

THE ENCANTO* STUDY: EPIDEMIOLOGICAL CHARACTERISTICS OF SEVERE POISONINGS ADMITTED TO A SINGLE INTENSIVE CARE UNIT.

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INTRODUCTION: The aim of the ENCANTO study is to describe the features of severe acute poisonings needing intensive care in our referral rural and urban area.

METHODS: Prospective epidemiological analysis of clinical cases, measurements of severity of illness (by means of APACHE II, APS of APACHE III, SAPS II and MPM II), therapeutic effort (by means of TISS scale), and main outcomes of acutely poisoned patients admitted to our 20-bed general ICU since January 1, 1996 to March 31, 2000.

RESULTS: We studied 127 patients (83 male and 44 female) with age (mean±SD) 39±18 years. The most frequent cause was intentional self-poisoning, with only three cases of accidental poisoning. The six groups of causative agents were: I) agricultural products, 55 cases (43.3%): organophosphate, 25; paraquat, 16; carbamate, 11; and glyphosate, 3; II) drugs, 54 cases (42.5%); III) household products, 7 cases (5.5%); IV) severe ethanol intoxication, 5 cases (3.9%); V) illicit drugs overdose, 4 cases (3.1%); and VI) CO poisoning, 2 cases (1.6%). Severity of illness was statistically significantly greater ($p<0.0001$) among nonsurvivors than in survivors: APACHE II 22±6 vs. 10±9; APS of APACHE III 69±25 vs. 26±19; SAPS II 53±17 vs. 24±14; MPM II-0 0.49±0.3 vs. 0.13±0.1; and MPM II-24: 0.43±0.3 vs. 0.11±0.1. Therapeutic effort was also greater among nonsurvivors but differences with survivors did not reached statistical significance ($p=0.12$) as measured by TISS scale (33±23 vs. 23±14) in the first day of ICU stay. Mortality was 17.3% (22 patients). Significantly high mortality (18 deaths) was observed among poisoned patients by agricultural products (group I): organophosphate, 5 deaths; paraquat, 9; carbamate, 3; and glyphosate, 1. There was only one death in each one of the groups II, III, V and VI.

CONCLUSIONS: In our study, suicide is the main cause of poisoning, and male gender is predominant. There is a very high mortality rate related to agricultural products, although survival after paraquat ingestion is reported in seven cases. Drugs were also used in suicidal attempts in a similar proportion, much more than household products, although lower mortality was found in both groups. Abuse of recreational licit or illicit substances leading to ICU admission is a rare condition, with a low mortality rate. Prevention efforts should be made towards the suitable control of pesticides and herbicides, which render the highest mortality rate in poisoned patients.

* ENCANTO: Encuesta Canaria Toxicológica (www.epicure.org/encanto)

** EPICURE: Epidemiological Projects for ICU Research & Evaluation

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