

Analysis of commonly encountered toxins in avian patients presenting to a wildlife rehabilitation service

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Countless numbers of raptors are introduced to rehabilitation clinics annually, many with signs of toxicity. Some of the most common and lethal toxins include lead, anticoagulant rodenticides, organophosphates, and pentobarbital. A retrospective study of 129 raptors presented to the Atlantic Veterinary College's Zoo, Exotics, and Wildlife Service (ZEW) from 2015-2020 was performed to assess the exposure of these toxins in the Atlantic Canada region. Patients were categorized as Predated (injury consistent with predation), Suspect (history consistent with toxin exposure), Probable (clinical signs of toxicity), and Confirmed (positive testing for toxins). Data from ZEW intake and AVC Pathology found that 52.71% (n=68/129) of all raptor intakes were Probable or Suspect and 33.33% (n=43/129) were Predated. Clinical signs were more commonly associated with lead (16.28%, n=21/129), followed by anticoagulant rodenticide (9.3%, n=12/129). Due to budgetary limitations, samples from only five raptors (7.3%, n=5/68) that presented as Probable or Suspect for toxicity were sent for confirmation. Of these, 60% were Confirmed (n=2 lead, n=1 pentobarbital). In addition to the financial constraints often associated with wildlife rehabilitation, there are limitations in antemortem toxin testing. Additionally, clinical signs are often nonspecific. For these reasons, it is recommended that toxicity be considered a differential diagnosis for raptors presenting to wildlife rehabilitation centers and that history and clinical signs be used in conjunction with testing, when available, to direct clinical decision making. Additional testing of Suspect and Probable cases may allow improved recognition of antemortem signs and patient care.

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