Lameness in dairy cows: using gait score as a predictor for claw lesions

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Early detection of lameness is critical for optimizing treatment plans and reducing economic loss. It is commonly thought that lameness relates directly to the occurrence of either infectious or non-infectious claw lesions. The intent of our study was to evaluate the use of gait scoring as a tool to identify cows with claw lesions. Materials and Data were collected on 80 free stall dairy farms. It included video recordings to assess gait score by trained observers of 40 Holstein cows from each herd. Limping (L), asymmetric steps (A) and head bob (H) were the 3 clinical signs recorded. To categorize a cow as lame, the clinical sign L had to be present. Claw lesions were identified by 7 trained hoof trimmers and recorded using a computerised system (Hoof Supervisor®). Gait scores were recorded within 4 weeks before the hoof trimmer’s visit. Not all gait scored cows were trimmed. Association between lameness and the presence of claw lesions was analyzed using Chi-square statistics. Sensitivity and specificity were calculated to demonstrate the ability of gait score to identify the presence of claw lesions. Preliminary analysis of 1,370 cows showed that 18.6% were clinically lame. Overall, no lesions were found on 63% of the trimmed cows, 24% had one and 13% had more than one claw lesion. Digital dermatitis was the most prevalent claw lesion (35%), followed by sole ulcers (16%), white line lesion (16%) and sole haemorrhage (9%). A alone detected 49%, L alone 43%, and H alone 41% of the cows with claw lesions. However, by combining the clinical signs A+L+H a sensitivity of 70% and a specificity of 60% were achieved. There is limited value in the use of gait scoring as a tool for early identification of claw lesions.