

Bismuth Sodium Tartrate found to be effective treatment for resolution of diarrhea in anecdotal canine study.

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Abstract

This study assesses the effectiveness of Clear Relief® (bismuth sodium tartrate) in the treatment of non-infectious diarrhea in dogs. Using a call back reporting system, dog owners reported rapid resolution of diarrhea (<24 hours) using the product.

I. Introduction

It is estimated that 25% of the 60 million dogs in the United States¹ suffer at least one bout of diarrhea annually. While bismuth products have been used in the past, their use has been complicated by the presence of chemical entities, such as subsalicylates, tied to the bismuth and their associated side effects and risks.² Bismuth sodium tartrate (Clear Relief®), as manufactured,³ is a bismuth ion suspended in the food additive sodium tartrate. It is a clear solution and has no associated chemicals and as such would be free of the potential complications. This study tests small dosing volumes and twice a day dosing in treating canines with non-infectious diarrhea.

II. Methods

Dogs were selected for the study from an urban veterinary clinic within a routine clinic population. The animals accepted for the study received a routine exam, abbreviated chemistry panel (ALKP, ALT, Total Protein, BUN, Creatinine and Glucose) and full CBC. The dogs were also tested for infectious causes with a fecal floatation to screen for common intestinal parasites and a direct fecal smear to screen for flagellates.

Dogs that qualified for the study received a three day, six dose, course of Clear Relief® at a dose of 1.0 ml per 20 pounds of body weight given at 12 hour intervals. Pet owners were called on the first, third and fifth days of the treatment to evaluate the drug's effectiveness. Resolution of the diarrhea was noted as 24 hours, 48 hours, 72 hours or lack of resolution.

III. Results

Fourteen dogs qualified to participate in the clinical trial. Several dogs that were screened did not qualify because their diarrhea was proven to be secondary to complex and often end-stage diseases. It should be noted that all dogs were given Clear Relief® whether they qualified for the study or not. Of the 14 dogs that qualified for the study, 12 dogs had their symptoms resolve within 24 hours. The other two dogs had their symptoms resolve within 48 hours. No untoward effects of the treatment were reported.

IV. Conclusion

Bismuth sodium tartrate (Clear Relief®) was effective in the treatment of non-infectious diarrhea of undetermined etiology. No reported untoward effects were noted in this study confirming past research related to the use of bismuth.

Some of the anecdotal data was the most interesting. Three of the pet owners asked for more of the product to keep on hand should their dog have any more episodes of diarrhea. One of the owners noted that her dog seemed to “thrive” while on the product compared to when not taking the product. All of the pet owners were pleased with the results.

Perhaps the most revealing part of the study is the effectiveness of bismuth sodium tartrate (Clear Relief®) in dogs that have secondary diarrhea due to other disease processes. Two dogs with end stage chronic renal failure had chronic gastroenteritis secondary to uremia. Both of these dogs had soft stools with melena and poor appetites. Both dogs had resolution within 24 hours on Clear Relief®. The owners reported their dogs had resolution of soft stools while taking Clear Relief® and an increased appetite and vigor.

A double blind prospective study is needed to validate these findings and look closer at dosing and respective bismuth levels in the blood stream. Anecdotally, some pet owners reported success at preventing diarrhea by incorporating a small amount of bismuth sodium tartrate into dry cereal daily provisions. A trial to confirm this hypothesis is also recommended.

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- 1 American Veterinary Medical Association, Schaumburg, Ill., *U.S. Pet Ownership and Demographics Sourcebook, 2002.*
 - 2 Shuren, Jeffrey. Federal Government. Department of Health and Human Services. Food and Drug Administration. Antidiarrheal Drug Products for Over-the-Counter Human Use; Final. 2003.
 - 3 U.S. Patents #6,482,865, #6,699,912, and #6,743,827.