CASE REPORT

Amitraz Poisoning; A case study

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Received April 11, 2012; Accepted May 28, 2012

This paper is available online at http://ijpt.iums.ac.ir

ABSTRACT

Amitraz, an insecticide/acaricide of the formamidine pesticides group, is a α2 adrenergic agonist and of the amidine chemical family generally used to control animal ectoparasites. Poisoning due to amitraz is rare and characterized by central nervous system and respiratory depression, bradycardia, hypotension, hypothermia, hyperglycemia, nausea and vomiting. Few cases of intoxications in human beings due to this pesticide have been published in the literature. However, a clear and specific treatment protocol does not exist and this makes the successful managements of this poisoning (presented in the case reports) a probable useful guide for clinical practitioners in other poison centers. Management of amitraz poisoning is still considered to be supportive and symptomatic. We present a case of amitraz poisoning who successfully managed by supportive treatments in a 20 years old female.

Keywords: Amitraz; Bradycardia; Miosis; Central nervous system

CASE STUDY

A 20-year-old female referred to L.G. Hospital in Ahmedabad, Gujarat, India after the ingestion of 2 to 3 full table spoons of amitraz chemical (10% solution) in a suicidal attempt. Her first symptoms had begun about one hour post ingestion and included nausea and dizziness, after which vomiting had ensued. Her family had immediately brought her to our center where gastric lavage with normal saline and administration of activated charcoal (1 g/kg) were performed. She was then admitted to ICU for further management.

At presentation, she was drowsy but followed the verbal commands. Her blood pressure, pulse rate, respiratory rate, and temperature were 126/80 mmHg, 69 bpm, 24/min, and 36.8°C, respectively. Analysis of blood gases showed PaO2 of 106.4, O2 saturation of 96%, pH of 7.40, PCO2 of 34.0, and HCO3 of 21.6. Other lab tests were as follow: blood urea nitrogen: 13 mg/dL; creatinine: 0.80 mg/dL; sodium: 138.9 mEq/L;...
potassium: 4.48 mEq/L; alanine transaminase: 15.7 IU/L; blood glucose: 95 mg/dL (normal range, 70 to 110 mg/dL); PT: 14.7; INR: 1.03; calcium: 9.33 mg/dL; and increases heart rate and prevents amitraz-induced magnesium: 2.2 mg/dL. In complete blood count, bradycardia in animals [2]. We administered atropine to hemoglobin, white blood cells, and red blood cell count of our patient only once with adult dose. We believe were reported to be 6.72 g/dL, 8260/mm³, and atropine is effective in amitraz poisoning only when 4.58×10⁶/mm³, respectively. Chest X-Ray was normal. Bradycardia exists.

One unit of packed cell was injected due to the low... interesting. On this basis, the diagnosis of bradycardia is established. Atropine (once; 4 mg stat) was administered to our patient's and colleagues that reported hyperglycemia in nearly... six cases [9]. This is while our patient did not show any evidence of electrolyte abnormalities. On the other hand, while analysis of blood gases was normal in our case, Kalyoncu and colleagues have reported respiratory alkalosis in two... and hyperglycemia. The duration of CNS depression has ranged from a few hours to 24 h [4]. CNS symptoms began within 30-150 minutes and resolved within 6-20 h in our case. Sedative effects of α₂-agonists are dose-dependent [1]. Coma, absence of light reflex, and respiratory failure are due to the ingestion of greater... amitraz supporting its dose-dependent... Our case is interestingly very similar to a 54-year-old patient who had referred to Elinav and associates (with a clonidine-like syndrome) and managed in the same way [11]. Although not related to our patient, It is interesting to know that intravenous administration of... potential. Although active charcoal and cathartic effects... depression leads to confusion with organophosphate poisoning have not been evaluated, they are still considered in the treatment protocol of these patients. Attention must be paid to the evaluation of the respiratory, cardiac, and hypotension, bradycardia, hematuria, and edema and... Bradycardia was also present accompanying with miosis. Medical management is essentially symptomatic and developed during the course of hospitalization. Supportive. No specific antidote exists [2].

Coexistence of bradycardia, miosis, and the respiratory... Although active charcoal and cathartic effects... depression leads to confusion with organophosphate poisoning have not been evaluated, they are still considered in the treatment protocol of these patients. Attention must be paid to the evaluation of the respiratory, cardiac, and hypotension, bradycardia, hematuria, and edema and... Bradycardia was also present accompanying with miosis. Medical management is essentially symptomatic and developed during the course of hospitalization. Supportive. No specific antidote exists [2].

Artificial ventilation was not required. Intravenous atropine was administered for the treatment of the patient's... and hyperglycemia. The duration of CNS depression has ranged from a few hours to 24 h [4]. CNS symptoms began within 30-150 minutes and resolved within 6-20 h in our case. Sedative effects of α₂-agonists are dose-dependent [1]. Coma, absence of light reflex, and respiratory failure are due to the ingestion of greater... amitraz supporting its dose-dependent... Our case is interestingly very similar to a 54-year-old patient who had referred to Elinav and associates (with a clonidine-like syndrome) and managed in the same way [11]. Although not related to our patient, It is interesting to know that intravenous administration of... potential. Although active charcoal and cathartic effects... depression leads to confusion with organophosphate poisoning have not been evaluated, they are still considered in the treatment protocol of these patients. Attention must be paid to the evaluation of the respiratory, cardiac, and hypotension, bradycardia, hematuria, and edema and... Bradycardia was also present accompanying with miosis. Medical management is essentially symptomatic and...

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