

ABSTRACT

Silent Majority, Major Slayers - Something beyond imidacloprid poisoning

Introduction:

Imidacloprid, a neonicotinoid insecticide, was widely used for agriculture purpose. It was thought to substitute for the old insecticide such as organophosphate due to low human toxicity. Neonicotinoid insecticide are nicotinic acetylcholine receptor (nAChR) agonist and have high affinity for insect nAChR than vertebrate nAChR. Acute poisoning showed mainly mild toxicity including nausea, vomiting, diarrhea, dizziness and drowsiness. Occasionally, caustic injury could be seen due to the solvent N-methyl-2-pyrrolidone (NMP) effect, reported from Taiwan and Sri Lanka.

Brief case report:

A 68-year-old male was admitted to emergency department due to suicide attempt and ingested unknown amount of imidacloprid (9.6%) around 1 hour ago. The initial vital signs were T:33°C P:114/bpm R:30/min BP:103/63 mmHg and GCS: E3V3M5. He presented mild nausea, vomiting, and slight drowsiness. It progressed to respiratory failure required for intubation and mechanical ventilation. The condition deteriorated to shock, acute kidney injury, coma, and severe acidosis after then. We initiated the antidote treatment and arranged hemodialysis. The patient was fully recovered after treatment.

Conclusion:

Acute imidacloprid poisoning mainly cause mild toxicity for human. However, severe cases could be encountered due to the highly toxic solvent.

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益達安是一種新尼古丁類的殺蟲劑並且在農業上廣泛被使用。由於毒性較低，因此被認為可以取代較毒的農藥，例如有機磷。這一類的殺蟲劑主要是作用在尼古丁受器上，且對昆蟲的受器親和力比脊椎動物受器高，因此急性中毒主要都是輕微的症狀，例如噁心嘔吐拉肚子或嗜睡等。在台灣和斯里蘭卡也曾報導過益達安中毒表現出腸胃道腐蝕性傷害，這個主要是因為溶劑NMP的作用，而非益達安本身的毒性。

在此我們報導一個嚴重的益達安中毒案例。一位68歲男性因為自殺服用未知劑量的益達安，一開始表現出噁心嘔吐嗜睡，之後就呼吸衰竭需要插管治療，而接下來病人陸續併發休克、急性腎衰竭、意識昏迷、及嚴重酸血症。在我們給予解毒劑及安排血液透析之後，病人慢慢恢復切之後順利拔管出院。

急性益達安中毒雖然大多數都是輕微的症狀，但仍不可以掉以輕心，因為高毒性的溶劑易被忽略且可能是導致重症的主因。