



## **KEEP YOUR DOG AWAY FROM HORSE WORMERS**

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Last Sunday evening while I was cooking dinner my labradoodle vomited on the carpet. Oh great! I thought as I put the dog outside and cleaned the carpet, just what I need when I am trying to get the kids fed and ready for bed! Then my daughter said 'Mum the dog just fell off her bed' so I went to check on her, she was vomiting, weak in the hind legs and with massively dilated pupils. I knew she must have eaten something and would require veterinary treatment. I trained as a horse vet but have always taken my dogs to a dog vet and have not even worked as a horse vet for over 10 years. I finally found a vet open on a Sunday night and when we arrived I discussed with the vet what might have caused these signs. I thought it would be simple and the local vet would say, oh yes it must be X! Unfortunately this was not the case.

I live near Kurrajong in NSW and in this area there are a number of potential nasties for dogs. Living next to the bush we see both black snakes and brown snakes in our yard and there are paralysis ticks in the area as well. So in addition to having eaten a poison it could have been a snake bite or tick paralysis. We searched my hairy labradoodle for a tick with no luck, however they can be very hard to find so this could not be ruled out easily. Apparently with a snake bite it is very difficult to see the bite wound so it was unlikely we would find a bite wound. Black snake bites result in bleeding and blood clotting problems so we took a blood sample, this was normal so that was one thing off the list. Potential poisons included organophosphates, like snail bait, rat bait or a plant poison, also the dog had been at a friend's place and her dog had caught a rabbit which they both were eating and so potentially the rabbit might have been poisoned. I phoned my friend and she said her dog was fine and she had no snail bait, nor poisonous plants, also her dog was fine so that ruled out a few things. I had some rat bait in the stable but rat bait also causes haemorrhage and blood clotting problems so that was also unlikely. So we were left with a tick, brown snake bite or a poison.

The vet advised that I should take the dog to another emergency clinic where they could do a test for brown snake and monitor the dog over-night, the bill was certainly going up! At the second clinic the vets were very concerned as not only did the dog have dilated pupils but she appeared to be blind and had a tremor, as well as weakness in the hindlegs. They were worried about some type of brain lesion and I was worried the dog might not survive. We put the dog on a drip and they were to monitor it overnight. As I was driving home at midnight I suddenly remembered that I had wormed my horse just that morning and it spat a bit of the wormer out. I did not worry about the horse as the wormer was to treat a 600kg



horse so a smaller dose would still be OK. Later in the day I was riding my horse near where it was wormed and the dog was sniffing about. I realized the dog might have eaten the wormer that the horse had spat out. I phoned the vets and they looked up the symptoms of overdosing abamectin (the active chemical in the horse wormer) in dogs.

Symptoms of abamectin poisoning in animals include pupil dilation, vomiting, convulsions and/or tremors, and coma (1). Doses of 0.5 and 1 mg/kg of abamectin administered to dogs resulted in pupillary dilation, weight loss, lethargy, tremors and recumbency (1). These symptoms were just what my dog was showing, pupil dilation, vomiting and tremors. Thank goodness she had not gone into a coma. My dog weighs 12kg, so 12mg of abamectin could have caused the signs she was showing. The horse wormer contains 4mg/mL so she would only need to eat 3mL to get a dose of 12mg. So at least we had worked out the likely cause. There is no specific treatment apart from supportive treatment so the drip was the correct approach and by morning she was much improved and I picked her up the following afternoon and she is now back to being her usual self.

Abamectin is widely used in dogs to prevent heartworm infection, however the dose for this is only 3µg/kg once a month. The dose of abamectin in the horse wormer was 4mg/mL, so a single mL of the wormer contains 4mg = 4000µg which is about 100 x the appropriate dose for a small dog! No wonder horse wormers are toxic to dogs. Collie dogs are particularly sensitive to abamectin and can be poisoned by doses as low as 100 µg/kg. The average collie weighs 25kg, so this dose is only 2.5mg, which is about ½ mL of the horse wormer.

I wanted to share this story, as I am a vet and I work for a company which manufactures horse wormers and my dog was poisoned by a horse wormer!! Many horse owners have dogs, often small dogs around their horses and many horses spit out some of their worming paste. I have never thought to clean up after the horse but certainly will be doing so in future and I would suggest that all dog-owning horse owners do the same. So when the horse spits out their wormer, pick up what has dropped on the ground and possibly even wash down the area with water to prevent your dog from eating the remains. This will hopefully prevent expensive visits to vets and keep your dog healthy!!

1. Lankas, G.R and L.R. Gordon. Toxicology in W.C. Campbell (ed.). 1989. Ivermectin and Abamectin. Springer-Verlag, NY.