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Original Article



Malicious poisoning in animals

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Abstract

Malicious poisoning in animals are heinous act of cruelty that involves intentional feeding of toxic substances to innocent animals in order to harm or kill them. The reason includes personal enmity, competition, revenge, intimidation, and in many cases organizational supported effort. It is done by lacing food, water with toxic substances or use of poisoned baits commonly. Mostly the cases encountered in field are of pesticide poisonings as they are easily available with the distributors. Poisoning in animals have various impact depending upon the substances used. Symptoms can range from excessive salivation, vomiting, convulsions, difficulty in breathing and death in general and specificity can vary according to size, age, sex, species difference and other factors. Education and awareness campaigns can help to educate the public about dangers of the poisonings. Law enforcement agencies can also play a vital role in ensuring penalties in malicious poisoning of animals strictly. Veterinarians can play a role in supporting animal owners with information on how to recognize signs of poisoning and provide immediate assistance to the animals.

Keywords: Toxic substances, Symptoms, Awareness, Law enforcement, Veterinarians

Introduction

In India, cases of malicious poisoning are common in livestock due to personal enmity among the villagers. Veterinarians encounter cases in field with intentional poisoning and usually their source is pesticides [1]. Commonly used pesticides for poisoning are carbamates, organophosphates and organochlorine. Use of strychnine, anticoagulant rodenticides and reports of use of thallium and cyanide have also been recorded in previous years. These chemicals are used in agriculture and are easily available with distributors. Other sources which are used for malicious poisonings are the baits [2]. The scattering of poisoned bait in the environment is still a very widespread practice, resulting in the deaths of wild animals protected under wildlife regulations. These baits are also used by villagers to target their livestock.

Classification:

This classification has generated six classes:

- (1) baits prepared with discarded or out-of-date food;
- (2) laborious and original/particular baits;
- (3) baits containing more than one toxic substance;
- (4) baits containing non-toxic material;
- (5) baits prepared with non-food material and
- (6) in vivo baits.

A survey was conducted in India for deliberate use of chemicals intended to harm or kill animal. The organophosphorus and carbamate pesticides was the most common detected toxic substance followed by anticoagulant rodenticides. One reason can be availability of these chemicals in market and easy accessibility to general public by agriculture distributors [3].

a) Baits used in poisoning: -

Use of mouse, rats has been reported where they are fed with cheese, fresh meat filled with toxic substances. Use of poultry necks for hiding the toxic substances have also been reported. Potatoes filled with zinc phosphides to kill the predators (wild boars) who were tagged as field pest was used by farmers [3]. These potatoes were buried at a depth of about 10 cm. However, later this practice was dropped as they detected the chemical from the odor. It has been used by people for non-target species now.

b) Baits containing more than one toxic substance:-

These baits are usually the most harmful for the animals. The combination of two or more toxins in the matrix can result in a synergistic effect or in a variation in time of onset (immediate/delayed) of the different venoms. These intoxications may require intricate resolution by veterinarians. In fact, if the patient recovers from the first instantaneous symptoms (due to the immediate toxin), other unexpected symptoms, due to the second toxin, can arise after the lapse of some time. This second phase can take place when the animal seems to be better and has been discharged from veterinary care. The field veterinary officer has to be careful with toxicological analysis as in many cases the laboratory investigation is stopped with detection of first poison.

c) Baits containing non-toxic material:-

These baits could be on the edge of the classification because they do not contain toxins. The intention achieved here is slow and more painful. They cause irreparable damage to the animal. The source used is shattered glass in raw meat, razor blades in meat stuff. The clinical intervention is ineffective. Field veterinary officer has to be careful with the history and inspection of owner's place/farm is to be included in circumstantial evidence [4].

d) Baits prepared with non-food material:-

This group is seldom used, but according to reports it is a method apparently employed by other unscrupulous people to kill guard dogs. Baits are tossed to dogs, even use of balls or toys to lure the guard dogs has been reported [5]. Usually, they are filled up with the toxic (powders). As soon as animal ingests it, the poison is released in the system where absorption is almost immediate. Guard dogs are often not checked on and frequently they are found dead.

Common poisoning in cattle:-

Crushed seeds of abrus plants are used. Abrus precatorius, an ornamental plant used to make jewellary but is a potent poison. The seed of the plant has been used in past to poisoning. The common signs are digestive disturbance viz. diarrhea, vomition and severe dehydration with systemic signs: drowsiness, staggering gait, coma, convulsion and death in severe cases.Death may occur in severe case when unattained.



Image 1: Profuse diarrhea, urination, salivation is common signs of organophosphorus insecticide poisoning



Image 2: Profuse diarrhea in calf after ingestion of poisonous material

Common poisoning in dogs

The most commonly used poisons are organophosphates and rat poison. Temik is widely used and combined with other vehicle or toxic substances to increase the effect/impact. They are tiny granules crushed and hidden in meat loaf, sausages, bread and in some cases, also toys. The prognosis is grave and animal dies very quickly after administration of the toxic substance in the system [6].



Image 3: Excessive salivation in pet dog after ingestion of toxic substance

Conclusion

Malicious poisonings of domestic animals and wildlife are reported worldwide. Control of casual episodes are difficult but they account for a small proportion of cases compared to illegal and deliberate poisonings. Education and awareness campaigns can help to educate the public about dangers of the poisonings and law enforcement agencies can ensure penalties in malicious poisoning of animals strictly [7]. Veterinarians can play a role in supporting animal owners with information on how to recognize signs of poisoning and provide immediate assistance to the animals. These steps can help has fight this illegal yet immoral harmful practice. As a vetrolegal cases, a veterinarian has to be very cautious in identifying the accidental case of poisoning with malicious poisoning [8]. Cases of malicious poisoning are also reported where owner are the culprit and their motive is insurance money. The field veterinary officer has to be vigilant and carefully differentiate between an enmity, revenge case over a case of self-benefit.

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