

Evaluation and analysis of prehospital treatment in acute poisoning cases referred to loghman- hakim poison hospital

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Objective: Acute poisoning is one of the common refer to emergency services and missing of this situation could lead to hazardous outcome. There are specific treatments in spite of taking preventive actions in intoxication. Hospital and prehospital treatments in the first hours play an important role in outcome of poisoned patients (1-3). The present study evaluates and analyzes prehospital treatment of patients who referred to Loghman-Hakim Poison Hospital (LPH).

Methods: This was a cross sectional study. All >12 year acute poisoning patients who transferred to LPH during 6 month from 21 May 2003 were included in this study. Data was gathered by trained physicians who were not involved in treating through interview and observation using a questionnaire designed by toxicology experts and the study investigators. The expected treatments with therapy done in three groups including EMS, Medical Centers and the others were compared based on clinical valid guidelines. All statistical analysis was done using SPSS 15. **Results:** 3347 (27%) poisoning cases were recorded to get prehospital/primary cares. The median age of the group was 26.4±11 years (Range 12–90). Totally 4492 different treatments were done in this group. The most common prehospital/primary care was IV fluid therapy (more than 500 ml) in 2287 (68.3%) cases. It was the only method which was used for 1298 cases (38.8%). Comparing three main prehospital action showed from 207 (6.2%) expected administration of activated charcoal (AC) just one (0.5%), from 133 (4%) expected usage of gastric lavage (GL) 27 (20.3%) and from 753 (22.5%) expected protection of airway (AP) 52 (6.9%) actions were done. Inappropriate administration of activated charcoal and gastric lavage were done in 108 (3.3%) and 1107 (33.1%) respectively. EMS was used 11 (2.4%) out of 465 expected action including AC, GL and AP while Medical centers were used 69 (11.5%) out of 599. (P<0.01)

Conclusion: There were no matching between expected treatments and what were done clinically and there was significant difference in actions of Medical Centers before referring. So due to probable positive efficacy of prehospital/primary treatments on patient's outcome particularly in first hours we recommend practical training for EMS and other medical centers.

References: (1) Kulig K. Initial management of ingestions of toxic substances. *New Engl J Med* 1992; 326:1677-1681. (2) Allison TB, Gough JE, Brown L, Thomas SH. Potential time savings by prehospital administration of activated charcoal. *Prehosp Emerg Care* 1997; 1:73-5. (3) American Academy of Clinical Toxicology and European Association of Poison Centres and Clinical Toxicologists. Position paper: Single-Dose Activated Charcoal. *J Toxicol Clin Toxicol* 2005; 43:61–87.