



## A CASE OF ORGANOPHOSPHOROUS POISONING WITH EXTRAPYRAMIDAL SIGNS PRESENTATION: A RARE CASE REPORT

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### ABSTRACT

Organophosphorus poisoning is one of the serious poisoning worldwide as it is easily accessible pesticide for suicidal as well accidental poisoning. It is associated with high morbidity and mortality. Complications of organophosphorous poisoning are classified as cholinergic syndrome, intermediate syndrome, delayed polyneuropathy, arrhythmia, pancreatitis and hepatic dysfunction. We had 46 year old patient presented with extrapyramidal manifestations got recovered with various supportive treatment. A 46 yr old male patient presented to emergency department of tertiary care hospital of Aurangabad with alleged history of approximately 15-20 ml of profex insecticide (profenofos organophosphorous compound) under alcohol influence around 2 hrs before hospital admission. He presented with complains of breathing difficulties for which got intubated in emergency and then started on ventilator support in ICU. From around day 12 patient started with increased tone of all muscles of neck trunk upper as well as lower limbs. it was more of lead pipe rigidity at elbow and knee joint with absent deep tendon reflexes. With Neurologist's opinion patient was started with tablet syndopa, baclofen and prednisolone as patient was showing extrapyramidal manifestations. Patient's tone started decreasing gradually from day 21 and became normal till day 28. Patient's breathing efforts became adequate hence taken off ventilator support by day 33. Patient decannulated and shifted back to general ward where psychiatry consultation was done.

**KEYWORDS :** organophosphorous, extrapyramidal, syndopa

### INTRODUCTION

Poisoning ranks 45th in total death in the world. Highest incident being household agents followed by drugs and then agricultural pesticides. Organophosphate poisoning is one of the most common causes of poisoning in developing countries like India.

Organophosphorous has physiologic depression with muscarinic signs and symptoms such as seizures, excessive secretions (lacrimation, salivation, bronchorrhea and wheezing, diaphoresis) and increased bowel bladder activity with nausea vomiting, diarrhea, abdominal cramps and incontinence of feces and urine. Nicotinic signs and symptoms such as hypertension, tachycardia, muscle cramps, fasciculations, weakness and paralysis. Death is due to respiratory failure. Cholinesterase activity in plasma and red cells is less than 50 % of normal in acetylcholinesterase inhibitor poisoning. (1)

Most of the patient need intensive monitoring and prompt management for recovery. Otherwise they land up with various complications.



Figure 1: profex organophosphorous insecticide  
Sources: [www.googleimages.com/profex](http://www.googleimages.com/profex)

### Case Study

A 46 yr old male patient presented to emergency department of tertiary care hospital of Aurangabad with alleged history of approximately 15-20 ml of profex insecticide ( profenofos organophosphorus compound) under alcohol influence around 2 hrs before hospital admission. He presented with complains of breathing difficulties for which got intubated in emergency and then started on ventilator support in ICU. He also had altered sensorium, loose stools, profuse sweating and oral secretions. On examination patient was drowsy arousable. His BP was 110/80 mmhg, pulse rate 65 bpm and pupils small sized, neck holding was poor. Respiratory system examination had minimal crepitations in basal zones. Injection pralidoxime was given as 1 gram loading and 500 mg 8 hourly. Injection Atropine given as a bolus and then as per requirement. he was started on antibiotics such as cefoperazone sulbactam and metronidazole. Patient was started for weaning trial from 4<sup>th</sup> day itself but it was bit difficult to wean as patient's breathing efforts were inadequate.

From around day 12 patient started with increased tone of all muscles of neck trunk upper as well as lower limbs which was hampering limb and chest physiotherapy. it was more of lead pipe rigidity at elbow and knee joint with absent deep tendon reflexes. As physiotherapy has vital role in patient with mechanical ventilation support, it became more difficult to wean patient. With Neurologist's opinion patient was started with tablet syndopa, baclofen and prednisolone as patient was showing extrapyramidal manifestations. His liver function tests were also started deranging by day 13. His prothrombin time reached upto 30 and INR upto 5 with bilirubin 2.5 but without active bleeding.

He was given fresh frozen plasma, packed red cells and vitamin k, then it started to come gradually towards baseline. Patient was given gentamicin, amikacin, linezolid, colistin, meropenem and tigecyclin according to tracheal culture sensitivity. Patient's tone started decreasing gradually from day 21 and became normal till day 28. Patients breathing efforts became adequate hence taken off ventilator support by day 33. Patient decannulated and shifted back to general

ward where psychiatry consultation was done . he was discharged in stable condition.

## DISCUSSION

OP poisoning is one of the most common poisoning seen in emergency medicine in developing countries requiring intensive monitoring and urgent intervention. It presents as diverse symptoms and signs in the form of muscarinic ,nicotinic and central nervous symptoms. Diagnosis of OP poisoning is mainly done clinically based on nicotinic and muscarinic signs and symptoms. However, one of the screening tools to diagnose OP poisoning is measurement of acetylcholinesterase/ plasma cholinesterase levels. Patient showed extrapyramidal presentation. Some of cases showed basal ganglia infarct on NCCT brain. Our patient could not be shifted to NCCT brain or MRI brain as he was on ventilatory support. Very few literature is available regarding same even after intense search. However treatment including dopamine agonist, muscle relaxants with supportive treatment including prevention of ventilator associated pneumonia and bed sores is necessary for recovery. Patient recovery is prolonged but definite.(2)(3)

## CONCLUSIONS

Patients presenting with extrapyramidal manifestations can be given treatment with syndopa which has beneficial effects. NCCT brain or MRI brain can be done as and when necessary and possible. Limb physiotherapy is supportive in recovery.

## REFERENCES

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