Occurrence of a severe acute livestock poisoning by borehole water in Marsabit district, Kenya: A case study.

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Abstract

This article report on an outbreak of acute livestock poisoning by bore hole water that occurred at Kargi in Marsabit District, Kenya in 2000. The borehole had been out of use for 3 years and after its was re hab i tation, 7,000 died within a day after drinking the water. The most affected were shoats, cattle, camels and dogs with mortalities of up to 90%. Donkeys and humans were only mildly affected with no deaths reported. Clinical signs occurred within 1hr after drinking the water. Initially the animals displayed increased frequency of urination followed by symptoms of respiratory insufficiency comprising of dyspnea, cyanosis, rapid and weak pulse and general weakness. The signs progressed into methaemoglobinuria, severe pain, trembling, convulsions, collapse, coma and death within hours. Rapid decomposition, brown discolouration of mucous membranes, gastrointestinal tract corrosion and cooked appearance of visceral organs were observed at postmortem. Water samples were corrected from the borehole and neighbouring wells contained arsenic (0.2-66.8ppb), selenium (1.1-4.4ppb), lead (0.01-0.02 ppm) and nitrates (450-950 ppm) and other contaminants. The deaths were probably due to acute nitrate poisoning.