

Management of Ant Chalk Poisoning in a Puppy

Kavin Ravikumar^{1*}, Gowtham Raja Murugan², Pradeep Sidder³, Kavin Thangaraj⁴

¹Veterinary Dispensary, Devakottai, Sivagangai, ²Veterinary Dispensary, Kanniappampillaipatti, Theni, ³Veterinary Dispensary, Kilasevalpatti, Sivagangai, ⁴Veterinary Dispensary, Karunganni

Abstract

Pesticide toxicity is common in pets. This case study reports that sixty days old, Pomeranian puppy presented with a history of ingestion of ant chalk which was kept in the open place. Mild shivering and hypersalivation were noticed. Based on the history and clinical signs, the case was diagnosed as cypermethrin poisoning and treated accordingly. The animal recovered uneventfully.

Keywords: Cypermethrin, pesticide toxicity, Pomeranian

Pesticide use is expanding day by day in response to agricultural and household demand. Pesticides applied in and around the home may be toxic to animals. When these drugs are used to control insects and ectoparasites, pesticide poisoning is very common in pets (Parmar *et al.*, 2018). The synthetic type II pyrethroids - cypermethrin, deltamethrin, and fenvalerate are commonly employed in agriculture (Biswas *et al.*, 2019). Among these, due to its low cost and high efficacy, cypermethrin is widely used (Klainbart *et al.*, 2014). This fat-soluble chemical is rapidly metabolised in the liver and eliminated within 12-24 hours following oral or cutaneous absorption (Valentine, 1990 and Gupta, 2012). Numerous reports on pyrethroid toxicity in cats have been documented in the veterinary literature, however, pyrethrin/pyrethroid toxicity in dogs is unusual (Hansen *et al.*, 1994).

Case history

A sixty days old, Pomeranian puppy was presented with a history of ingestion of ant chalk (JEETH ACTION™ cockroachant killer, 1% w/w cypermethrin chalk) (Fig.1) which was kept on the house's veranda. The animal had eaten almost half of the ant chalk and vomited frothy contents twice. The animal was presented thirty minutes after the incident. The animal was active and showing signs of generalized tremor, hypersalivation and mild ataxia (Fig. 2). All the physiological parameters were normal.

Treatment and Discussion

The puppy was treated with intravenous injection of bolus normal saline @ 40ml/kg, injection Tribivet

(Vitamin B1, B6 and B12) 0.5ml, I/V and injection chlorpheniramine maleate 0.5ml, I/M. About 10 grams of activated charcoal, bismuth subnitrate, calcium phosphate and light kaolin oral granule (Fig. 3) was mixed with raw egg white and made into a slurry and fed orally to the animal. The same was repeated six hours after the initial treatment. The animal recovered uneventfully on the subsequent days.

There is no specific antidote for cypermethrin, hence it must be treated symptomatically. Because the animal was active with slight incoordination and tremors in this case, no anticonvulsant was administered. The animal developed neurological symptoms characteristic of TS- syndrome linked with pyrethroid toxicosis (Klainbart *et al.*, 2014). Given the occasional occurrences of pesticide toxicity in pets, owners must read and observe pesticide application instructions, and it should be stored out of reach of pets (Parmar *et al.*, 2018).

Conflict of interest: The authors declare they have no conflicts of interest.

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*Corresponding author: kavinlkk@gmail.com



Fig. 1. Ant chalk (JEETH ACTION™ cockroachant killer, 1 % w/w cypermethrin chalk)



Fig. 2. Animal showing signs of hypersalivation and tremor



Fig. 3. Activated charcoal, bismuth subnitrate, calcium phosphate and light kaolin oral granule

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