

Ovine Enterotoxemia in Ahvaz Region, Pathological, Bacteriological, Serological and Molecular studies

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Received: 17.02.2019

Accepted: 09.06.2019

Abstract

Clostridium perfringens type D is the cause of an acute and fatal disease; called enterotoxemia which mostly infects sheep and goats. This study aimed to evaluate the pathological, bacteriological, serological and molecular aspects of this disease in sheep in city of Ahvaz. During 23 months, 20 suspected sheep (based on clinical history) were taken for routine necropsy and required specimens were prepared for complementary studies. In 50% of the cases, sudden death was reported as the most obvious clinical finding. The most common pathological lesions were endocardial hemorrhage (70%) interstitial pneumonia (65%) brain haemorrhage and edema (60%) and acute tubular necrosis (65%). Moreover, in 50% of the cases, glucosuria was also noted. The conventional bacteriological methods on the intestinal content showed 6 suspected strains of *C. perfringens* which in the PCR method, four were identified as type A and two as type C and D, (each one). The toxin detection in the intestinal content was performed using indirect Elisa test the results of which were consistent with PCR findings. Assuming the brain lesions and glucosuria as indicators of type D enterotoxemia, the disease was suspected at least 50% of the cases, which however didn't match with finding of the other tests, so it needs to be studied more. The findings of the present study revealed the importance of freshness of samples in the results of tests that can be used to trace *C. perfringens* and their toxins. Furthermore, considering the history of vaccination in most of the animals studied, the principles of vaccination in local farms are questionable.

Key words: Enterotoxemia, *Clostridium Perfringens*, Elisa, PCR, Pathology

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