonia & bronchitis(9.1 each), bronchiectasis(8.4), infarction(4.9), fibrosis(4.2) and melanosis(0.7). Also, 120 livers containing lesions were identified, which are the relative frequency of liver lesions(percent): fatty-change(96.7), irregularity of Remac plates(55.8), telangiectasia(46.7), hydatid-cyst(45), hyperemia(40.8), necrosis(39.2), hepatitis(35), cirrhosis(34.2), hemorrhage(23.3), calcification(17.5), Bilirubin-accumulation(15), granulomatous-hepatitis(11.7), Bile duct hyperplasia & cholangiohepatitis(10.8 each), hepatocyte-regeneration(10), cholangitis(6.7), abscess & bile duct dilatation(5 each) and lipofuscin-accumulation(3.3). In this study, we found that bronchitis, which is a microscopic lesion of the lungs, was significantly associated with the age of camels and was more common in the young group of 1 to 6 years old. Also, the presence of macroscopic and microscopic lesions in camels's liver had a significant relationship with their sex, so that more macroscopic and microscopic liver lesions were observed in females. Among the microscopic lesions of the liver, the prevalence of lesions due to fat change, telangiectasia, necrosis and irregularity of Remac plates was significantly related to the sex of camels and these lesions were more common in female camels. It should be noted that the level of significance in all cases was considered $p<0/05$. Obviously, identifying the lesions in the organs of this animal and the diseases that cause it will make it easier to deal with these diseases and increase the efficiency of livestock production.

Keywords: Camel, Liver, Lung, Lesions, Histopathology, Slaughterhouse