

Acute behavior of dairy goat kids administered lidocaine injections, topical EMLA cream or meloxicam prior to cautery disbudding

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Introduction

Cautery disbudding causes acute and post-operative pain, but pain relief is seldom provided when disbudding dairy goat kids. The objective of this study was to evaluate the acute behavioral response associated with (1) lidocaine compared with saline injections and (2) lidocaine injections plus a topical mixture of lidocaine and prilocaine (EMLA) cream and meloxicam before cautery disbudding of dairy goat kids.

Materials and Methods

A total of 60 doe kids were randomly allocated to 1 of 6 treatments: (1) a ring block using 1% lidocaine (DBLA) 20 min before disbudding, (2) saline injected (DBSA) 20 min before disbudding, (3) EMLA cream rubbed into the buds 1 h before disbudding (DBEM), (4) oral meloxicam 1 h before disbudding (DBMEL), (5) disbudding without pain relief (DB) and (6) handled but not disbudded (HAND). Behavior during treatment was recorded using a video camera placed approximately 4.9 ft (1.5 m) in front of the operator. The total frequency of rump movements, tail shakes and vocalizations (mean \pm SED) were analyzed using a linear mixed model with treatment as the fixed variable and kid, age and weight as random variables.

Results

Rump movements, tail shakes and vocalizations were higher in DB (6.4 ± 0.8 , 8.1 ± 1.2 and 11.3 ± 1.6 no.) than HAND kids (2.4 ± 0.8 , 2.1 ± 1.2 and 3.8 ± 1.6 no.) ($P \leq 0.05$). Rump movements and tail shakes of DBLA (5.5 ± 0.8 and 6.9 ± 1.2 no.) and DBSA kids (5.6 ± 0.8 and 7.2 ± 1.2 no.) were no different to DB kids ($P > 0.10$). Vocalizations of both DBLA and DBSA kids (7.1 ± 1.6 and 7.9 ± 1.6 no.) were lower than DB kids ($P \leq 0.05$). Rump movements, tail shakes and vocalizations of DBEM (5.7 ± 0.8 , 6.3 ± 1.2 and 11.1 ± 1.6 no.) and DBMEL (5.3 ± 0.8 , 8.0 ± 1.2 and 9.1 ± 1.6 no.) were no different to DB kids ($P > 0.06$).

Significance

These results indicate that lidocaine injection may not reduce pain associated with cautery disbudding of dairy goat kids. Additionally, EMLA cream and meloxicam appear to have no effect on reducing acute pain associated with disbudding of dairy goat kids. Further research on efficacious pain relief for cautery disbudding of dairy goat kids is required.