

## CASE REPORT 1 [ID#13]

### Imidacloprid poisoning complicated with cardiogenic shock survived by extracorporeal life support

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**OBJECTIVE:** Neonicotinoids are a new class of insecticide that used for crop protection and flea control. They are considered less toxic to human. Imidacloprid is one of them, and is most commonly used in Taiwan. Cardiovascular complications were rare previously after imidacloprid poisoning. We present one imidacloprid poisoning complicated with cardiogenic shock survived after vaso-arterio extracorporeal membrane oxygenation (VA-ECMO).

**CASE REPORT:** A 73-year-old woman presented with con's change, and hypotension after drunk unknown amount of imidacloprid 9.8%. Pulseless developed and ROSC after CPR for 2 mins. After resuscitation and inotropic agents using, her hemodynamic was relatively stable. Laboratory data shows WBC elevation and lactatic acidosis. The eletrocardiogram (ECG) reveals widening QRS initially. However, profound shock developed 24 hours after poisoning, and ECG showed V3-6 ST elevation. Echocardiography shows Takotsubu cardiomyopathy. Troponin-I progressively elevated. Acute myocardial injury with cardiogenic shock was suspected. VA-ECMO and IABP were performed and coronary angiography shows coronary artery stenosis. Imidacloprid induced cardiomyopathy was suspected. ECMO was discontinued on the fifth day and IABP was removed on the eighth day under stable condition. There is no complications induced by ECMO or neurological sequelae.

**CONCLUSION:** Most manifestations of imidacloprid poisoning are easy symptoms such as nausea, vomiting, dizziness, abdominal pain, and diarrhea. Severe symptoms like respiratory failure, cardiovascular events, and consciousness change are relative rare. Mohamed et al. stated cardiotoxicity was observed in two patients (3.5%), who have mild hypotension and did not have myocardial injury. Hunag et al. also reported one female died 12 hours after imidacloprid poisoning because of intractable hypotension and intermittent ventricular fibrillation. Unlike this patient, our case survived from profound shock because of intervention of early ECLS. We believed ECMO is the key point of survival and we should use it if severe poisoning presented.