

ALBENDAZOLE TOXICITY IN CAMELIDS

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Albendazole is an important member of the benzimidazole class of broad-spectrum anthelmintics and is widely used in veterinary medicine. This report describes the findings in a group of alpaca crias that died due to accidental albendazole intoxication.

Nine crias (1-7 months old) in a herd of sixty animals each received 900mg (33-100mg/kg/day) of oral albendazole (Valbazen®) once daily for four consecutive days. Two animals died within 72 hours of receiving the final dose. The remaining seven presented with diarrhea and neutropenia (mean 758 cells/ μ l [range 32-3264 cells/ μ l] [reference range 3440-12730 cells/ μ l]), and five were euthanized due to sepsis and organ failure. Postmortem examinations were performed on six animals. The most consistent gross lesion was reddening of the small intestinal mucosa. Histopathologic lesions were most consistent within the small intestine and bone marrow. Small intestinal villi were blunted and there was marked crypt epithelial necrosis and regeneration. In the bone marrow there was extensive loss of hematopoietic cells. Severity of clinical signs and lesions did not correlate with the administered dose of albendazole. The remaining 51 untreated animals were unaffected.

The principal mode of action of benzimidazole anthelmintics is disruption of parasite cytoplasmic microtubule formation through β -tubulin binding. Pancytopenia and bone marrow hypoplasia associated with benzimidazole administration are documented in various domestic animal species, as well as in rodent toxicologic studies. The findings in these crias therefore support a causal association between albendazole treatment and their morbidity and mortality, and suggest that alpacas may have an increased sensitivity to albendazole.