FREQUENCY OF RUMINITIS, LIVER ABSCESS AND PNEUMONIA IN SLAUGHTERED BRAZILIAN BEEF CATTLE RAISED IN FEEDLOTS

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Introduction: The feedlot system has increased 51.6% in the last six years in the Brazilian beef cattle industry. Although this system enhances the production can also predispose a higher incidence of diseases, such as rumen acidosis, liver abscess and pneumonia. So far, there is not a comprehensive study about the incidence of such diseases among Brazilian feedlot beef cattle.

Objective: To evaluate the frequency and the characteristics of ruminitis, liver abscess, and pulmonary macroscopic lesions, and to establish the relationship between these disorders in feedlot beef cattle.

Material and methods: A prospective study was carried out following the slaughtering of 1,617 feedlot beef cattle in 2007 (n=858) and 2008 (n=759). The frequency, size, number and location of abscesses in the liver were recorded in all animals; the rumen mucosa (n=1,397) was examined for the presence, type and surface area of ruminitis; the lungs (n=759) were also examined for detection of consolidation, evaluating the affected region, number of lobes and lesion score. Quí-square and odds ratios (OD) were calculated.

Results and discussion: The following frequencies were seen: liver abscess (3.3%), ruminitis (11.9%) and lung consolidation (8.3%). The abscesses were equally distributed in all hepatic regions; most abscesses (78.2%) were small (< 2.5 cm) and present in low number (1-2/liver). Four different types of ruminitis were seen: scars (54.2%), adherent contents (21.1%), clumped villi (13.2%) and erosive ruminitis (8.4%). In many cases (32.5%) ruminitis spread to an area larger than 300 cm². Cattle with ruminitis had a very high risk of contracting liver abscesses (OD=12.7) and lung consolidation (OR= 5.8), principally with erosive ruminitis. Lung consolidation was mostly seen in the ventral (71.4%) than dorsal lobes (28.6%), in the left (59.8%) than right lobes (40.2%); in most cases a single lobe was affected (54.0%) and less than 50% of the lobe was consolidated (66.6%). Liver abscesses were commonly seen in cattle with a single lobe (OD= 3.0) and when less than 50% of this lobe was consolidated (OR=11.6).

Conclusion: The set of results indicated that there is a direct relationship between the occurrence of these disorders in feedlot cattle starting with ruminitis. The influence of pulmonary consolidation preceding liver abscesses is real, but needs further studies to evaluate its pathogenesis.

Keywords: Bovine, feedlot, ruminitis, lung consolidation, liver abscess