

Bacterial isolates and factors associated with infection and outcome in calves with septic arthritis: 64 cases (2009-2014)

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Introduction

Lameness is an important problem in cattle and is often associated with an important economic loss in beef and milk production. Because of the pain, it is becoming an important welfare issue and represents 1 of the major culling causes in dairy herds. The joint is the second most important cause of lameness after the digit.

There is in an important lack in the literature regarding prognosis and factors associated with septic arthritis in calves. The objective of the study is to determine clinical characteristics, clinicopathologic data, and bacterial culture results associated with septic arthritis in calves less than 180 days old and to establish long-term prognosis of the condition.

Materials and Methods

The study was a retrospective study (n=64 calves). Medical records (2009-2014) were reviewed and calves less than 180 days old with confirmed infection of at least 1 joint identified. Data retrieved included signalment, clinicopathologic information, radiographic finding, bacterial and PCR results, and outcome. Data were analyzed for all calves as a single population and for calves stratified into 2 age groups (less than or equal to 28 days, 29 to 180 days). Positive

outcome was defined as reaching performances according to the owner's expectations 1 year after hospital discharge.

Results

Mean \pm SD age of all calves was 24.5 ± 32.7 days (range, 0 to 161 days). Mean \pm SD number of joints affected per calf was 1 ± 0.79 (range, 1 to 5 joints). Thirty-two of 54 (59.3%) calves had a positive long-term outcome. One synovial sample was submitted for each calf. Thirty-eight (59.5%) calves had an etiologic agent identified. Of the 49 bacterial isolates identified, 20 (40.8%) were Gram-positive, catalase negative cocci and 13 (26.5%) were *Mycoplasma*. Positive long-term outcome was positively associated with synovial leukocyte concentration and negatively associated with number of affected joints, blood neutrophil concentration, and fibrinogen.

Significance

Results indicated the main bacterial agents responsible for septic arthritis in calves, which may be helpful in empirical treatment. Also, the positive association between positive long-term outcome and synovial leukocyte concentration may have a prognosis and economical value in the evaluation of treatment options associated with the condition.

Short interval from calving to milking is essential for high IgG content in colostrum

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Introduction

Colostrum of good quality is pivotal for the health and growth of the newborn calf. In order to ensure enough mass of IgG fed to the calf, the recommendation is to feed 3 to 4 L of colostrum with an IgG concentration of >50 g/L within 4 to 6 hours after parturition. However, the content of antibod-

ies in colostrum decreases as time passes from calving, and it is therefore important to milk as soon as possible after parturition. This is manageable to reach this goal on larger farms, where the milking system is used most of the time. However, at smaller farms, where milking is done in a few shorter periods each day, an extra effort must be made to milk fresh cows as soon as possible after calving. The aim of