

Prevalence of sole haemorrhages and its correlation with subclinical and chronic laminitis in dairy cows

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Abstract

Prevalence and risk factors of laminitis were determined in 300 dairy cows from 29 zero-grazed and 3 pasture-grazed dairy farms in Nairobi and the peri-urban districts. Lameness was assessed using a universally recognized locomotion scoring system. Claws were examined and 1-2mm thick layer of the horn of the sole was trimmed-off to further expose underlying lesions. Location of lesions on the under-side of the claws was recorded corresponding to 6 universally recognized zones. Prevalence of subclinical and chronic laminitis was 49.3% and 21 % respectively. While sole haemorrhages were recorded in 82% of the 70.3% of the cows with laminitis (both subclinical and chronic), it was nevertheless present in all the 49.3% of the cows with subclinical phase of laminitis. Haemorrhages were categorized into 5 universally recognized scores. Haemorrhages in zone 4 of the claw under-side were frequently associated with subclinical laminitis while those in zones 2, 3 and 6 were frequently associated with chronic laminitis. Slight to moderate (score 1 and 2) haemorrhages were significantly correlated ($X^2 = 18.01$, $P < 0.0001$) with subclinical laminitis. Moderate to severe (score 2 and 3) haemorrhages were significantly correlated ($X^2 = 33.08$, $p < 0.0001$) with chronic laminitis. Sole haemorrhage which is made clearer through horn trimming can reliably be used to diagnose laminitis.