

Atropine and glycopyrrolate in organophosphate poisoning.

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Background: Unintentional and intentional organophosphate (OP) poisonings continue to be a significant cause of morbidity and mortality in our country. Conventional treatment with atropine may lead to CNS toxicity, although control of secretions may still be inadequate. **AIM:** To study the effectiveness of atropine with glycopyrrolate and atropine alone in organophosphate poisonings. **Methods:** A prospective randomized double - blinded, placebo-controlled trial done in an emergency department of VMKV medical college hospital. Patients who consumed OPC were included. Pregnant women, hypothermic adult, poly pharmacy and along with alcohol were exclude. Patients with OPC poisoning, received either atropine and glycopyrrolate or atropine and matching placebo as a bolus through a peripheral IV line. All other aspects of treatment were carried out as per Guidelines. **Results:** 72 victims were involved during six month period 36 were belong to study group & remaining were in control group. There were no significant differences in demographic data, time of arrival & time to start treatment. After administration of the study drug. Mean duration in ventilator was 4.2 in study group & 7.4 in control group. The mean ICU stay was 6 days in control group and 11,4 days in control group. CNS toxicity occurred in 40 % of control group & 4% of study group. Intermittent syndrome developed in 10 % of control group & 2 % of study group. Development of respiratory tract infection seen in 30 % of control group & 10 % of study group. **Conclusion:** Addition of glycopyrrolate appears to be a promising new intervention in the management of OPC poisoning.

Patient Character (Mean)	Atropine group n=36	Glycopyrrolate group n=36
Age (years)	28.6	30.1
Time of presentation after ingestion (hrs)	6.8	7.2
Heart rate b/min	48	46
RR (min) (mean)	10	11
Spo2 (%) (mean) with 6 liter of o2	90	90

Primary out come	Atropine	Glycopyrrolate
Discharge	24	35

Death	12	1
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Secondary outcome

Duration of ventilation in days (median)	9	4
LOS in ICU (days)(median)	12	6
Hospital stay(days) (median)	16	7
CNS toxicity	15	1
Intermediate syndrome	8	1
Respiratory tract infection	12	3