

## OP Poisoning –A Clinical Study.

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### ABSTRACT

**Background:** Organophosphorus compounds control and eradicate the insects and pests and save the crops and plants. In India as agriculture is main occupation especially in rural India Organophosphorus pesticides have contributed a lot in bringing the green revolution. The agriculture labor or workers do not follow the precautions and become victims of accidental poisoning especially acute and some times of chronic poisoning. The agriculture products like fruits and vegetables are being polluted with Organophosphorus compounds because of neglected attitude of vegetable agents. **Results & Conclusion:** Consumption of Organophosphorus compounds as suicidal poison is also increasing rapidly.

**Keywords:** Organophosphorus poisoning, Pesticides, Clinical features

### INTRODUCTION

Organ phosphorus and carbonate insecticides (Parathion, Malathion) are widely used in commercial agriculture and home gardening. There are many clinical agents in this group. Most of them are poorly water soluble formulated with an aromatic hydrocarbon solvent such as Xylene are well absorbed through intact skin. Most chemical warfare nerve agents (such as GA (taban), GB (Sarin)) are Organophosphorus.

#### Aim and Objects

To study the clinical features of Organophosphorus poisoning in emergency department.

### MATERIALS AND METHODS

In our study we have examined to cases of acute Organophosphorus poisoning. After the diagnosis blood samples were sent to emergency laboratory for the estimation of random blood sugar, SGOT, urea and creatinine and Serum Electrolytes. After the Gastric lavage treatment was started and ECG was taken 2 times once at the time of admission and 2nd was at the time of discharge.

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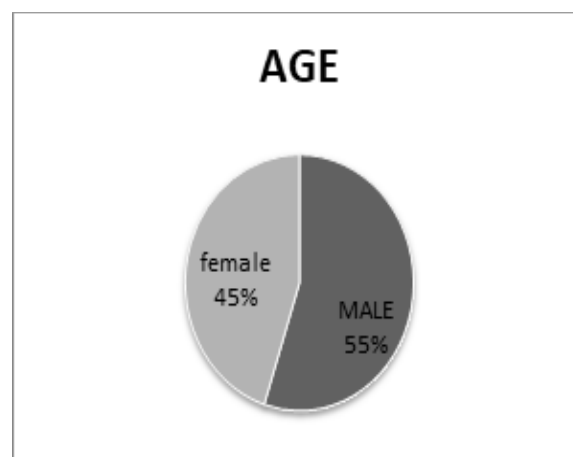
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### RESULTS

The incidence of poisoning in the age group 20-30 years is 55%

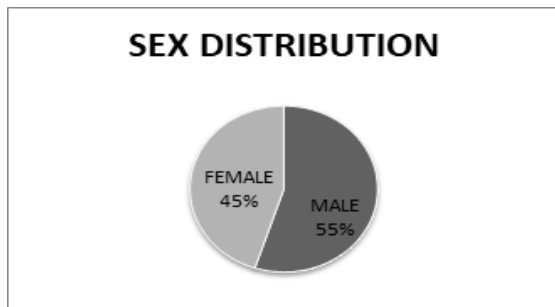
#### Age Distribution

AGE GROUP	NO.OF CASES	PERCENTAGE%
<20 yr	15	15%
21-30	48	55%
31-40	18	20%
41-50	6	6%
51-60	3	3%



**Sex Distribution:** In our study the male female ratio is 55% and 45%

Sex	No. Of Cases	Percentage
Male	48	55%
Female	42	45%

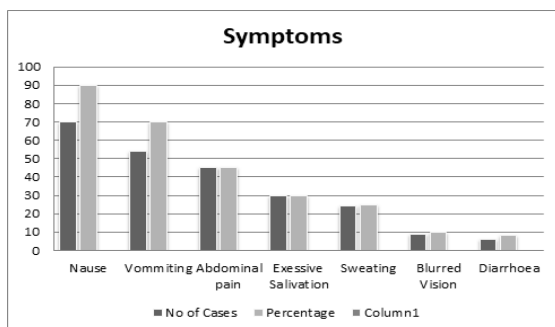


**Analysis of Symptoms**

In our study Nause (90%), Vommiting (70%), Abdominal pain (45%), Excessive Salivation (32%) Sweating and Lacrimation (27%) ,Weakness (18%), Insatiability (15%), Diarrhoea (8%), Blurred Vision (8%) were comparable to the study reported by APN Kumar et al and Goel

