



nantwich
farm vets LLP

NEWSLETTER

SEPTEMBER

2020

This Month:

Joining XLVets
Team News
Abomasitis in Calves
Meloxicam and Disbudding



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AN INTRO TO XLVETS...



August has been an interesting month for sure. The combination of wet weather, thunder storms like we have not seen for years and very hot weather has caused lots of issues. We seem to talk about heat stress more and more each year. With all the problems this month and predictions of hotter and hotter summers it's a problem that doesn't seem to be going away. A lot of people have invested in fans and other cooling methods, which are a massive help but don't always cure the problem. Fertility seems to have held up ok until recently but I'd expect to see a bit of a drop next month with cows served in the heat struggling with conception. It is possible for fertility to be a problem for up to three months after a hot spell if cows were badly affected.

Many farms have seen big yield drops, as intakes have been much reduced due to hot weather and there have been problems with heating forage. Hopefully this is starting to come back now. Mastitis has also been a big issue; heat stress, muddy gateways, warm and wet conditions ideal for bugs, cows crowding under trees and around water troughs have all contributed to this.

In other news we are very pleased to be able to tell you that we are now members of XLVets. XLVets is a group of independently owned, progressive vet practices working together to improve the service we offer to clients. We are not attracted by the corporate model and believe independent practice enables us to offer our farmers the best service we can. Becoming members of a larger group of practices has the benefits of increased knowledge sharing, help with industry incentives, and gives us access to resources for training for both us and you to ensure we are all progressing in the work we love. This extra string to our bow will also enable us to continue to attract the best vets to Nantwich, especially at a time when farm vets are in short supply.

Another big incentive to join is getting further ahead of the game in terms of awareness of product shortages and improved acquisition of alternatives so we can offer more stability in supply.

We are excited about this development and are sure you will see the benefits in the months and years to come!

John

MELOXICAM USE IN DISBUDDING

Whilst COVID-19 has had an impact on some of our lives in a practical sense, nothing much has changed on the paperwork side of things, a job many of us don't look forward to! Having helped with our online medicines training, Red Tractor health plans and other herd health planning paperwork for various audits I got thinking about our medicines used in some of the routine husbandry procedures.

I have concerns that some farms are still not using systemic pain relief for disbudding calves.

Many studies have demonstrated that disbudding calves causes them pain and distress. A paper written in 2010 in the Journal of Dairy Science provided clear evidence that meloxicam (our version of this is "Metacam") was effective for reducing post-surgical pain and distress associated with dehorning.

The use of local anaesthetic is a legal requirement under the Protection of Animals (Anaesthetics) Act and remains extremely important to deal with the local pain at the time of disbudding. However, this wears off within a few hours, so unless pain relief is supported with the use of a non-steroidal anti-inflammatory (NSAID), calves will be suffering for certainly 24 hours, possibly longer, following disbudding - whether they "show" it or not. Subtle signs of pain following disbudding include ear flicking, tail flicking and head shaking. All ages of cattle are

extremely stoical in their behaviour and when they show us obvious signs they are in pain or unwell they really mean it. The use of an NSAID is

strongly recommended by us vets and the British Cattle Veterinary Association.

To obtain maximum benefit it is good to inject the calves at the same time as you inject with local anaesthetic, before carrying out the disbudding. As a little reminder, the dose for Metacam is 1ml per 40kg under the skin (so roughly 2ml per calf depending on exact weight). Meat withdrawal is 15 days. Make sure you record batch numbers of both local and meloxicam in your medicines records.

Don't forget this can all be carried out for you by our Vet Tech service! Any questions, feel free to give me or the practice a call.

Amy

References:

A Heinrich, T F Duffield, K D Lissemore, and ST Millman (2010). The effect of meloxicam on behavior and pain sensitivity of dairy calves following cautery dehorning with a local anesthetic. Journal of Dairy Science 93, 2450-2457

K J Stafford and D J Mellor (2011). Addressing the pain associated with disbudding and dehorning in cattle. Applied Animal Behaviour Science 135, 226-231



ABOMASITIS IN CALVES



Eleri James gives us the inside information about this calf problem.

Abomasitis describes inflammation of the lining of the stomach. It can be seen most commonly in milk fed calves, but can occur in all pre-weaned ruminants, including lambs and kids. A severe abomasitis can lead to cell death of deeper layers of the stomach and some can develop ulcers, with severe consequences. Abomasitis is a multi-factorial syndrome: the initial cause is often a failure of management practices which then predispose to subsequent bacterial involvement.

Short term mortality rates have been reported at 52%¹ so understanding the disease progression is a good way to protect calves for a good future in the herd.

CLINICAL SIGNS

The clinical signs of abomasitis can include colic, bloat, teeth grinding, dehydration, inappetence and may present with (or without) scour². There can be a large variation of clinical signs, from just having calves off suck all the way to bloated, dehydrated calves suffering from toxic symptoms of bacterial overgrowth and gut leakage.

CAUSES

Several managemental factors can predispose calves to abomasitis. These are factors that are most likely to change day to day or between feeders, so are the most important to find consistency with.

Milk replacer concentration

Milk replacer is a relatively high protein, high fat substance and has a high energy content when compared to a dam's natural milk. Feeding at the incorrect

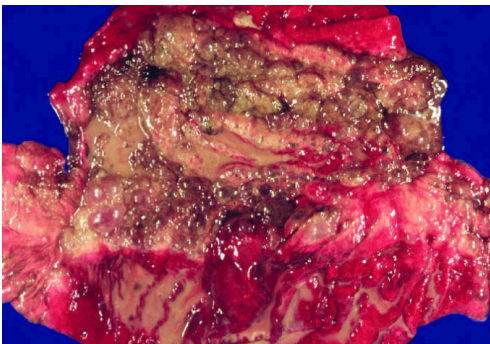


Figure 1: the inside wall of an inflamed abomasum. Rather than a uniformly pink, healthy surface, this abomasum shows areas of bright red inflammation, and darker brown, necrotic and ulcerated areas.

concentration can result in raised pH within the abomasum, delay abomasal emptying and allow rapid fermentation to occur³. The same applies to inconsistent or inadequate mixing of milk powder where one calf may be receiving a higher concentration feed than another calf, or in general if calves are receiving highly variable feeds.

