

Study of morphology, topography, and histopathology of abomasal lesions of cattle: The association of intrinsic and extrinsic predisposing factors with prevalence of lesions

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Abstract

Abomasal lesions are one of the well-known factors affecting the health and production of the ruminant, most of which are sub-clinical, and generally unable to be detected. In the present study, the frequency of different types of abomasal lesions in slaughtered cattle of the Golshan industrial slaughterhouse, Khorramabad and its relationship with intrinsic and extrinsic risk factors was evaluated. Abomasum of four-hundred male and female cattle between 1 to 6 years old, were randomly examined to determine the presence of abomasal lesions, from the autumn of 2017 to the summer of 2018. After confirming the presence of the lesion, a tissue sample was obtained for histopathological evaluation. To investigate the relationship between lesions and risk factors, the Chi-square test and regression statistical model were used. The frequency of abomasal lesions was equal to 74.5% (95% CI: 79.2-31). The prevalence of lesions in male was lower than in female cows. The frequency of abomasal lesions has a direct and significant relationship with age. Moreover, the lowest and highest incidence also is related to animals younger than 2 years and older than 4 years old, respectively. There was a statistical relationship between the foreign bodies and the lesions, furthermore, in 39.25% (157 out of 400 cases) of the examined abomasum; the foreign bodies were also found. The frequency of abomasal lesions in summer, autumn, spring, and winter was equal to 87, 77, 70 and 64%, respectively; in addition, it was found that there was a statistically relationship between the occurrence of abomasal lesions and season. Histopathological findings showed that coagulative necrosis, cell infiltration and hemorrhage were directly related to the severity of the lesions and also the presence of condensed connective tissue between the abomasal lesions is an expected finding. Abomasal lesions are affected by the host and environmental risk factors, and there is a large-scale subclinical type of lesions in Lorestan province, which shows the role of the management-breeding system by increasing the incidence of lesions.

Key words: Abomasal lesions, Cattle, Topography, Morphology, Histopathology

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