

Acute ethylene chlorohydrin poisoning: a Poison Center study.

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Background: Ethylene chlorohydrin is a chemical that has been used in hastening grape vine sprouting in Taiwan. Although such agricultural use is prohibited, intoxications still occur due to illegal use. Reports concerning human ethylene chlorohydrin poisoning are rare, we report our experience in treating acute ethylene chlorohydrin-poisoned patients. **Methods:** A retrospective study was conducted to evaluate patients with ethylene chlorohydrin exposure reported to Taiwan Poison Control Center during 1989-2009. **Results:** Thirty-four patients with ethylene chlorohydrin poisoning were identified. There were 23 male and 10 female patients, ranging in age from 2 to 73 years. The intent of exposure was suicidal in 8, accidental in 17, and occupational exposure in 8 patients. The severities of poisonings were as follows: fatal 39.4%, severe 6.1%, moderate 18.2%, and mild 2.9%. Oral ingestion was the most common route of exposure (63.6%) and the mortality was 52.4% in this group. Dermal or dermal/inhalation exposure involved 33.3% of cases and the mortality was 18.2%. Specific therapy of ethanol and fomepizole were used in 4 and 6 patients, and their mortality ratios were 25.0% and 33.3% respectively. The mortality ratio was 43.5% in non ethanol-fomepizole group. **Conclusion:** Ethylene chlorohydrin is highly toxic and can result in severe metabolic acidosis, respiratory failure, coma, and even death after oral or dermal exposure. Experimental data suggest ethanol or fomipyzole may be used in such cases, however there were too few patients to reach definitive conclusion.