

A Case of Flufenoxuron Intoxication Presenting With Severe Lactic Acidosis

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Objectives : Flufenoxuron(Trademark - Cascade) is one of recently introduced insecticides. It is known to exert insecticidal activities by inhibiting chitin synthesis in insects. However, its toxic effects on human or mammals are not well known to medical or scientific communities. The authors present a case of flufenoxuron intoxication characterized by severe lactic acidosis. **Case Report :** A 72 year-old woman was brought to the emergency department by ambulance. The accompanying person brought an empty bottle of flufenoxuron insecticide which was found at the scene. She was semicomatous, and her blood pH was 7.343 at presentation. When she was admitted to the intensive care unit, her blood pH was 7.093, and anion gap was 18.4mmol/L. An hour later, blood pH dropped to 7.030, and blood lactate concentration was 16.5mmol/L. The lactic acidosis was not considered as a consequence of shock, because there were no clinical signs of shock other than lactic acidosis, and the cardiac output measured by impedance cardiography was 4.7L/min. The possibility of disorders in oxygen utilization, and sodium thiosulfate was given as co-intoxication with cyanide cannot be completely excluded. With other supportive care including mechanical ventilation, the patient was recovered. She denied taking any drugs or toxins other than the flufenoxuron-insecticide. **Discussion :** Pubmed search with the keyword of flufenoxuron yielded no result about the toxic effect of flufenoxuron on humans. It is not clear whether the insecticide itself or its metabolite inhibit oxygen utilization at cellular level. Experimental studies are needed to clarify the toxic effect of flufenoxuron on humans.

Reference : 1. Mommaerts V, Sterk G, Smaghe G. Harzards and uptake of chitin synthesis inhibitors in bumblebee *Bombus terrestris* *Pest Manag Sci* 2006; **62(8):** 752-8.