

PP143 PLEASE UNBLOCK MY HEART!!!

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Introduction

Drug overdose appears to be a challenging clinical encounter to emergency residents. Over-ingestion of cardio-toxic agents can only be revealed by targeted history, presence of hypotension and bradycardia. HIET (High Dose Insulin Euglycemic Therapy) remains the paramount savior in beta blocker toxicity.

Case Report

A 29-year-old lady with underlying history of hyperthyroidism has been brought to our emergency department after ingested 40 tablets (1.6grams) of propranolol. The incident was preceded by a quarrel with her husband.

We received the patient 1.5 hours post ingestion after receiving initial treatment at a private medical Centre. Patient appeared unresponsive to call and her vital signs were supported by vasopressor therapy. Capillary blood glucose was normal. She was intubated for airway protection.

Electrocardiographic changes was consistent with tricyclic antidepressants (TCA) toxicity and a bedside echocardiography revealed both right and left ventricular dysfunction.

In keeping with the evidence of toxin-induced cardiogenic shock (TICS) with TCA-like toxicity by propranolol, HIET and sodium bicarbonate infusion were administered. Glucose and potassium were closely monitored and replaced accordingly.

Discussion

Propranolol toxicity not only has direct cardio-toxic effects causing hemodynamic instability but due to its highly lipophilic properties, it also poses detrimental effect on the central neurological system.

Insulin, an anabolic hormone, overrides the catecholamine's task in augmenting cardiac contractility. This drives glucose rather than free fatty acid into the starving myocardium leading to insulin-mediated inotropy. Sodium bicarbonate was administered to overcome the sodium channel blockade effect of propranolol.

The use of echocardiography strengthened the diagnosis of TICS and frequent echocardiographic monitoring aided us in monitoring the effectiveness of the life-saving treatment instituted.

Conclusion

In our case of beta blocker toxicity, a highly negative inotropic substance which led to cardiogenic shock. After a thorough grasp on the pharmacology of the toxin, HIET remains the ultimate salvation therapy.

Abstract Keywords : beta blocker, cardio-toxic, TICS, HIET, TCA