

eral rule is that oral fluids are most effectively used in subjects with a primary dehydration, normal gastrointestinal absorption, and less than < 10% dehydration. Many cows with acute mastitis are effectively excluded using these criteria. Intravenous fluid therapy is a therapeutic option which deserves strong consideration. Effective fluid therapy is probably one of the most beneficial treatment option in cases of endotoxin-induced shock. Intravenous fluids may be administered rapidly in the first hour of treatment (15 to 20 ml/lb or a total volume of 20 L) and at a reduced rate (5 to 10 ml/lb) thereafter. Total doses will vary from 20-60 L depending on cow size, hydration status, and presence of ongoing fluid losses. Most cows with acute gram-negative mastitis will have a mild azotemia and hypokalemia, hyperglycemia, moderate to severe hypocalcemia and normal acid-base status. In the absence of serum chemistry results, near-isotonic sodium chloride based solutions, judiciously supplemented with calcium and potassium, are likely the most suitable choices for intravenous fluids in cattle with acute mastitis. Excessive glucose administration in already hyperglycemic cows should be avoided because this type of therapy may cause an osmotic diuresis and further contraction of circulating blood volume.

The bulk of informed opinion currently recognizes that antibiotic therapy of mastitis should ideally be restricted to instances where the practitioner is reasonably

certain of therapeutic efficacy and economic benefit (either production or reductions in the reservoir of infectious bacteria offsetting direct and indirect treatment costs). Clinical trials and experimental studies have demonstrated no benefits to antibiotic therapy in cattle with gram-negative mastitis. Systemic antibiotic therapy should be restricted to cows with systemic clinical signs. Given that a large percentage of cattle with clinical coliform mastitis will not remaining productive following clinical disease, extended milk or meat withdrawal times should be avoided. Rational therapeutic plans for severe cases of mastitis will require extra-label drug use. Such plans will necessitate the existence of a valid veterinarian-client-patient relationship. Consultation with a veterinary practitioner will aid in the selection of efficacious and safe compounds and doses. **Practitioners, in consultation with the Food Animal Residue Avoidance Database, can set appropriate times and testing procedures to prevent the sale of residue contaminated milk.**

References

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Abstract

Effects of treatment with topical ivermectin three and eight weeks after turnout on nematode control and the performance of second-season beef suckler cattle

S.M. Taylor, P.F. McMullin, T.R. Mallon, A. Kelly, W.T.R. Grimshaw

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Two groups of yearling suckled beef calves born between January and May of the preceding year and another two groups of lighter and slightly younger calves born between the previous March and July were grazed during their second year on four separate paddocks known to be contaminated with infective larvae of gastrointestinal nematodes. One of the heavier and one of the lighter groups were treated with a topical formulation of ivermectin three weeks and eight weeks after

turnout. The treatment of the heavier group had only relatively minor parasitological effects and no effect on weight gains, whereas the treatment of the lighter cattle resulted in increased weight gains due to effective nematode control. The paper highlights that small differences in previous performances, age and exposure to parasites can have a substantial impact on the benefits accrued from anthelmintic treatment.