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A Retrospective Study of Acute Methanol Poisoning Outbreaks Referred to the UP-PGH National Poison Management and Control Center in December 2019

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Mass methanol poisonings are of global concern and attributed to illegal spirits consumption in developing countries. In the Philippines, cases are seldom documented in medical literature.

Aim and objectives:

To determine the clinical profile, treatment, and outcomes of patients with methanol poisoning secondary to *lambanog* ingestion admitted in UP-PGH in December 2019.

Methodology:

This is a retrospective cross-sectional analysis of a methanol poisoning outbreak involving patients who consumed *lambanog* from Laguna who were referred to the National Poison Management and Control Center at the UP- Philippine General Hospital from December 22 to 27, 2019. Review of records was conducted. Analysis was done using Kruskal-Wallis one-way analysis of variance and Fischer's exact test to compare categories.

Results:

A total of 120 cases were reviewed, 75% were male, 31% with co-morbidity, and 41% with history of regular alcohol drinking. Age ranged of 13 - 71 years old (mean 34.5 $\pm$ 12.3, median 34). The average volume of *lambanog* intake was 481.2 $\pm$ 483.9 mL (median 350 mL) and the average drinking duration of 3.75 $\pm$ 3.03 hours (median3 hours). The time from last intake to consult ranged from 4.53 to 143.95 hours (mean 53.8 $\pm$35.2, median 47.54, interquartile range 24.64-77 hours). The most common symptoms were abdominal pain (35.83%), headache (32.5%), dizziness (32.5%) and visual disturbances (20%). Interventions given were oral 40% ethanol, folinic and folic acid, hemodialysis, and correction of metabolic acidosis. One patient died, one was intubated on admission, and 90.83% recovered without sequelae. Prolonged length of stay was associated with degree of high anion metabolic acidosis and severity of poisoning. Poisoning severity was associated with regular alcohol drinking, volume of *lambanog* intake and metabolic acidosis.

Conclusions:

This study describes the demographic profile, clinical features, interventions, and outcomes of patients with acute methanol poisoning. This outbreak mainly involved young adult male patients, commonly presenting with gastrointestinal symptoms and only 1 assessed with methanol toxic optic neuropathy. Oral ethanol was given to those who met the criteria for antidote administration. Majority recovered with no sequelae on discharge. The low mortality rate may be attributed to active case finding during this outbreak that aided early diagnosis and treatment.