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Case Report

A Case Report of Fungicidal Poisoning

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Abstract

Myclobutanil may be a conazole class fungicide. Mostly employed in food crops (like apple, banana, asparagus, beans, cranberry, grape, plum, soybean, tomato, strawberry) and in other commercial landscape. Moreover it's lower acute toxicity is seen. In animal study, it can affect reproductive ability. Workers in fields are mostly affected. Common symptoms include headache, eye irritation, itching, nausea, vomiting, abdominal pain, nose bleeding. A 39 year old male patient was brought to emergency department with chief complaints nausea, vomiting, seizures, loss of consciousness, and nose bleeding. Patient was provided with treatment upon admission.

Keywords: Myclobutanil, conazole, fungicide.

INTRODUCTION

Myclobutanil may be a conazole class fungicide. Mostly employed in food crops (like apple, banana, asparagus, beans, cranberry, grape, plum, soybean, tomato, strawberry) and in other commercial landscape. Moreover it's lower acute toxicity is seen. In animal study, it can affect reproductive ability. Workers in fields are mostly affected. Common symptoms include headache, eye irritation, itching, nausea, vomiting, abdominal pain, nose bleeding. Myclobutanil can effect heart (heart rhythm, hypovolemia, hypotension), systemic respiratory (pulmonary edema, bronchospasm), and seizures also are seen. Treatment involves establish a patent airway (oropharyngeal or nasopharyngeal airway, if needed). Suction if necessary. Sit up for signs of respiratory insufficiency and assist ventilations if needed. Administer oxygen by nonrebreather mask at 10 to fifteen L/min. Monitor for pulmonary edema and treat if necessary. Monitor for shock and treat if necessary.¹

Anticipate seizures and treat if necessary. For eye contamination, flush eyes immediately with water. Irrigate each eye continuously with 0.9% saline (NS) during transport.²

Don't use emetics. For ingestion, rinse mouth and administer 5 ml/kg up to 200 ml of water for dilution if the patient can swallow, includes a strong instinctive reflex, and doesn't drool. Cover skin burns with dry sterile dressings after decontamination.³

Consider orotracheal or nasotracheal intubation for airway control within the patient who is unconscious, has severe

pulmonary edema, or is in severe respiratory distress. Positive-pressure ventilation techniques with a bag valve mask device could also be beneficial. Consider drug therapy for pulmonary edema. Consider administering a beta agonist like albuterol for severe bronchospasm. Monitor heart rhythm and treat arrhythmias as necessary. Use 0.9% saline (NS) or lactated Ringer's if signs of hypovolemia are present. For hypotension with signs of hypovolemia, administer fluid cautiously. Look ahead to signs of fluid overload.⁴

Treat seizures with diazepam or lorazepam. Use propranolol hydrochloride to help eye irrigation

CASE REPORT

A 39 years old male patient who was an occasional ethanolic was remarked to the emergency department with complaint nausea, vomiting, seizures, loss of consciousness and nose bleeding in sight over consumption of myclobutanil poison

Upon admission into general medical aid unit the vitals were, Temp: 98.6°F BP:120/90mmHg PR:88 bpm RR:18bpm No crepts

Laboratory investigation

Upon further investigations the patient had a standard haematological levels, serum electrolytes levels, on contrary the hepatic function test showed increase in total bilirubin, direct and indirect bilirubin and more over the ECG was abnormal which showed abnormal Sinus rhythm, Left atrial enlargement, R-S transition zone in V leads displaced to right.

Lab Parameter	DAY-1	Normal value
HB	13 gms%	13-18gms%
WBC	5400c/cmm	4000-11000c/cmm
RBC	3.9m/cmm	4.3-5.7c/mcl
DLC=N+L+E+M+B	79+36+03+00+00	
PLATELETS	1,90,000	1.5-4.5 lakhs/cumm

Lab Parameter	DAY-2	Normal value
SODIUM	139mmol/l	135-145mmol/l
POTASSIUM	3.3mmol/l	3.5-5mmol/l
CHLORIDE	104mmol/l	98-105mmol/l
IONISED CALCIUM	1.17mmol/l	1.15-1.35mmol/l
RBS	90mg/dl	70-140mg/dl
Sr. CREATININE	0.6mg/dl	0.9-1.3mg/dl
BLOOD UREA	11mg/dl	7-40 mg/dl

Lab parameter	Day 3	Normal value
AST	23	0-35U/L
ALT	45	0-38U/L
ALP	91	30-115U/L
TOTAL BILIRUBIN	1.1	0-1.2mg/dl
DIRECT BILIRUBIN	0.5	0-0.2mg/dl
INDIRECT BILIRUBIN	1.9	0-1mg/dl
TOTAL PROTEIN	4.8	6.4-8.3g/dl
ALBUMIN	2.9	3.5-5.2g/dl
GLOBULIN	1.5	2.9-3.1g/dl
A/G RATIO	1.9	1-2

Differential diagnosis:-

The patient was diagnosed by the history interrogation with patient's attenders and also the symptoms of fungicide poisoning like loss of consciousness, five episodes of

vomiting and one episode of seizure and abnormal ECG supported above investigations and interrogation the patient was diagnosed with victim of myclobutanil poisoning

Treatment:-

Upon admission the patient as there's not particular antidote the patient was firstly secured with dextrose normal saline and ringer lactate solutions for stability later the treatment was started with broad spectrum antibiotics, diazepam, proton pump inhibitors, ondansetron and cynamocobalamin.

The patient was monitored and treated for 6 days and later was discharged with proper counselling to the patient and family with discharge medication plan which was comprised of cephalosporin antibiotic, multi vitamins, proton pump inhibitors and calcium supplementation. The patient came with complaint vomiting, seizures, loss of consciousness visible over consumption of myclobutanil poison

DISCUSSION

Myclobutanil may be a conazole class fungicide. Mostly workers in food crops and commercial landscape are affected. Myclobutanil poisoning is quite rare. Common symptoms include headache, eye irritation, itching, nausea, vomiting, abdominal pain, nose bleeding. Myclobutanil can effect cardiovascular system (heart rhythm, hypovolemia, hypotension), systema respiratorium (pulmonary edema, bronchospasm), and seizures also are seen

Patient was brought to the emergency department with chief complaint nausea, nose bleeding, vomiting, seizures, loss of consciousness in view over consumption of myclobutanil poison.

As there's no definite antidote for fungicide poisoning the patient was secured with intravenous saline and broad spectrum antibiotics, proton pump inhibitors and was monitored and treated for 4 days, later was discharged with proper counselling to patient and patients attenders for a healthy socio-family life, cessation of alcohol, discharge medication plan which encompassed of multivitamins and calcium supplementations.

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