

Poster Abstracts

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MISTAKING FOXGLOVE FOR COMFREY RESULTED IN FATAL POISONING

Hsien-Yi Chen^{1,2}, I-Lin Wu¹, Cheng-Hsien Hsieh³, Chih-Chuan Lin^{1,2}

¹ Department of Emergency Medicine, Chang-Gung Memorial Hospital, Taoyuan, Taiwan, ² College of Medicine, Chang Gung University, Taoyuan, Taiwan, ³ Department of Emergency Medicine, En-Chu-Kong Hospital, New Taipei City, Taiwan

Objectives: Foxglove (*Digitalis purpurea*) contained several cardiac glycosides (CG), which may cause

cardiac toxicity following ingestion. Few human poisonings from mistaking foxglove leaves for comfrey were reported, and all these cases recovered. We report a case who mistakenly took foxglove misidentified as comfrey, developed refractory ventricular dysrhythmia and eventually expired.

Methods: A 55-year-old woman presented to ED with nausea, vomiting, malaise and lightheadedness eight hours after drinking alleged “comfrey” herbal tea. On arrival, her mental status was normal and her vital signs were stable except a slow heart rate of 54 bpm. Physical examination was unremarkable. Laboratory studies showed a notable hyperkalemia of 7.6 mEq/L, otherwise the remainders were normal. Electrocardiography revealed a first degree atrioventricular block with paroxysmal junctional beats. Conventional therapy for hyperkalemia with intravenous calcium gluconate, insulin, dextrose, and sodium bicarbonate were administered.

She developed progressive bradycardia and hypotension, which needed fluid resuscitation, dopamine infusion and transcutaneous pacing. 3 hours after arrival, a follow-up electrocardiography showed wide QRS complexes with paroxysmal ventricular tachycardia. Emergent hemodialysis was performed for her hyperkalemia and ventricular dysrhythmia.

Results: Based on the cardiac toxicity concomitant with hyperkalemia, mistakenly ingestion of a CG-contained plant was highly suspected. A serum digoxin level was checked and reported as 151.2 ng/mL. Hemodialysis was terminated immediately and 2 vials of Digibind were given (stock in our hospital: 2 vials). Just before Digibind infusion, the patient collapsed with a rhythm of polymorphic ventricular tachycardia followed by ventricular fibrillation. CPR was started and emergent extracorporeal membrane oxygen (ECMO) was set up because of the refractory ventricular dysrhythmia. She was admitted to ICU where 8 vials of Digibind were given subsequently. Unfortunately, the patient developed lower limbs ischemia and multiple organ failure, and finally expired on hospital day seven. A sample of the alleged “comfrey” from her husband was identified as foxglove (*digitalis purpurea*) by a botanist.

Conclusions: Accidental foxglove poisoning may occur because comfrey leaves resemble those of foxglove when not in bloom. Timely diagnosis can be difficult while lack of accurate exposure history. GI symptoms, followed by cardiac toxicity and hyperkalemia could be the only hints for diagnosis. Although digoxin-specific antibody fragments (DSFab) have variable efficacy for natural CG poisonings, it is usually recommended to administer 10 vials empirically in life-threatening poisoning. When DSFab is either insufficient or unavailable, early ECMO intervention for patients with unstable hemodynamics or life-threatening dysrhythmia is reasonable, although the evidence is insufficient.