2. Wheezying, Seizers, Initial tachycardia followed by Bradycardia was also observed

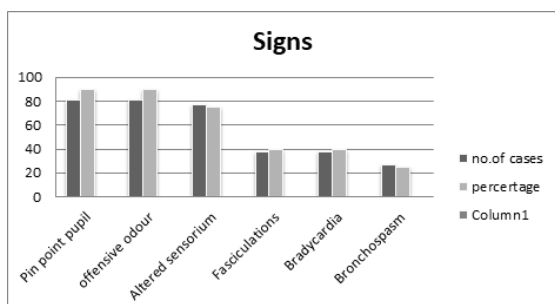
Symptoms	No. Of Cases	Percentage
Nause	70	90%
Vommiting	54	70%
Abdominal pain	45	45%
Excessive Salivation	30	30%
Sweating	24	25%
Weakness	18	20%
Blurred Vision	9	10%
Diarrhoea	6	8%



**Signs in our study**

Pin point pupil (Miosis 90% offensive odour 90% Altered sensorium 75% Fasciculations 40% Bradycardia 40% Bronchospasm 25%)

Sign	No. Of Cases	Percentage
Pin point pupil	81	90%
offensive odour	81	90%
Altered sensorium	77	75%
Fasciculations	38	40%
Bradycardia	38	40%
Bronchospasm	27	25%



Organo-phosphorus, poisoning is very common in adults especially in low socio- economic group pain abdmens, Nausea, vomiting, miosis, Rthym abnormalities, and bronchospasm and altered sensorium are very common manifestations. Fasciculation are considered as bad prognostic sign.

**DISCUSSION**

The reasons behind the increased incidence of organo-phosphorus poisoning in rural area is the population depends on agriculture. The main crops cultivated are paddy, chilly and cotton and pesticides are commonly required to eradicate insects.

The common symptoms are nausea vomiting and due to muscarinic effect of acelytecholine. Shankar et al observed around 55% cases.<sup>[3]</sup>

Pain abdmens is another common symptoms seen in appropriate 40% of cases and may be due to increased tone and rhythm city of duodenum. The cholinesterase inhibitor effect in on duodenum may leads to spasm because of decreased cholinesterase levels.

The froth in the mouth may be due to increased production in saliva. In sensitive to atropine therapy. Breathlessness in due to muscarinic nicotinic or both Vishwanathan and Srinivasan et al observed 42% of cases in their study.<sup>[1]</sup>

Diarrhoea was observed in 5% cases on 1st 2days. The general weakness is due to nicotinic effect of poisoning headache and blurred vision are seen in 10% of cases.

Constriction of bilated pupil (miosis) is most important sign and observed in 90% cases of may disappear in 24 to 48 hours.It is not related with severity of poisoning.

Fasciculation were observed in 40% cases Fasciculation were due to increased in amplitude of miniature and end plate potentials due to accumulation of acetyl choline and increase in spontaneous frequency of and plate potentials after treatment with PAM they were disappear balanced observed Fasciculation in 30% cases.

Wheeze is observed in 25% cases and in associated with bronchospasm and disappeared with treatment Srinivasan and Vishnathan observed wheeze in 45% patients.

Repertory paralysis in due to nicotinic effect on respiratory muscle and respiratory dishes in due to excessive section in oral capacity and bronchial passage which may lead to pulmonary congestion and edema.

Bronchospasm due to muscarinic effect leads to difficulty in breathing and cyanon 8 patients were expired due to respiratory paralyism. Sinus bradycardia is seen in 40% cases and it is due to direct of a sinus node.

## CONCLUSION

Young people who belongs to agriculture families uses organ –phosphorus poison for suicidal purpose and it is the one of the commonest poisons are available in market.

Common clinical features are vomiting, nausea, miosis, pain abnormal whereas excessive salivation detesionrater was observed in some patients after 2 to 3 days and improved with atropine, PAM and ventilator support.

The best preventive measure is education by agriculture officer, regarding spraying improving the socio-economic standards.

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