
DAIRY NEWSLETTER

Dystocia Pain Control for Cows and Calves

Calving is one of the most stressful periods in any dairy cow's life due to the simultaneous stress of parturition, social changes, feed changes, milk production demands and immunosuppression. Any increased stressor at that time can tip the balance towards fresh cow diseases such as ketosis, mastitis and displacements. **Dystocia** (difficulty or abnormality at any stage in labour) is one of the most common stressors seen in the modern dairy cow at the time of calving. Reports of dystocia rates in North America vary from anywhere between 10-30%, with higher rates of dystocia seen in heifers compared to cows. Cows that experience dystocia have an increased likelihood of short term outcomes such as: trauma, uterine disorders and death. Long term outcomes associated with dystocia include: decreased milk yield, decreased fertility and increased cull risk. In addition to causing increased risks to the cow, dystocia is also associated with issues in calf health and survival. Calves with difficult births experience an increased rate of stillbirth, increased mortality before 30 days of age, increased likelihood of respiratory and digestive diseases and decreased subsequent heifer milk yield. Pain caused by dystocia is one of the most important contributing factors to many of these cow and calf problems. In order to combat the effects of pain, the use of a non-steroidal anti-inflammatory drugs, such as meloxicam (trade names: Metacam, Meloxidryl), are appropriate for both the cow and calf.

Pain management in the cow

A recent study published in December of 2018 evaluated the use of oral meloxicam at the time of calving. A single dose of oral meloxicam (trade name: Solvet oral meloxicam) was used in half the cows in the study, the other half receiving a placebo. **Meloxicam-treated cows produced 0.64kg/day more milk**, had lower odds of having subclinical mastitis at first test (based on SCC) and a reduced rate of culling (46% less likely to be culled by 60 days in milk). These findings support that using meloxicam to control pain and inflammation at that time of calving can mitigate the risks of fresh cow problems. Appropriate NSAIDs that could be used in the place of oral meloxicam include injectable meloxicam (trade names: Metacam, Meloxidryl), flunixin meglumine (trade names: Flunizine or Banamine) and ketoprofen (trade name: Anafen)

Pain management in the calf

The use of meloxicam in calves post-calving was studied in January of 2016 at the University of Guelph. Calves received at birth an injection of meloxicam or a placebo. **Calves that received meloxicam had a significantly higher vigor score, suckling reflex and greater milk intake** at the first feeding compared to calves treated with the placebo. These findings show the importance of controlling pain in newborn calves, especially those that have experienced dystocia. Any of the NSAIDs mentioned above could also be used in calves, but meloxicam is the most cost effective as it has the longest coverage and milk withdrawal is not an issue.

Take-home message: Dystocia is a common, painful event in a dairy cow's life that can lead to fresh cow and calf health problems. The use of NSAIDs to control pain at the time of calving can have favourable outcomes in both the cow and calf.