

LABORATORY FINDINGS

Toxicological Analyses Of Dogs and Cats

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During 1967, the bodies of 71 poisoned animals, 56 dogs and 15 cats, were submitted to the Department of Veterinary Science for toxicological analyses. In most cases, the history accompanying the specimen(s) dictated the types of analyses performed. The procedures used were the same or similar to those used by other veterinary toxicology laboratories. In the case of strychnine, in addition to chemical analysis, biassay was often employed. The laboratory studies did not attempt to ascertain whether the poisonings were of a malicious or accidental nature.

Seventeen of the 56 specimens from dogs contained strychnine (Table 1). Cases of strychnine poisonings in dogs were quite common as this poison is often used in vermin baits. More stringent efforts on control of the sale of strychnine have been attempted, although it can still be procured with relative ease.

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Seven canine specimens contained organic phosphate compounds. This group of compounds contains some of the most dangerous chemicals used in agriculture. These are usually insecticides containing esters, amides or other derivatives of phosphoric or thiophosphoric acid, and their toxicity is due to the inhibition of cholinesterase (a hydrolyzing enzyme). Generally, the signs of acute organic phosphorus poisonings are similar to acetylcholine poisoning. Over-activity of the parasympathetic nerve supply to the alimentary tract causes excess salivation, pain, vomiting and diarrhea. Bronchial secretion and spasm may be noted. Irregular violent voluntary muscle contractions and weakness are also possible signs. Respiratory failure is the cause of death.

Specimens from two cats also contained organic phosphates. One case of interest was lead poisoning in a cat. Lead poisoning in cats is quite rare, but this animal apparently ingested a compound containing the metal.

Table 1. The 1967 laboratory findings of dogs and cats submitted for toxicological analyses.

Species	Strychnine	Organic Phosphates	Chlorinated Hydrocarbons	Arsenic
Canine	17	7	1	1
Feline	0	2	1	0

Species	Thallium	Lead	1080	Negative Laboratory Findings	Total
Canine	2	0	1	27	56
Feline	0	1	0	11	15

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