

## Comparative Efficacy of Atropine V/S Atropine-Glycopyrrolate in Management of Organophosphorus Poisoning in a Tertiary Care Hospital

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### Abstract

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**Objective:** To study the effectiveness of atropine and atropine-glycopyrrolate combination in the management of OP poisoning in tertiary care hospital.

**Method:** A prospective observational study was carried out in a tertiary care hospital in south India from February 2009 to November 2012. All acute OP poisoned patients admitted, irrespective of age and genders were included in the study. Mixed and unknown poisoning cases were excluded from the study. Demographical details like age, gender, type of compound, occupation, type of exposure along with patient's co-morbidities, clinical features and treatment given were recorded in case record form. Effectiveness of atropine and atropine-glycopyrrolate combination was analyzed using SPSS 16.0

**Result:** During the study period, 256 patients were admitted to emergency wards with complaints of OP poisoning. The mean age of the study population was found to be  $33.44 \pm 13.55$  years. The majority of the patients were males (52.4%). Among 256 patients, 194 patients received only atropine and 62 patients received atropine and glycopyrrolate combination. The outcomes of these two groups were analyzed in terms of primary and secondary outcomes. Primary outcome included percentage of mortality, percentage of recovery and percentage of sequel. Secondary outcomes included duration of hospitalization days, duration of ventilation days, incidence of intermediate syndrome and percentage of adverse reactions of atropine. Outcome analysis of these groups showed that there was no significant difference in percentage of recovery and percentage of mortality. However, there was reduction in hospitalization days and incidence of adverse drug reactions of atropine in atropine and glycopyrrolate group when compared to atropine group alone.

**Conclusion:** Organophosphorus pesticide self-poisoning is a major clinical and public health problem across much of rural Asia. Our study suggests that treatment with atropine-glycopyrrolate versus atropine alone does not have any major advantage except reduction in the duration of hospitalization and incidence of adverse reactions.