

A CASE REPORT ON OP POISONING DURING PREGNANCY

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ABSTRACT

Organophosphorus compounds are highly effective insecticides, though some are also lethal to humans at minute exposure. A case of organophosphate poisoning is presented in which a pregnant women consumed organophosphorus compound and treated with antidotes and other drugs. Mean while we found adverse drug reaction for a drug T. Escitalopram 10mg, BD. We reported it to the health care professionals and the same was focused in this case. The suspected ADR was Probable ADR (Naranjo's scale). After doing intervention the patient was recovered and discharged safely.

KEYWORDS: Organophosphorus compounds, antidotes, adverse drug reaction, intervention.

INTRODUCTION

Organophosphate (OP) poisoning is common in developing countries and especially so in India. Organophosphate poisoning occurs most commonly as a suicide attempt in the developing world and less commonly by accident. Intentional ingestion of organophosphates is associated with a high mortality rate.^[1]

MECHANISM OF ACTION

These compounds inhibit the enzyme acetyl-cholinesterase within the peripheral and central nervous system by phosphorylation of its esteratic site. The resultant accumulation of

acetylcholine at the cholinergic receptor sites, leads to signs of cholinergic toxicity. Thus, resulting in muscle overstimulation. Accidental OP sites, leads to signs of cholinergic toxicity. If this blockade is not reversed within 24 h, large amounts of acetylcholinesterase are permanently destroyed.^[2]

CASE REPORT

A 25 years female patient with Primi gravida (2months) was admitted in General medicine, casualty ward with the chief complaints of burning sensation in the throat and stomach, headache and feeling of thirst. This is a case of OP poisoning. She had consumed poison around 3p.m and admitted to hospital at morning.

On examination, the patient was conscious. Vitals were monitored, BP: 130/80mmHg, PR: 78bpm, Pallor+. Soon stomach wash was done and she was treated with Injection Atropine 2amp stat, Injection. Pralidoxime 1gm in 100ml NS, IV, Tid and then injection Atropine 8 amp. (1amp=1ml=0.2mg) in 1 pint Normal saline, IV 8th hrly was given. Along with that Inj. Pantop 40mg, IV, OD and Intravenous fluids i.e. 2 pint DNS, 2 pint NS, 1 pint RL was given. Foley's catheterization was kept and she was advised to take blood and electrolyte test. As she is pregnant she was referred to Gynecology and Obstetrics department. On Day-2, vitals were monitored, BP was 110/80mmHg, PR: 72bpm, CVS- NAD, CNS- NAD, and the reports shows **Hemoglobin:** 9gm/dl (12 to 16 g/dl for women), **Total Bilirubin:** 0.6mg/dl (0.6 to 1.1 mg/dl), **Direct Bilirubin:** 0.2mg/dl (Upto 0.2mg/dl), **Indirect Bilirubin:** 0.4mg/dl (0.2-0.8), **Bilirubin Urea:** 24mg/dl (7 to 20 mg/dl), **Creatinine:** 0.8mg/dl (0.5-1.5mg/dl), **Na⁺:** 135mmol/l(134-145), **K⁺:** 3.9mmol/l (3.5-5.0), **Cl⁻:**103mmol/l (95-105), **Total Count:** 9000/mcl (4500-1100). As there is no abnormalities in the test. They continued the same treatment. On Day-3 vitals were monitored, BP: 110/70mmHg, PR: 80bpm, RS- clear, SPO2: 99% and the patient had history of vomiting 2 episodes. So they added Inj. Ondansetron (2ml=4mg), IV, BD to the above following medication. Ultrasonography was done with permission of both patient and patient's representatives. The reports showed that the fetal movements was positive, fetal heart pulsation was positive and the size of the fetus is 54-6 cms. A single intrauterine fetus of 12 weeks 1 day with good cardiac activity was observed. On Day- 4 vitals were normal and the same treatment was continued. On Day -5, vitals were normal and the patient was treated with IV fluids 2pint RL,1pint NS(100ml/hr), IV, SOS, Inj. PAM, 1gm in100ml NS,IV,TID, Inj. Atropine 2amp (1amp=1ml=0.2mg)IV, 8thhrly, Inj. Pantop, 40mg, IV, BD, Inj. Ondansetron, 2ml=4mg, IV, BD and T. Escitalopram, 10mg, P/o, OD was given.

