

Hair-Raising Emergency: Managing a Minoxidil Overdose in a 17-Month-Old Infant

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Introduction

- What begins as a standard treatment for hair loss or hypertension can quickly turn dangerous—minoxidil toxicity, though rare, may lead to severe hypotension, tachycardia, and multi-system complications, necessitating prompt medical intervention.
- Despite the widespread availability of minoxidil, reports of acute toxicity remain rare, and clinical management guidelines are not well established.
- This case highlights a severe presentation of minoxidil ingestion, emphasizing the pathophysiology, clinical manifestations, and critical interventions necessary for stabilization in a young child.

Patient Description

- A previously healthy 17-month-old male presented to the emergency department (ED) 30 minutes after ingesting topical minoxidil 5% at home.
- The parents reported witnessing the child pouring the medicine into his mouth.
- The patient immediately began coughing and expelled most of the liquid onto the floor.
- Upon arrival at the ED, the child was at his baseline, with no reported episodes of vomiting, respiratory distress, or other concerning symptoms.
- Vital signs were stable and physical examination was normal.
- During observation in the ED, the patient gradually developed significant tachycardia, prompting admission to the pediatric intensive care unit (PICU).

Intervention

- Despite adequate fluid resuscitation, the patient rapidly became profoundly hypotensive, requiring escalation to three vasopressors.
- While on vasopressor support, the patient experienced a large emesis episode, leading to aspiration.
- He subsequently developed agitation and poor perfusion on examination, necessitating intubation.
- The patient had evidence of pulmonary edema and pleural effusions on post-intubation chest x-ray.
- Given his high risk for cardiovascular collapse, the extracorporeal membrane oxygenation (ECMO) team was consulted as a precautionary measure.
- Over the next 48 hours, the patient was successfully weaned off epinephrine and vasopressin.
- The pulmonary congestion was steadily improving.
- Twenty-four hours later, norepinephrine was discontinued, and the patient was extubated.
- He remained hemodynamically stable and was subsequently transferred out of the PICU for continued recovery.

Conclusion

- Ingestion of topical minoxidil can be a life-threatening emergency with refractory shock due to its potent vasodilatory effect.
- Tachycardia and fluid retentive effects can further complicate its course and management.
- Given the increasing prevalence of topical minoxidil use, greater awareness of its potential toxicity in children is essential for both healthcare providers and caregivers.

References

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