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DIAGNOSIS OF PODODERMATITIS IN ANGUS CATTLE

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Abstract

Cattle are among the most economically important livestock species due to their role in milk and meat production. This study was conducted on a farm housing 160 Angus cattle, where 64 animals were diagnosed with acropodium pathologies. A subset of 9 affected animals (4 males and 5 females) was selected for detailed clinical examination. The most frequent lesion observed was Rusterholz ulcer (n=4), followed by individual cases of acute septic pododermatitis, circumscribed septic pododermatitis, interdigital dermatitis, interdigital hyperplasia, bulbar necrosis, and heel erosion. Grade 3 lameness, indicating severe locomotor impairment, was observed in one animal (11.1%) diagnosed with diffuse septic pododermatitis, while grade 2 lameness was identified in three animals (33.3%). These results highlight the importance of early detection and appropriate management strategies for podiatric disorders in cattle.

Key words: *pododermatitis, cattle, diagnosis, therapy.*

INTRODUCTION

Cattle are one of the most economically important species due to the numerous farming opportunities, including milk and meat production. Against a background of high demand for animal products, especially beef and veal, their exploitation has increased significantly, leading to changes in their physiological and metabolic parameters, exposing them to various diseases, especially in intensive farming systems (Ball, 2004; Bîrțoiu, 2016; Bîrțoiu and Seiciu, 2006).

MATERIALS AND METHODS

The study was conducted on a farm with a herd of 160 Angus cattle. Of these, 64 animals exhibited signs of acropodium pathologies. Nine cases were selected for dynamic follow-up. Each animal underwent a general clinical examination followed by targeted podiatric evaluation. Prior to examination, animals were secured in a restraining cage for safety.

Animals were housed in a semi-enclosed paddock, featuring a shaded resting area and access to open pasture. The bedding consisted of a mix of earth and straw. The feeding and watering stations were located on one side of the paddock, adjacent to the main alley. The diet consisted of alfalfa hay, silage, and grain meals (wheat, corn, soybean), provided twice daily. During the summer, the animals had almost exclusive access to pasture grass.

RESULTS AND DISCUSSIONS

In the present study, 9 animals were identified with acropodium pathologies, of which 4 were males (48%) and 5 were females (52%).

Figure 1. Rusterholz ulcer

Figure 2. Acute septic pododermatitis

Figure 3. Interdigital dermatitis and horn erosion

Figure 4. Diffuse aseptic pododermatitis

Figure 5. Circumscribed septic pododermatitis and bulbar necrosis

Figure 6. Rusterholz ulcer and interdigital dermatitis

This distribution indicates a slight female predominance, suggesting a mild predisposition to pododermatitis among females in this breed (Figure 7) (Amory et al., 2008, Amory et al., 2004).

The graphical representation of the type of pododermatitis diagnosed in our study (Figure 8) shows an increased incidence of Rusterholz ulcer (n=4), while the remaining pathologies: acute septic pododermatitis (n=1), circumscribed septic pododermatitis (n=1), interdigital dermatitis (n=1), and interdigital hyperplasia and bulbar necrosis (n=1). There is, however, also a diagnosis of heel erosion, a common pathology caused by horn wear in the most stressed area of the hoof (Figures 1-6).

Figure 9 illustrates the degree of lameness in the patients included in the present study. Grade 3 lameness, i.e. the most severe form of the disease, was recorded in only one patient diagnosed with diffuse septic pododermatitis (11.11%), due to the depth of infection at this level, while grade 2 lameness with moderate locomotor discomfort was recorded in 30% of the patients (n=3).

