

# A case of poisoning with HATTRICK [1] [OPC-triazophos-O, O-diethyl, O 1 Phenyl 1H 1, 2, 4, Triazol 3yl – phosphorothio] Pesticide; case report

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Organoposporous compounds are most often involved in human poisoning, as they are used extensively in India for agricultural purposes [2]. These pesticides are available in lethal and concentrated forms. Self poisoning with OPC is a major global problem associated with thousands of deaths per year.

**Keywords:** Hattrick, OPC, triazophos, Metabolic derangements, Oxidative stress, Organ damage, Hemolysis, fatal.



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## Introduction

OPC Poisoning in India is a suicidal method (95%) [2] and as accidental (5%) are commonly seen at age group 15-35 OPC are available with different brands and combinations. They are available at low cost, easily available, and highly toxic. Toxicity varies with each compound.

Eg: chlorpyriphos, monocrotophos, dimethoate, paroxan, metacid, cypermethrine, dichlorovas, TRIAZOPHOS etc, fatality also depends on multiple factors like identification of the compound and treatment.

## Case report

A 21 year old male, non smoker, non alcoholic, unmarried, was admitted to MICU on 27-8-12 with alleged h/o consumption of HATTRICK insecticide 2 hours ago. Definitive history was obtained from the patient and relatives, clinical examination confirmation was done.

## Examination

Patient was drowsy, irritable, confused, smell of op-compound was there, pupils constricted and sluggishly reactive to light, secretions in mouth and throat present. Patient had vomited, pulse rate -86/min, BP 130/80 mmHg, respiratory rate-22/min, slightly febrile, respiratory system examination revealed bilateral widespread crepitations.



## Course in the hospital

Pt in ICU, did not maintain SpO<sub>2</sub> and hence intubated and put on ventilator support. Later pt improved in conscious level and vitals. On the 4<sup>th</sup> day pt had haematuria, mild icterusa and had mild hepatomegaly and was investigated for hemolytic anemias where LDH was raised, Coomb's test was negative and PBS showed evidence of hemolysis. Pt given packed cell volumes. Later Hb dropped from 14 to 8.7G/dl and he showed abnormalities in the metabolic parameters ranging from hypo to hyperglycemia. However no electrolyte disturbances were found. Pt had a sudden cardiac arrest which could not be revived. In view of inconclusive cause of death body was subjected for autopsy, which revealed oligemic vital organs and toxicology report is awaited.

## Treatment

Stomach wash, atropinisation, oximes, antibiotics and supportive treatment.

## Investigations

Hb-14,  
TC-13400, P-82%, L-18%, Platelets-2.4lakhs, ESR-10, PS-  
normocytic normochromic blood picture with neutrophilia.  
Urine routine-N  
RBS-102  
S.Urea- 18  
S.Creat-1.1  
NA-131, K-4-6  
LFT-TB-0.9,DB-0.5,IB-0.4,SGOT-19,SGPT-17,ALP-71,T.Pro-  
5.3,Alb-4.2  
ABG-Normal  
ECG-WNL  
CXR-WNL  
SERUM CHOLINESTERASE LEVELS- 5.44U/ml(5.32-12.92)

## Discussion

Hattrick [1] (triazophos-O, O-diethyl, O 1 Phenyl1H 1, 2, 4, Triazol 3yl – phosphorothio) is a broad spectrum systemic insecticide and acaricide.

Symptoms and signs of poisoning in humans are similar to OP compound poisoning [2]. This pesticide is extensively used in agricultural practice throughout the world. Literature review reveals significant alterations in all the biochemical parameters-hypoglycemia, hypocholesterolemia, SGOT, SGPT, LDH variations seen [3].

Research work on fresh water crab, fish (Punctatus), Albino rats have shown effect on glucose and other enzymes and oxidative stress induced tissue damage on liver and kidney [4-5].

In our case patient manifested with symptoms and signs of OP compound poisoning, inspite of appropriate treatment patient went into complications and succumbed to death. We found in our case, apart from metabolic derangements and organ damage, severe anemia due to hemolysis, as evidenced by raised LDH and peripheral smear study.

So it is a scope for further research activities regarding hematotoxicity of the compound.

## References

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