Comparative evaluation of ultrasonography with clinical respiratory score in diagnosis and prognosis of respiratory diseases in weaned dairy buffalo and cattle calves

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Abstract:

Background Respiratory troubles have economic impacts in countries where livestock industry is an important segment of the agricultural sector, as well as these problems may cause significant economic losses for bovine producers. Various practical methods are used to assess diseases that affect the bovine respiratory system. Ultrasonography is a noninvasive tool that has been used frequently in diagnosis of various animal diseases. The present study was designed to establish whether thoracic ultrasonography is a diagnostic tool for detection of respiratory troubles in weaned buffalo and cattle calves, as well as to assess its prognostic value in comparison with clinical respiratory scores. Thirty five (15 buffalo and 20 cattle) calves were included. Twelve (6 buffalo and 6 cattle) clinically healthy calves were enrolled as controls. Results Based on physical examinations, clinical respiratory scores (CRS), ultrasound lung scores (ULS) and postmortem findings, animals were classified into 4 groups as pulmonary emphysema (n = 8), interstitial pulmonary syndrome (n = 7), bronchopneumonia (n = 12), and pleurisy (n = 8). The mean values of CRS and ULS were significantly higher in diseased calves (P

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