

Practices for the disbudding and dehorning of dairy calves by veterinarians and dairy producers in Ontario, Canada

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Introduction

Disbudding and dehorning (DD) dairy calves are common management procedures performed on-farm. Appropriate DD practices are important for the welfare of the calf, as well as public perception of the dairy industry. The objective of this study was to build on a 2004 survey of bovine veterinarians and dairy producers in Ontario (Misch et al., 2007) to determine if DD protocols had changed over the past decade, and to examine factors associated with the adoption of pain-control practices.

Materials and Methods

An online survey (Qualtrics, 2005. Provo, UT), with an option to participate via telephone, was conducted in the fall of 2014. Members of the Ontario Association of Bovine Practitioners (n=238), and a subset of licensed producers of the Dairy Farmers of Ontario (n=603, stratified by 15 geographic zones) were invited to participate. Ninety-three veterinarians (39%) from 51 clinics (63%) and 165 dairy producers (27%) completed the survey.

Results

Ninety-four percent of responding veterinary clinics reported veterinarians or veterinary technicians performed DD for a mean of 29% (SD=20) of their dairy clients. Ninety-six percent of veterinarians reported training producers in appropriate DD methods, including local anesthetic use. Of veterinarians disbudding calves <4 weeks of age, 99% used local anesthetic, 56% used a sedative, and 50% used an NSAID. Of veterinarians disbudding calves 4-8 weeks of age, 99% used a local anesthetic, 61% used a sedative, and 54% used an NSAID. Of veterinarians performing DD in calves >8 weeks of age, 97% used a local anesthetic, 66% used a sedative, and 59% used an NSAID. Injectable meloxicam accounted for 89% of all NSAIDs used. Of veterinarians practicing over 10 years, 72% reported changing DD practices since 2004.

Common changes included: use/increased use of an NSAID (60%), use/increased use of sedation (34%), and use/increased use of local anesthetic (29%). Dairy producer respondents had a mean age of 44 years old (SD=13, range=16-74). Farms had from 20-450 milking cows (mean=82, SD=71), with 54% in tie-stall housing and 44% in free-stalls. Seventy-three percent of farms reported performing DD themselves; the remaining 27% reported having a veterinarian for this procedure. Of producers performing DD themselves, 62% used a local anesthetic, 38% used sedation, and 24% used an NSAID. Producers disbudded a mean of 28% (SD=41) of calves <4 weeks of age, 36% (SD=41) between 4 and 8 weeks of age, and 36% (SD=44) >8 weeks of age. Sixty-three percent of producers reported changing DD practices in the past 10 years. Common changes included the addition of local anesthetic (60%), performing DD at a younger age (30%), the addition of sedation (23%), or the addition of an NSAID (17%). The most common influence cited for changes was the herd veterinarian (73%). Factors associated with use of local anesthetic by producers were assessed in a logistic regression model. Positive associations included: herd health visits every two weeks or sooner (OR=3.6, P=0.03) and citing online resources as important in on-farm decision-making (OR=3.1, P=0.03).

Significance

Although use of an online survey might have resulted in some selection bias towards younger and more educated dairy producers, the use of local anesthetic in this survey was far higher than previously reported (62% vs. 22%). Nonsteroidal anti-inflammatory use by veterinarians was also far higher than previously reported (59% vs. 1.5%). A strong relationship between producer and veterinarian was associated with the adoption of pain-control. Veterinarians can clearly play a key role in improving DD practices for dairy calves. Identifying factors associated with best practices may help veterinarians target appropriate educational opportunities for their dairy clients.