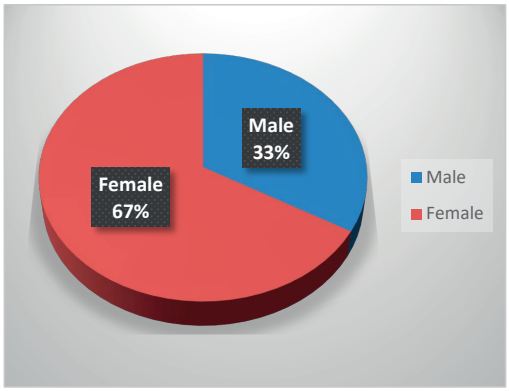

Figure 7. Gender distribution of affected cattle

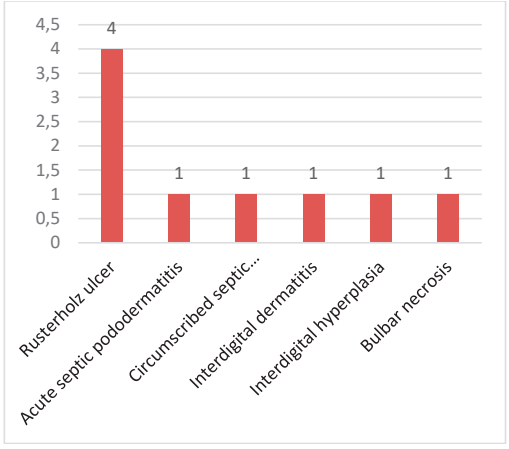

Figure 8. Distribution of diagnosed podiatric pathologies

Rusterholz ulcer was the most frequently diagnosed lesion (n=4), accounting for 44.4% of cases. Other identified conditions included acute septic pododermatitis (n=1), circumscribed septic pododermatitis (n=1), interdigital dermatitis (n=1), interdigital hyperplasia with bulbar necrosis (n=1), and heel erosion (n=1). Heel erosion, commonly resulting from excessive horn wear, was also observed in one animal.

Lameness severity was assessed and categorized according to a standardized grading system. Grade 3 lameness, indicative of severe locomotor dysfunction, was noted in a single animal (11.1%) diagnosed with diffuse septic pododermatitis. Grade 2 lameness, reflecting moderate discomfort and locomotor restriction, was identified in three animals (33.3%).

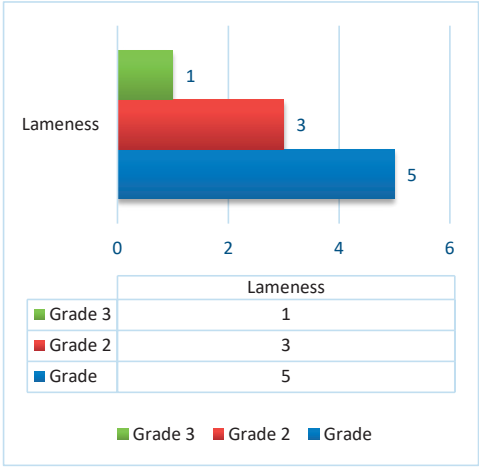

Figure 9. Lameness grading in affected animals

These findings illustrate the clinical diversity of pododermatitis lesions in Angus cattle and highlight the potential impact of deep infections on animal mobility. The observed distribution suggests that Rusterholz ulcer may be the predominant form of podiatric pathology in this breed. The slight predominance of affected females may warrant further investigation, although the small sample size limits the strength of this inference (Chase et al., 2017, Clarkson et al., 1996, Murray et al., 1996).
Prompt diagnosis and intervention remain critical in minimizing the progression of hoof lesions, preventing lameness, and enhancing overall animal welfare. The study emphasizes the necessity of implementing routine health surveillance and tailored treatment protocols in herd management.

CONCLUSIONS

This study underscores the clinical manifestations and distribution of pododermatitis in Angus cattle. Rusterholz ulcer emerged as the most frequently diagnosed

condition, followed by several distinct lesions affecting hoof integrity. Severe lameness (grade 3) was identified in a single case, whereas moderate lameness (grade 2) was observed in approximately one-third of the affected animals. A slight predominance of cases in females was noted, although the limited sample size warrants cautious interpretation. These findings highlight the critical role of early diagnosis, preventive strategies, and timely intervention in the effective management of hoof pathologies and the promotion of animal welfare.

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