research

Pain reduction during calf disbudding

Combining local anesthesia and NSAID analgesics helps reduce pain associated with disbudding

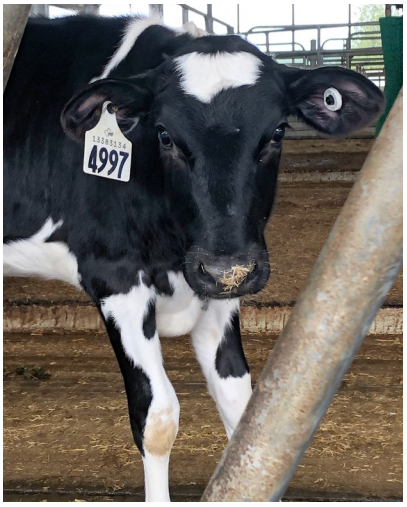
By Mya Kidson

To combat the pain associated with horn bud removal, University of Guelph researchers have found a method that makes calves more comfortable.

U of G Prof. Charlotte Winder and PhD candidate Cassandra Reedman, from the Department of Population Medicine, have found that administering local anesthesia with non-steroidal anti-inflammatory drug (NSAID) pain relievers is the most beneficial combination to reduce pain caused by caustic paste disbudding in young calves.

"Horn removal is a common procedure on dairy farms," says Winder. "It reduces the risk of injury associated with horns to other cattle or the farm staff."

Disbudding calves at an early age can minimize the health risks



and stress associated with the procedure. When a calf is very young, disbudding can be done either by caustic paste (chemical burn) or cautery (thermal burn), to destroy the horn-producing cells of horn buds to prevent growth. Little research has explored best pain control practices for caustic paste disbudding for young calves.

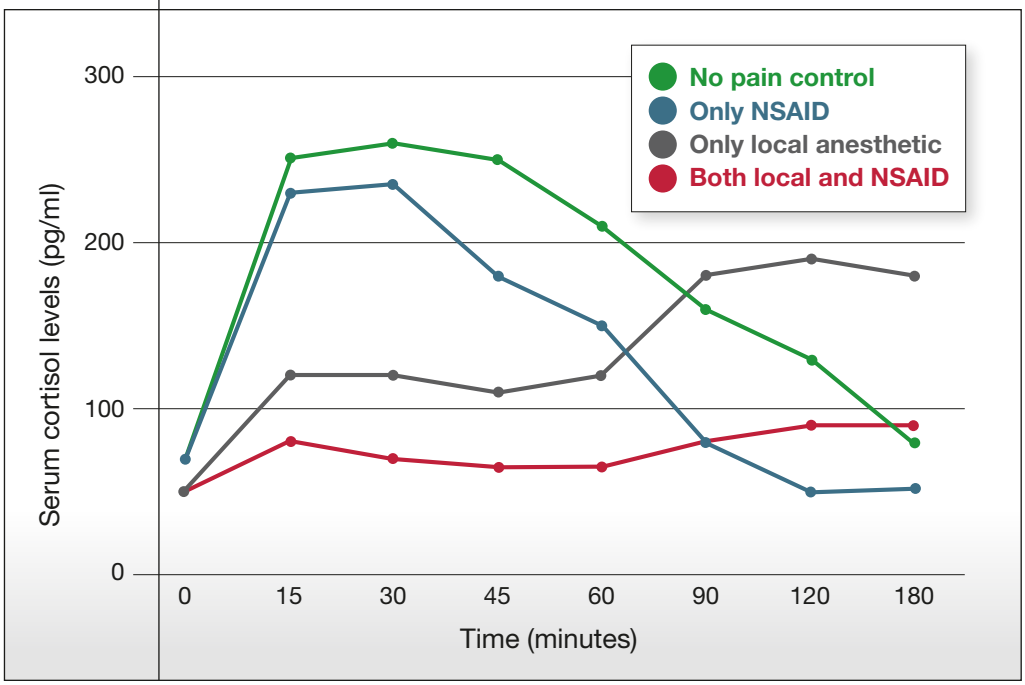
Disbudding can be unpleasant and stressful for the calf without pain-reducing methods to manage discomfort.

One of the ways that researchers can measure acute stress is through levels of serum cortisol, a stress hormone.

Winder and Reedman compared calves disbudded without pain control, with just local anesthetic (lidocaine), with just an NSAID (meloxicam), and with both medications given together. They also had a control group which was not disbudded.

They found that using either lidocaine or meloxicam alone wasn't as effective at reducing serum cortisol levels, compared to when they were used together. The combination of lidocaine and meloxicam greatly reduced serum cortisol levels in comparison to no pain control.

Because disbudding is a necessary procedure for safety, this research finding is significant in the further optimization of calf wellbeing.



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Further reading

journalofdairyscience.org/article/S0022-0302(20)30432-X/fulltext

Dehorning fact sheet from OMAFRA:
omafra.gov.on.ca/english/livestock/dairy/facts/09-003.htm

For more information, Prof. Charlotte Winder, Dept. of Population Medicine, winderc@uoguelph.ca

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