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Acute Human Self-Poisoning with the N-Phenylpyrazole Insecticide Fipronil -A GABAA-Gated Chloride Channel Blocker; JArticle; Journal of Toxicology and Clinical Toxicology; Vol: 42; No.(7); 2004 _955-963pp

Abstract :Objective-Fipronil, a broad spectrum N-phenylpyrazole insecticide that inhibits GABAA-gated chloride channels, has been in use since the mid-1990s. A high affinity for insect compared to mammalian GABA receptors results in lower animal toxicity than other insecticides blocking this channel. To date, only two accidental cases of fipronil poisoning in humans have been published. Case series-We report seven patients with fipronil self-poisoning seen prospectively in Sri Lanka together with pharmacokinetics for four patients. Non-sustained generalized tonic-clonic seizures were seen in two patients (peak measured plasma fipronil concentrations 1600 and 3744 µg/L); both were managed with diazepam without complications. A patient with a peak measured plasma concentration of 1040 µg/L was asymptomatic throughout his stay. Plasma concentration was still high at discharge 3-4 days post-ingestion when the patients were well. Retrospective review of >1000 pesticide poisoning deaths since 1995 found only one death from fipronil-based products. In contrast to the good outcome of the above cases, this patient required intubation and ventilation and had continuous fits despite therapy with barbiturates and benzodiazepines. Conclusions-Our experience with prospectively observed patients suggests that fipronil poisoning is characterized by vomiting, agitation, and seizures, and normally has a favorable outcome. Management should concentrate on supportive care and early treatment of seizures. However, further experience is needed to determine whether increased susceptibility to fipronil or larger doses can produce status epilepticus.