On Day-6 vitals were normal, the patient condition is improving and she had headache on and off. So the following medication was given. Inj. Ondansetron 2ml=4mg, IV, BD, Inj. Pantop, 40mg, IV, BD, T. Escitalopram, 10mg, P/o, OD, Inj. Tramadol 2ml=100mg, IM, SOS. On day-7, patient experienced severe itching on the whole body. And on investigation it was found that tablet Escitalopram was the suspected drug for this pruritis condition and it was found that it is a Pregnancy Category-C drug. So the drug was stopped immediately after doing intervention and T. Cetirizine 10mg, P/o BD was given to overcome the condition. On Day-8, at the day of discharge, investigations were done and the results showed **Hb:** 9gm/dl (12 to 16 g/dl for women), **TB:** 0.6mg/dl (0.6 to 1.1 mg/dl), **DB:** 0.1mg/dl (Upto 0.2mg/dl), **IB:** 0.4mg/dl (0.2-0.8), **BU:** 20mg/dl (7 to 20 mg/dl), **Cr:** 0.9mg/dl (0.5-1.5mg/dl), **Na⁺:** 138mmol/l(134-145), **K⁺:** 4mmol/l (3.5-5.0), **Cl:**100mmol/l (95-105), **TC:** 9000/ mcl (4500-1100). At the day of discharge patient had been suffering from dizziness fever and headache but no treatment was given. After doing intervention the patient was discharged with T. Rantac 150mg, PO, BD, T. Paracetamol 500mg, PO, SOS, T. Cetirizine 10mg, PO, BD, T. Ondansetron, 4mg, PO,BD, T. Vertin 16mg, PO, BD.

ANALYSIS OF ADR

The suspected drug ADR was analyzed by using Naranjo's scale and the ADR was found to be "Probable" and the severity of the drug was analyzed by using Modified Hartwig, Siegel scale and the ADR was found to be Probable. Preventability of an ADR was analyzed by using Schumock and Thornton scale the ADR was "Preventable".

DISCUSSION

Organophosphorus poisoning is poisoning due to Organophosphates. They are used as insecticides and nerve agents.^[3] Symptoms include increased saliva and tear production, small pupils, diarrhoea, vomiting, sweating, muscle tremors, and confusion.^[4] While onset of symptoms is often rapid they can take up to 12 hours to appear.^[5] Symptoms can last for days to weeks.

This is a case of Organophosphorus poisoning in which the patient was pregnant (1st trimester) had consumed poison and treated with the above following drugs. In this case Adverse drug reaction took place and the suspected drug was Tablet Escitalopram, 10mg. It is an antidepressant drug belonging to a group of drugs called selective serotonin reuptake inhibitors (SSRIs).^[6] The way escitalopram works is still not fully understood. It is thought to positively affect communication between nerve cells in the central nervous system and/or

restore chemical balance in the brain. Human data suggest there may be risk in the third trimester.^[7] But in this case the patient in 1st trimester experienced pruritis condition on the whole body. Commonly reported side effects of escitalopram include: Diarrhea, drowsiness, ejaculatory disorder, headache, insomnia, nausea, and delayed ejaculation. Other side effects include: anorgasmia, constipation, dizziness, dyspepsia, fatigue, decreased libido, diaphoresis, and xerostomia. Serious side effects: severe allergic reactions like trouble breathing, swelling of face, tongue, eyes or mouth. Can cause rashes, itchy welts, blisters, with or without fever or joint pains. Less common side effects like fever, chills, cough, itching, decreased appetite etc. In this case a Adverse drug reaction was found and the same was documented. Medication errors was found as the dosage forms was not written for few drugs and untreated indications was also seen. The same was monitored and interventions were done.

CONCLUSION

In this study we made an attempt to bring awareness about the adverse drug reactions, medication errors among the health care professionals, nurses and the patients. A adverse drug reaction was reported and documented. Medication errors was also reported and documented for untreated indication and for omission of dosage forms. Interventions were made and patient counseling was done.

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