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Claw lesions predict lameness in breeding sows

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Claw lesions are very common in pigs. Severe claw lesions can cause lameness (Anil *et al*., 2007., Penny *et al*., 1963; Dewey *et al*., 1993), a welfare concern, and a major reason for early removal of sows from breeding herds. Housing conditions and management practices may be associated with the development of claw lesions. It is important to understand the association between claw lesions and lameness in order to minimize the incidence of such lesions and to reduce removal of sows for lameness. The objective of the present study was to analyze the association of different types of claw lesions with lameness in breeding sows.

Claws of 771 sows in a commercial breeding herd in Minnesota were individually examined for lesions on day 110 of gestation when sows were in farrowing stalls. Lesions included erosions, cracks, and overgrowths. Areas on the claw were classified as side wall, heel, sole, heel-sole junction, white line and toe. Lesions were scored on a scale of 0 (no lesions) to 4 (severe). The final score on each area was obtained by multiplying the number of lesions by the severity of these lesions. A multivariate logistic regression analysis was performed (Proc Logistic, SAS v 9.1) to assess the association of lesion scores (less than median vs. ≥ median) on different claw areas with lameness (lame vs. non-lame). The lesion scores on different claw areas of lame and non-lame sows were compared using Kruskal-Wallis tests.

Lesions on the heel and the white line were associated with lameness whereas overgrown heel, lesions at heel-sole junction and sole lesions were not associated with lameness. Sows with less than median heel lesion scores had 34% lower ($P \leq 0.05$) likelihood of being lame. Similarly, sows with less than median white line lesion scores were less ($P \leq 0.05$) likely to be lame (Odds ratio 0.689). Sows with less severe side wall lesions tended to be less likely (Odds ratio 0.686) to be lame ($P = 0.06$). There were differences ($P \leq 0.05$) between lame and non lame sows in terms of lesion scores on side wall and white line. Lame sows had higher scores on these areas. Sole lesion scores also tended to be different between lame and non-lame sows ($P = 0.06$).

The present finding of lower odds of lameness in sows with less than median scores for heel, white line and side wall lesions and finding of significant differences in lesion scores among lame and non-lame sows may add confirmation to the link between claw lesions and lameness.

References

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