

MASTITIS - TO TREAT OR NOT TO TREAT



DECEMBER 22



With increasing pressure to reduce antibiotic use, some farms are now opting not to treat clinical mastitis cases. There are situations where this would be a suitable approach but it will not be a good option for all farms. If this is something you want to implement on farm there are testing and monitoring requirements needed to ensure we are not going to impact on welfare, milk quality and farm profitability.

Is selective treatment suitable for your farm?

The rationale for not treating clinical mastitis cases is that a lot of mild E. coli (gram negative bacteria) cases will self-resolve without any treatment given. However, if you are a farm that rarely has E. coli mastitis then this would not be a sensible approach because delaying to treat mastitis cases for a lot of other pathogens will negatively impact the cure rate. Research has shown that if more than 20% of your clinical cases are caused by gram positive pathogens selective treatment will not be a cost effective option (Down et al., 2017). So, a good understanding of what your predominant mastitis clinical case pathogens are is essential - this can change between summer and winter when cows are turned out.

Deciding which cases not to treat with tubes

Unfortunately, by simply looking at a cow with mastitis we can not determine what bug caused it. On farm testing is needed to decipher whether we are dealing with a gram positive or gram negative case of mastitis. On farm kits such as Mastdecide and Vetoslide are commercially available, milk from mastitis cases can be tested with results available in 12-24 hours indicating what type of bacteria is causing the infection.

When a case of mastitis is first detected, a sample will need to be taken, then the quarter should be thoroughly stripped out, a non-steroidal anti-inflammatory given (zero milk withhold products preferable) and udder mint applied.

If the case is shown to be caused by a gram negative bacteria, and the cow has improved with the non-antibiotic treatments given, then no tubes are needed. If the test shows a gram positive result then antibiotic tubes should be given. If the case of mastitis is looking more severe (increased swelling, heat or further milk changes) following the initial treatment, antibiotic tubes should be given regardless of the test result.

This protocol above only applies to mild (milk changes only) and moderate cases (milk changes and udder swelling and heat) of mastitis. Severe mastitis cases, where the cow is also appearing sick or has a temperature should always receive antibiotics therapy (injectable +/- tubes), along with anti-inflammatories, fluid therapy and regular stripping of the affected quarter.

Quality Control

Using the on farm test kits needs to be done carefully as there is plenty of potential for things to go wrong. Incorrect results can arise from:

- How the milk samples are taken (contamination must be avoided)
- How the samples are handled when setting things up
- How the tests are incubated (an incubator will be needed to run these tests)
- Test interpretation

To ensure we are staying on the right track, it is advisable that quarterly samples should be sent off to be tested externally. This has two benefits, it fulfills our quality control requirements and it also keep track of our mastitis pathogen patterns.

Meetings coming up...

Medicine Handling course,
Thursday 26th Jan 23 @ the
Practice 11am to 1pm

Save the Date...

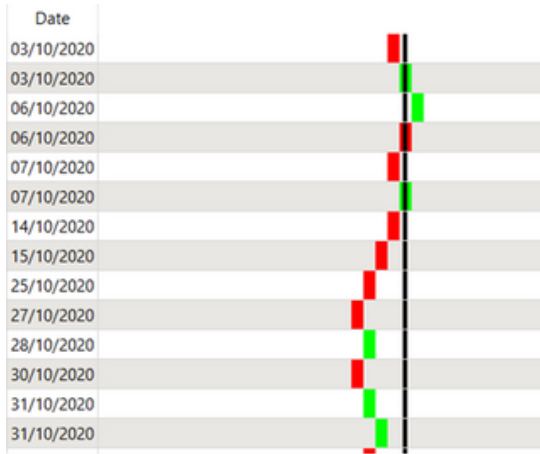
Cow Convention,
15th March, Cotswold Water Park



Veto slide is a new product from Vetoquinol that will differentiate gram positive and gram negative bacteria in milk in 24hrs

Recording and monitoring

One of the issues encountered with farms that have already started doing this is that mastitis cases that are not receiving antibiotics are not getting recorded. If the cases are not properly recorded there is no way of monitoring the outcomes of those cows. For farms that milk record, recording all clinical cases (regardless of treatment), allows us to monitor treatment success rates. If a cow does not have a subsequent clinical mastitis case and her cell counts return to normal in the time after a clinical case then we would consider this a clinical cure. Cure rates would usually average close to the 50% mark for most farms. If when a selective treatment regime is started on farm we start to see cure rates going down this would indicate we need to reassess the protocol or that selective treatment is just not suitable.



We can create CuSum charts looking at first clinical case cure rates. The black line is 50%, a cure (green blocks) moves the line right, a treatment failure (red blocks) moves the line right

Penny for my thoughts

I think that any intervention we can do on farm that will reduce antibiotic use whilst not impacting cow health and welfare can only be a good thing. However, knowing the levels of *Strep uberis* mastitis we see from the milk bacteriology we do, I think this will not be suitable for quite a few of our farms. Also, setting this up on farm will take a lot of effort and will need a conscious and detail orientated person to take charge of it.

Kingshay estimate, with the current milk price of 50p, that the average cost of case of mastitis is now £386. This figure accounts for yield loss, culling risk, fertility effects as well as medicine use and milk withhold. With this figure being as substantial as it is, mastitis prevention should always be a priority. So if there was a choice on spending money on adjusting treatment protocols or spending that money on prevention measures, investing in mastitis prevention should be prioritised!

Mastatest System

The practice has recently invested in a Mastatest system which is an automated milk bacteriology machine. It can be used to test clinical cases and high cell count cows, it will also do antibiotic sensitivity testing. It has been shown by research to give laboratory level accuracy in a shorter time frame, the samples are processed and results obtained within 24 hours!

Down, P.M., A.J. Bradley, J.E. Breen, and M.J. Green. 2017. Factors affecting the cost-effectiveness of on-farm culture prior to the treatment of clinical mastitis in dairy cows. *Prev. Vet. Med.* 145:91–99. doi:10.1016/j.prevetmed.2017.07.006.

Wishing you all a Merry Christmas



Will

For sale:

10 to 20 pedigree well grown in calf heifers, calving late Jan onwards, pd'd in calf to Hereford bull, Bromham Telstar. Generations of Excellent and VG on female side. Medium size, good udders, feet and legs, longevity. Bred to milk from grass, but would also suit robots and other systems. Health strictly monitored.

Also 2 pedigree 82% Friesian bulls by Barncluth Arrival, 5 gens VG & EX on female side. Tel: 01666 510261



VET TECH - UPDATE

We have a brand new calf head yolk to attach on the side of gates, perfect for disbud sessions with our Vet Techs.



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