

Mastitis Hurts! Lessons Learned Upon Becoming a Mother

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In 2015, I became a mom. There's no shortage of calving jokes when a cattle veterinarian has a baby and I found most of it to be only too true. But having experienced pregnancy, parturition and lactation, I can't help but think about the life of a production animal a little differently. I haven't had any radical changes in my animal use philosophies, but perhaps I have a little more sympathy for the physiological challenges dairy cows face.

My increased sympathy has a lot to do with changes in the way I think about animal pain. My situation is not unique; surveys of veterinarians' attitudes to pain management have identified differences in perceived pain among male and female veterinarians. A 2011 survey of American bovine practitioners found female veterinarians considered caesarian sections, castration, dehorning and toxic mastitis as more painful for cattle than male veterinarians who were surveyed¹.

My personal experience only relates to mastitis so I will focus on that. Cattle are such resilient creatures and to see how quickly this disease weakens a dairy cow is pretty convincing that they are severely ill and likely in pain. My own experience was pretty similar, within hours of feeling a little bit sore, I found myself in an emergency room with a high fever, chills, shakes, discolouration to my skin and in bad need of hydration. Several days later when I was on the road to recovery, all I could think was "how can I convince every producer to eliminate EVERY risk factor we know of for this disease?!" Because it's awful and surely something we have tools to do better.

With hot weather upon us, the highest risk period for environmental mastitis is here. Prevention of mastitis is a balance between minimizing the infection pressure in the environment and increasing the resistance of the cow. My colleague recently reviewed environmental mastitis prevention in this column so I will refer you to his article for more detail here.

Briefly, to minimize the risk of infection from the environment, providing clean dry stalls with sufficient bedding is critical. Frequent removal of wet and soiled bedding helps keep bacterial growth to a minimum and keeping the barn well ventilated will also limit growth of bacteria. Other areas such as cross-overs alleys, walkways, waters and yards should be kept free of manure to prevent manure from splashing up on the udder. Those in the milking parlour should make sure teats are clean, sanitized, stimulated and dried before attachment of the milking unit.

What I would like to focus on is pain management for sick cows. When a cow is afflicted with severe clinical mastitis, pain relief should be a part of the treatment plan. There are several Nonsteroidal Anti-inflammatory Drugs (NSAIDs) labelled for dairy cattle in Canada that are appropriate. There is good research to show including an NSAID will relieve pain as well as reduce udder edema and body temperature for cows with severe clinical mastitis². Moreover, we are beginning to understand that pain relief medication shouldn't be reserved for only the worst affected cases. New research shows there are benefits to including pain relief for mild to moderate cases of mastitis as well. Cows that received an NSAID in conjunction with antimicrobial therapy had higher rates of bacteriological cure and increased conception rate to the subsequent breeding³.

I encourage you to consult with your herd veterinarian to ensure medications are given properly and appropriate withdrawals are observed. The route of injection and withdrawals vary between

NSAIDs so one needs to be aware of the label for the individual product your veterinarian recommends.

My own biological parallel tells me pain relief needs to be a part of the treatment. Trust me, your cow thinks so too.

References:

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2. Fitzpatrick, C.E., Chapinal, N. Petersson-Wolfe, C.S., DeVries, T.J., Kelton, D.F., Duffield, T.D., and K.E. Leslie. 2013. The effect of meloxicam on pain sensitivity, rumination time, and clinical signs in dairy cows with endotoxin-induced clinical mastitis. *J. Dairy Sci.* 96: 2847-2856.
3. McDougall, S., Abbeloos, E., Piepers, S., Rao, A.S., Astiz, S., van Werven, T., Statham, J., and N. Pérez-Villalobos. Addition of meloxicam to the treatment of clinical mastitis improves subsequent reproductive performance. *J. Dairy Sci.* 99: 2026-2042.