High volume or low frequency feeding

Feeding high volumes of milk per feed will reduce the frequency of abomasal emptying and can allow fermentation of milk that is experiencing a prolonged stay in the abomasum. Reducing the speed of abomasal emptying creates a high pH environment where certain bacteria are given the opportunity to replicate and become a problem. Feeding too infrequently can cause a drop in pH of the abomasum between feeds and allows the lining of the stomach to experience prolonged periods (up to 6 hours) of low pH (see Figure 2).

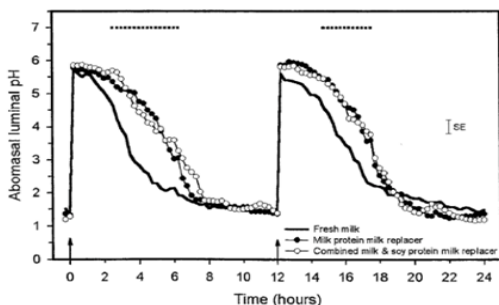


Figure 2: change in abomasal pH in calves fed cow's milk or two different milk replacer formulations.

Rapid diet change

Changing the diet from milk to milk replacer, changing milk volume, changing the type of replacer and

doing any of these changes rapidly can imbalance the natural flora of the gut - and allow bacterial overgrowth (see later). Evidence suggests that milk replacers with plant-based or alternative proteins (as opposed to whey) have the effect of slowing normal abomasal emptying speed⁵.

Contamination

Hygiene is a calf's best friend and it is no different in this instance. Poorly cleaned teats, buckets, piping on automatic feeders and calf equipment can all carry bacteria that can compromise calves with existing abomasitis or even cause abomasitis in the first instance.

Colostrum management

Good colostrum management is critical for all calves, and correctly stored, thawed and delivered colostrum will not only provide the calf with lasting immunity from the dam, but also immediate local immunity within the guts. Poor colostrum management results in pool local immunity and reduced ability to deal effectively with overgrowth of undesirable bacterial species.

Water provision

Essential for neutralization of an acidic environment or dilution of a highly concentrated environment, clean water should be available at all times for calves. It will also drive intakes of solids around weaning and encourage rumen development, in turn increasing growth rates.

Bacterial overgrowth

The most frequently isolated bacteria from calves that had been diagnosed with abomasitis were *Clostridium* spp. and *Escherichia coli*¹. Less frequently reported are *Salmonella* species and *Sarcinia* species^{2,6}. Milk retention, a high pH and fermentation enable proliferation of bacteria. Overgrowth of these species allows further damage to the abomasum, gas production and bloat. Some bacteria can also produce toxins, which will deteriorate the calf's condition rapidly.

PREVENTION

Prevention is largely based around excellent management and delivery of colostrum, correct and consistent feeding practices, hygiene of equipment and provision of clean water.

TREATMENT

Rehydration- ensure clean water is provided and consider oral / IV fluids for those with severe signs.

Electrolytes- these will aid rehydration and correct associated electrolyte abnormalities.

Bloat- if signs of bloat are present then it must be treated as soon as possible. Passing a stomach tube can help, and a needle can be inserted in an emergency, but please call one of us if in any doubt.

Antibiotics- broad-spectrum antibiotics are only indicated if the cause is bacterial overgrowth.



Figure 3: severely affected calves may require vet administration of IV fluids

Pain relief- abomasitis is a painful condition so provision of anti-inflammatories are indicated providing the calf is NOT severely dehydrated.

REFERENCES

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HELLOS AND GOODBYES

You may have heard a new voice on the phone the past few weeks. Megan Duncalf joined our office staff in August, and is settling in well to the numerous roles and responsibilities. Our support team are a highly valued and key part of our practice!

This month we are pleased to welcome Jack Randles to the vet team:

"My name is Jack and I have recently graduated from Liverpool Vet School as a member of the 'Covid Cohort.' I also have a degree in Animal Science from the University of Nottingham. I'm originally from Warwickshire, but having seen practice at Nantwich I'm excited to work with the team and clients. Outside of all things farm animal, you might find me in a set of cricket whites or at the Emirates Stadium. I'm really looking forward to getting started and meeting you!"



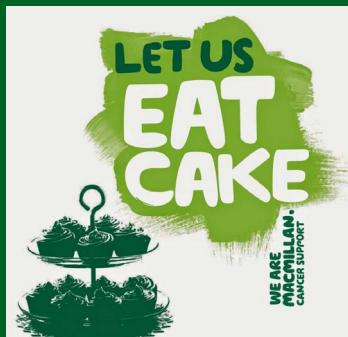
It's also the end of an era for one of the stalwarts in our support team, as Debbie Hopley leaves us after 16 years of service. We wish her all the very best for a restful, relaxing retirement! And thank you, Debs, for all you've done over the many years!

MACMILLAN COFFEE MORNING

Wednesday 24th September

Okay, maybe a bit of false advertising since there won't be any coffee involved, but there will be some delicious cake to buy so you can support this amazing charity.

Due to Covid unfortunately you won't be able to come in and browse the delights that might be on offer, but you can pre-order a slice of cake or two and we will package it ready for collection in the car park the same way we do with medicine orders. Keep your eye on social media for more details.



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