THERAPEUTIC MANAGEMENT OF PYRETHROID INTOXICATION IN A DOG

Nicoli da Rosa do Amaral[a]; Gabriéla Wikowski Rutikoski[b]; Aila Ampese[b]; Vitória Cadore Costa[b]; Daiane Rocha Rosa[b].

[a]Programa de Pós-Graduação em Bioexperimentação, Universidade de Passo Fundo, BR 285, São José, Passo Fundo, Rio Grande do Sul, Brazil.

[b]Curso de Medicina Veterinária, Universidade de Passo Fundo, Passo Fundo, Rio Grande do Sul, Brazil.

INTRODUCTION: Pyrethroids are one of the most commonly used insecticides owing to their high efficacy and considerable low toxicity to mammals. However, intoxication may occur via accidental exposure (especially after contact with products recently applied). Clinical features of intoxication include neurologic symptoms such as ataxia, tremors, and gastrointestinal upset. Management consists of supportive care and symptomatic measures. CASE REPORT: A one-year-old male Pinscher, weighing 2.5 kg, was admitted to the Veterinary Hospital of the University of Passo Fundo (UPF), Rio Grande do Sul, Brazil, with a suspected acute intoxication from pyrethroids sprayed on patio of residence. The patient represented anorexia, adipsia, tachycardia, tachypnea, ataxia, hyperexcitability, motor incoordination, and salivation. Clinical examination revealed moderate dehydration, normocolored but sticky membranes, a body condition score of 3, and a temperature of 36.5 °C. The patient was hospitalized and treated with fuid therapy with Ringer's lactate solution, as well as n-acetylcysteine (10 mg/kg TID IV), maropitant citrate (1 ml/10 kg SID IV), omeprazole (1 mg/kg SID IV) and ondansetron hydrochloride (0.3 mg/kg TID IV). A gradual improvement in the clinical condition was observed during hospitalization, and the patient was discharged after three days with a prescription for oral n-acetylcysteine (10 mg/kg BID VO for four days) and guidance to return in case of worsening. DISCUSSION: The intoxication of pyrethroids in dogs is an emergency that needs immediate intervention. Neurological signs such as ataxia, hyperexcitability and incoordination are consistent with this compounds, which bind to sodium channels in neuronal membranes prolonging depolarization and resulting in central nervous system hyperexcitability. Fluid therapy was essential for recovery tissue perfusion and eliminating the toxic agent. N-acetylcysteine, with mucolytic and antioxidant properties, may potentially have alleviated oxidative damage, but its specific role in pyrethroid intoxication is not highly documented. Use of antiemetics helped management of gastrointestinal symptoms, avoiding secondary complications. This case highlights the importance of educating pet owners on the safe use of pesticides to prevent accidental poisoning in domestic animals.

Keywords: Poisoning; pyrethroids; canine.