

Toxicokinetics and toxicodynamics of gonyautoxins after an oral toxin dose in cats

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Although the action of Gonyautoxins (GTXs) and Saxitoxin (STX) mechanisms is well known at the molecular level, there are still many unresolved questions associated with the intoxication syndrome in mammals. For example, how are these toxins absorbed in the digestive system? Where are they absorbed? What is the absorption rate? What is the maximal concentration in plasma (C_{max}) and the time taken to reach this C_{max} (T_{max}) in the case of oral toxin administration? These questions are addressed in this paper, which describes an experimental design which allowed us to follow the toxicokinetics and toxicodynamics of GTX 2/3 epimers poisoning in vivo, when an oral dose of toxin was administered to an anaesthetized cat permanently coupled to an artificial ventilator. The GTX 2/3 epimers was orally administered with a dose of 70 μ g/kg, then urine and blood samples were collected during a 5h experimental period. The toxins were quantified using a post column derivatisation high performance liqu