PREVALENCE AND RISK FACTORS ASSOCIATED TO _TRITRICHOMONAS FOETUS_ INFECTION IN MOUNTAIN BREEDS OF BEEF CATTLE FROM NORTHERN SPAIN

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Bovine trichomonosis is a venereal disease considered an important cause of early reproductive failure in beef cattle kept under extensive management conditions. The purpose of this study was to investigate the prevalence and risk factors associated to _Tritrichomonas foetus_ infection in bulls from two representative Spanish beef cattle breeds usually managed in extensive conditions in mountain areas: Asturiana de la Montaña (AM) and Asturiana de los Valles (AV). In the traditional management of these breeds, putative risk factors associated to _T. foetus_ infection are present, such as the use of natural-breeding, shared bulls and grazing of cattle in communal pastures during summer time. Preputial smegma samples were collected with a plastic scraper prior to mating season. Samples were cultured in InPouch™ media and all suspect cultures were confirmed by a PCR test. In addition, epidemiological data were collected by means of a standard questionnaire. _T. foetus_ infection was demonstrated in 31.1% (32/103) and 41.5% (27/65) of the AM bulls and herds tested, respectively. In infected herds, a significant deleterious effect on reproductive efficiency was found. When the age of infected animals was analyzed, AM bulls older than 3 years (39.7%) were more likely to be infected than young bulls (16%) (P< 0.05; OR=3.5, CI=1.1, 11.2). Control measures were accomplished by removing infected AM bulls and the herd-prevalence decreased to 17.5% (14/80) (P< 0.01) in the next season. In AV breed, the percentage of infected bulls (4.4%, 7/158) and herds (5.1%, 6/118) was significant lower than in AM breed (P< 0.05). When comparing sampling population age, the percentage of AM bulls older than 3 years was higher than in AV animals (P< 0.05, OR=2, CI=1.1, 3.8), indicating that older bulls increased the likelihood of disease. The results reported here highlight the importance of the disease in beef cattle kept in extensive conditions in Northern Spain and the need for including bovine trichomonosis in the differential diagnosis of early reproductive failure. Specifically, the situation is complex in the AM breed since _T. foetus_ prevalence was still high after culling of infected bulls. This fact could be due to the existence of older bulls or other risk factors such as communal grazing or sharing livestock of unknown status. More studies should be accomplished to investigate the disease in other geographical areas and beef breeds in Spain.