CLINICAL AND LABORATORY CHARACTERISTICS OF PATIENTS INTOXICATED BY CHOLINESTERASE INHIBITORS ADMITTED TO A REFERENCE TOXICOLOGICAL ASSISTANCE CENTER IN NORTHEAST BRAZIL

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Introduction: Cholinesterase inhibitor (CI) intoxication is a very frequent poisoning in Brazil. It is observed after both accidental ingestion and suicide attempts.

Objective: To describe the clinical and laboratory characteristics of CI intoxications.

Materials and Methods: This is a cross-sectional study conducted with all patients intoxicated by CI admitted to the Toxicological Assistance Center at Instituto Dr. José Frota, Fortaleza city, Brazil, in the period from November 2013 to December 2014. Clinical and laboratory characteristics recorded at admission and during hospital stay (when hospitalization was required) were reviewed. Statistical analysis was performed with SPSS program v. 20, and p value < 0.05 was considered significant.

Results: A total of 136 CI intoxicated patients were admitted in the study period, with mean age of 29.5±15 years, and 48.5% were females. In 119 cases (87.5%) the intoxication was an intentional, suicide attempt. For the majority of patients (85.3%), hospitalization was necessary, with a median time of hospital stay of 6.1±6.0 days. Clinical manifestations at admission were: neurologic symptoms (45.6%), myosis (44.1%) and gastrointestinal abnormalities (23.5%). Fever was observed in 27.2% of cases, and for 47% antibiotics were required. Mechanical ventilation was necessary for 52.2% of cases, and 11% used vasoactive drugs. Gastric lavage was performed in 59.5% of cases, activated charcoal in 66.2% and atropine in 63.2%. Regarding laboratory evaluation, the median serum cholinesterase at admission was 281.5IU/l (minimum 58IU/l and maximum 13,000IU/l), and at the time of discharge it was 2,149IU/l (minimum 45IU/l and maximum 11,573IU/l). Leukocytosis > 12,000/mm³ was observed in 48.5% of cases; 22.9% presented acute kidney injury and 41.1% had electrolyte disturbances related to sodium and potassium. Regarding the outcome, 66.2% were discharged after normalization of cholinesterase levels, 8.1% had prolonged hospitalization due to different clinical complications, and 3.7% (n=5) had a fatal outcome.

Conclusion: CI poisonings are generally young with no gender predominance. These patients, as a whole, have significant symptoms and require hospitalization and decontamination measures. Despite the high levels of clinical complications, including secondary infections, kidney injury and electrolyte disturbances, there was a lower mortality than in many other series. Further social, psychologic and cultural studies are necessary to better understand factors that lead to deliberate self-poisoning with highly toxic chemicals.