LIVER TOXICITY OF ACUTE POISONING BY IMIDACLOPRID INGESTION IN HUMAN: A CASE REPORT

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Introduction: Imidacloprid is a new class of insecticide which is a potent neonicotinoid compound. It acts as a nicotinic acetylcholine receptor agonist. Animal studies suggested that it had relatively low toxicity to mammals. Though it has been used worldwide, information on human poisoning caused by imidacloprid is quite limited. Liver toxicity in human is not well documented.

Case report: A 27-year-old Thai male committed suicide by drinking a cup of 10% W/V SL imidacloprid solution. He came to hospital with nausea, vomiting and dyspepsia 10 minutes after drinking the solution. On admission, he was treated by gastric decontamination and intravenous metoclopramide. During the first two days of admission, he complained of abdominal pain, nausea and vomiting. On physical examination, abdominal tenderness and voluntary guarding were observed. There was no abnormal finding in radiologic study. On the 4th day of admission, his symptoms still remained but he was found having jaundice. Laboratory tests revealed that liver enzymes (AST/ALT 2,600/2,800 U/L, ALP 85 U/L, TB/DB 30/12 mg/dL) were increased with prolonged prothrombin time (PT INR 3.5). The other possible causes of hepatitis such as viral infection, alcohol and other diseases were excluded. The patient was treated with intravenous N-acetylcysteine. Three days after the treatment, his clinical hepatitis and laboratory tests were improved (AST/ALT 106/1,036 U/L, PT INR 1.2). The patient could be discharged from the hospital on the 8th of admission.

Conclusion: Imidacloprid, a new generation insecticide, is classified as having low toxicity to mammals. The recent evidence suggests that it may cause liver toxicity in animals. This is a report of the insecticide which could induce hepatitis in human. However, the pathogenesis of liver injury caused by this agent in man needs further study.