

CASE REPORT

TWO CASES OF ACCIDENTAL MINOXIDIL POISONING

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CASE REPORT

Two otherwise healthy middle aged women were brought to the casualty with H/O accidental ingestion of 2% minoxidil topical solution around 15ml each. The first person mistook the minoxidil solution for cough syrup and also gave it to the other person. Patient realised that it was not cough syrup, since after consuming they developed severe headache, vomiting and palpitation. Hence patient was brought to our Emergency department and the container brought by the attenders was found to be Minoxidil. On examination, both patients were conscious, oriented to time place and person.

Key words: Minoxidil, Poisoning

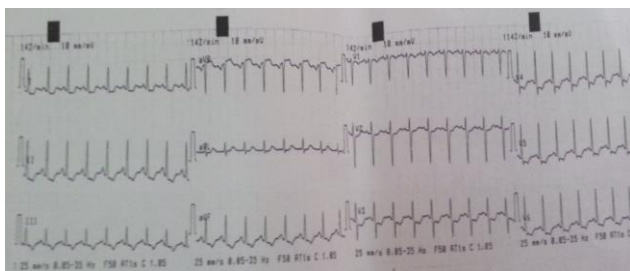
1.INTRODUCTION

C.V.S – In both patients : S1,S2 heard all areas , No murmurs, No S3 heard.R.S – In both patients : Air entry equally heard in all areas, No added sounds. C.N.S- No focal neurological deficit.

VITALS	PATIENT 1	PATIENT 2
PULSE RATE	130/min	140/min
BLOOD PRESSURE	100/70 mm hg	100/60 mm hg
RESPIRATORY RATE	28/min	24/min
SPO2	98% @at room air	98% @at room air

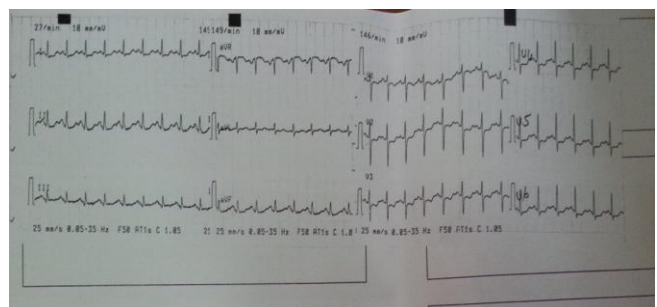
PATIENT 1:

ECG revealed a sinus tachycardia of 130 beats/min with depressed S-T segments in I,AVL,V1-V6.



PATIENT 2:

ECG revealed a sinus tachycardia of 140 beats/min with depressed S-T segments in I,AVL,V1-V6.

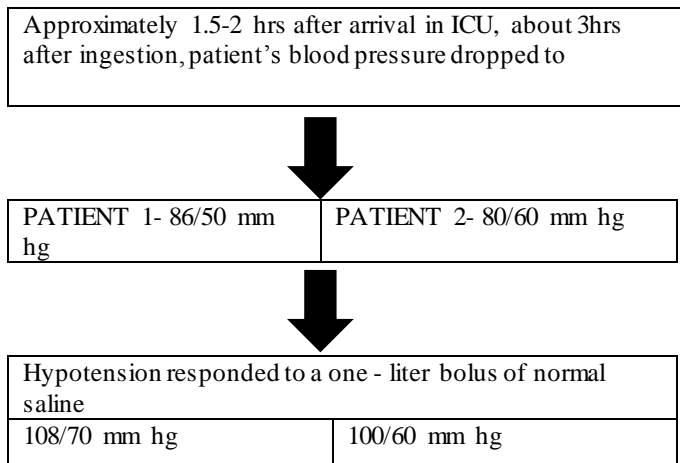


INSVESTIGATIONS:

- **Both Patients had elevated Serum CKMB levels(60&71).**
- **On second day serum ckmb levels (22&14).**
- **Other Investigations were within Normal range.**
- **ECHO taken the day after was normal for both patients.**
- **Both patients were shifted to ICU for further management.**

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MANAGEMENT:



Both patients were managed with I.V fluids, Activated charcoal, and other supportive measures. Hypotension resolved within 2 hours of i.v fluid administration. But Tachycardia persisted for the next 10 to 12 hours. Both patients' improved symptomatically after 12 hours of admission. Both patients were kept under observation for further two days and discharged on the third day.

2.DISCUSSION

Minoxidil is a vasodilator and was originally used as an antihypertensive agent. It was approved for the treatment of male pattern baldness after reports of hypertrichosis in patients receiving the oral formulation. As a topical solution it is to be applied to the affected area of the scalp twice daily. A 60ml bottle contains 2% minoxidil (1200mg), 63% ethanol, propylene glycol, and water.

DOSAGE:

As an antihypertensive :

Oral: 2.5 to 80mg/day ,qDay or q12 hrly; not to exceed 100 mg/day . Available as (2.5&10mg)

For Androgenic Alopecia :

As Topical solution: 1 ml of 2% or 5% solution twice daily, not more than 2ml in 24 hours.

ADVERSE EFFECTS:

Local:

Local irritation,Burning,sensation,Itching,Rash.

Systemic:

Breast

tenderness,Gynaecomastia,Polymenorrhea,Thrombocytopenia, Myocardial infarction,Pulmonaryhypertension,Sodium and fluid retention,Pericardial effusions.

Minoxidil produces systemic hypotension by a direct arteriolar vasodilatation and is associated with a reflex increase in cardiac output and myocardial contractility mediated by the sympathetic overactivity. Peak concentrations in the blood are achieved 1hr after oral dosing. The serum half life is 3 to 4 hrs, but the duration of effect can be 24hrs or longer.Total duration of the oral formulation is 72hrs.Minoxidil is eliminated mainly by hepatic metabolism.

In this present case report, the patient ingested 300mg(15ml) of minoxidil which is 3 times the maximum recommended dose of the oral drug formation.This resulted in hypotension, severe tachycardia, headache, vomiting.

1. Isles and colleagues reported the accidental ingestion of an alleged twenty 5mg tablets of minoxidil in a 2yr old boy.Child's heart rate was 160 beats/min on admission, and 120 beats/min on discharge 40 hours later.No other symptoms were observed and the child never became hypotensive.
2. McCormick et al reported the case of a 36yr old man who had ingested an estimated 1000mg of minoxidil.He experienced profound hypotension which was not responsive to crystalloid intravenous infusion.He was treated successfully with a high-dose dopamine infusion.

3.ACKNOWLEDGEMENT

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