

***ABSTRACT***

**DRUG UTILIZATION STUDY OF ANTIDOTES IN PATIENTS  
WITH ORGANOPHOSPHATE AND CARBAMATE INSECTICIDE  
INTOXICATION  
(Study at Naval Hospital Dr. Ramelan Surabaya)**

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Atropine sulphate and pralidoxime are used as antidotes in the treatment of organophosphate and carbamate intoxication. Atropine can decrease cholinergic effects caused by over stimulated acetylcholine; whereas pralidoxime can reactivate cetylcholinesterase inhibited by organophosphate.

The aim of the study was to analyze the drug utilization of antidotes used in hospitalized patients with organophosphate and carbamate intoxication. The considered utilization include type, dose regimentation, route of administration, frequency, duration and Drug Related Problem (dose chosen and drug interaction). This descriptive study used retrospective data from patient medical records from January 1<sup>st</sup>, 2009 until December 31<sup>th</sup>, 2013. Then, the result was compared with guidelines of intoxication by organophosphate and carbamate.

The result showed that organophosphate and carbamate intoxication prevalence were mostly seen in female (80%) and the rest (10%) in male. Mostly seen in age 20-30 years old. The severity of poisoning has been graded as mild with 23 patients (66%), moderate with 2 patients (6%) and severe with 10 patients (28%). The antidote used in intoxication patients in Naval Hospital Dr. Ramelan Surabaya was atropine sulphate only. Atropine given with loading dose 2.5 mg then the dose slowly decreased 50% every 5 minutes, 10 minutes, 15 minutes, 20 minutes, 30 minutes, 1 hour, 2 hours, 3 hours, 4 hours, 6 hours until 12 hours depending on the severity of poisoning till signs of atropinization were obvious. The main therapy of intoxication was to limit the intensity of toxic agents or to heal the toxic effect. Atropine sulphate administrations should be monitored strictly.

Keywords: organophosphate, carbamate, intoxication, antidotes, drug utilization study, atropine sulphate