

Strategies for Treatment of Coliform Mastitis

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Coliform mastitis has become the predominate form of severe clinical mastitis in dairy herds that routinely maintain control of contagious mastitis. Despite the use of J-5 type vaccines and attention to cow comfort and bedding sanitation, coliform mastitis continues to reduce milk production, increase the risk of early marketing and kill infected cows. The purpose of this article is to suggest some new strategies for treatment of coliform mastitis based on recent field research from the College of Veterinary Medicine at Colorado State University.

The first strategy suggested by their research is to routinely use a systematic classification of cows with suspected coliform mastitis. The system classifies cows by scoring the severity of the clinical signs. Table 1 shows the four classification factors. A score is determined for each factor and the total for all four factors is summed. Table 2 shows how the total score is used to classify the cows according the severity of the clinical signs caused by the coliform mastitis infection.

The reason for using this classification system is that as the severity classification moves from mild to moderate to severe, the likelihood of finding coliform bacteria in the blood increases. Of the cows in their study, 32% had bacteria in their blood streams. Cows classified as severe were found to have bacteria in the blood 48% of the cases compared to 23% classified as moderate. When compared to non-coliform infected cows, all cows with signs of coliform mastitis were more likely to have bacteria in the blood. In most cases, the same coliform bacteria were found in the milk and blood of cows with suspected coliform mastitis. In addition, cows classified as severe were more likely to die from the mastitis infection.

The bottom line is that cows classified as severe using their scoring system (abnormally low or high temperature, markedly sunken eyeballs, no rumen contractions and severe depression) will require more aggressive therapy than those with mild or moderate ratings. In addition to the usually treatment with fluids, pain killers and hypertonic solutions to combat the toxins produced by the bacteria in the mammary gland, antibiotic therapy may also be indicated to fight the bacteria in the blood stream. As the same bacteria were often found both in the milk and blood, culture of the milk with sensitivity and resistance testing may provide evidence for selection of the appropriate antibiotic. Your dairy veterinarian can help you design a plan for treatment of these severe coliform mastitis cases that will be specific for your dairy.



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Table 1. Scoring System for Classifying Severity of Coliform Mastitis

Factor	Classification	Score
Rectal Temperature	100-102.7 F	0
	102.8-103.7 F	1
	<100 F or >103.8	2
Sunken eyeballs	None	0
	Mild	1
	Moderate	2
	Severe	3
Rumen contraction Per minute	2 or >	0
	1	1
	0	2
Depression	None	0
	Mild	1
	Severe	2

Table 2. Coliform Mastitis Total Score Classification

<u>Classification</u>	<u>Total Score</u>
Mild	0 –2
Moderate	3-5
Severe	6-9