

Amlodipine and Insulin Overdose in an Elderly

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Introduction: Amlodipine belongs to the dihydropyridine class of calcium channel blockers (CCB). We present a patient who concomitantly overdosed on amlodipine and subcutaneous insulin. We believe this to be the first case of concomitant amlodipine and subcutaneous insulin overdose reported in literature. Causes of his relatively uncomplicated clinical course are discussed.

Case Report: An elderly man presented within 2 hours to the Emergency department after ingesting 140mg of amlodipine and self-injected 2 cartridges of Novo Mix 30/70 (600 units) in a suicidal attempt. He developed mild hypotension and had multiple episodes of hypoglycemia but was otherwise asymptomatic. He was managed with activated charcoal, low dose noradrenaline and multiple doses of dextrose for his hypoglycaemia. He was discharged well after 3 days.

Discussion: The clinical manifestations of dihydropyridine toxicity are hypotension, hyperglycaemia and metabolic acidosis. Our patient was elderly with multiple medical problems but he was alert and haemodynamically stable on presentation. Activated charcoal is the recommended form of decontamination when the patient presents early. He also developed initial hyperglycemia, which correlates with the degree of the calcium channel blocker overdose. The early co administration of insulin would correct the patient's hyperglycemia, acidosis, myocardial function and even provide inotropic support. It may be possible that the subcutaneous route of administering high dose insulin may have similar effect as intravenous HIET.

Our patient's hypoglycaemia occurred about 12 hours of the overdose, which is expected after an insulin overdose. He required many boluses of dextrose infusions before his blood sugar level stabilised.

Conclusion: It is postulated that self-administration of insulin and early decontamination could have resulted in patient's good outcome despite having ingested a potentially fatal dose of amlodipine.

Biography:

Dr. Adeline Ngo is a senior consultant working in the Emergency Medicine Department in Ng Teng Fong General Hospital in Singapore. Her interests lie in clinical toxicology and education. She previously served as a fellow in medical toxicology in the University of California, School of Medicine, San Francisco. She teaches emergency medicine, Hazmat and toxicology including the use of simulation. She is also a visiting consultant for clinical toxicology in Changi General Hospital.