



## REVIEWER'S REPORT

Manuscript No.: IJAR- 50712

Date: 18/03/2025

**Title: "Rebound Hypertension After Clonidine Withdrawal in a Pediatric Intensive Care Unit"**

### Recommendation:

- ✓ Accept as it is .....
- Accept after minor revision.....
- Accept after major revision .....
- Do not accept (*Reasons below*) .....

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality		✓		
Clarity		✓		
Significance		✓		

Reviewer Name: Dr. S. K. Nath

Date: 19/03/2025

### Reviewer's Comment for Publication:

This case report underscores the importance of cautious clonidine withdrawal, particularly in pediatric intensive care patients. The findings suggest that dopamine metabolism may play a previously underappreciated role in rebound hypertension. Future studies should explore the exact pathophysiology of dopamine's involvement in such cases. The study also reinforces the need for comprehensive catecholamine monitoring to optimize patient management during clonidine withdrawal.

### *Reviewer's Comment / Report*

This case report highlights a rare occurrence of rebound hypertension following the abrupt cessation of clonidine in an 11-month-old immunocompromised infant. The patient, previously sedated with clonidine, developed severe hypertension and tachycardia after withdrawal. Despite the absence of increased noradrenaline levels, urinary dopamine levels were significantly elevated, suggesting an atypical response. The management involved a trial with the dopamine antagonist domperidone, which successfully lowered blood pressure, followed by the gradual reintroduction and tapering of clonidine, preventing further hypertensive episodes.

### Strengths

- Clinical Relevance** – The study addresses a crucial concern regarding the safe withdrawal of clonidine, particularly in intensive care settings.
- Unique Observation** – Unlike typical cases where noradrenaline is elevated, this case reports an unexpected rise in dopamine levels, contributing new insights into rebound hypertension mechanisms.
- Comprehensive Workup** – The authors ruled out common secondary causes of hypertension using extensive diagnostic assessments.
- Clear Treatment Strategy** – The stepwise management approach, including pharmacological interventions and gradual clonidine tapering, provides a useful clinical guide.

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### Limitations

1. **Lack of Dopamine Blood Levels** – The absence of direct dopamine plasma measurements limits definitive conclusions on its role in hypertension.
2. **Small Sample Size** – As a single case report, generalizability is limited, requiring further studies for validation.
3. **Unclear Mechanism of Domperidone's Effect** – While domperidone, a peripheral dopamine antagonist, appeared effective, its exact role in controlling hypertension remains uncertain.
4. **Limited Resources** – The necessity of outsourcing catecholamine tests highlights challenges in resource-limited settings, affecting diagnostic efficiency.