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REVIEWER'S REPORT

Manuscript No.: IJAR-55101

Title: Hematological toxicity of psychotropic medications: A Case Report

Recommendation:

Accept as it is .....Yes.....

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: Professor Dr Dillip Kumar Mohapatra

Detailed Reviewer's Report

1. Strengths

Clear clinical relevance

Hematological toxicity due to psychotropic medications is clinically important yet under-recognized, making this case highly relevant for psychiatrists and primary care clinicians.

Well-documented temporal causality

The report clearly shows **two distinct neutropenia episodes** following exposure to chlorpromazine and carbamazepine, with **rapid resolution after discontinuation**, strongly supporting drug-induced causality.

Contribution to pharmacovigilance

Reporting the adverse reaction to pharmacovigilance adds scientific credibility and real-world clinical importance.

Detailed medication timeline

Dosing, sequence of medication changes, and laboratory findings are clearly described, allowing readers to follow the clinical decision-making process.

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Addresses an under-reported combination

Sequential neutropenia from two different psychotropic drug classes in the same patient is uncommon and clinically instructive.

Critical discussion of differential diagnosis

Consideration of benign ethnic neutropenia is appropriate, and its exclusion strengthens the diagnostic clarity.

Use of evidence-based references

The authors cite pharmacovigilance data and relevant epidemiological studies, strengthening the scientific validity.

2. Weaknesses

Language and grammar issues

Several sentences require improvement for clarity, grammar, and professional tone.

Missing laboratory details

Specific hematological values (WBC, ANC at each episode) are not provided, which weakens the diagnostic strength.

Limited diagnostic investigations

No mention of other causes of neutropenia being ruled out (e.g., infections, nutritional deficiencies, autoimmune markers).

Case flow could be clearer

The narrative could benefit from a structured table summarizing medications, doses, and corresponding hematological values.

Lack of formal causality assessment

Using a standard tool (e.g., Naranjo scale or WHO-UMC causality assessment) would strengthen the case.

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Discussion can be enriched

Mechanisms for drug-induced neutropenia (immunologic vs. direct marrow toxicity) are not deeply explored.

Formatting and referencing inconsistencies

Minor reference-format issues and punctuation errors exist.

3. Significance of the Study

Emphasizes the need for routine hematological monitoring

This case reinforces that not only clozapine but also chlorpromazine and carbamazepine can cause clinically significant blood dyscrasias.

Rare sequential toxicity documentation

Demonstrates that a patient may experience multiple hematological adverse reactions to different psychotropic classes, highlighting the importance of caution when prescribing alternatives.

Strengthens awareness of risks in specific populations

Differentiating drug-induced neutropenia from benign ethnic neutropenia is an important contribution to clinical practice, especially in African populations.

Useful for clinical guidelines and adverse drug reaction (ADR) education

Supports existing recommendations for blood count monitoring during the first weeks of psychotropic therapy.

Case contributes to safer prescribing practices

Shows the need for personalized medication choices and close follow-up when psychotropics with known hematological risk are prescribed.

4. Key Points

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A 40-year-old man developed neutropenia and leukopenia after starting chlorpromazine, and a second neutropenic episode after switching to carbamazepine.

Hematological abnormalities resolved rapidly after discontinuation of each drug.

Temporal associations strongly support drug-induced neutropenia rather than benign ethnic neutropenia.

Both chlorpromazine and carbamazepine are well-known but under-recognized causes of bone marrow suppression.

The case highlights the need for systematic blood count monitoring when initiating psychotropic medications with hematologic toxicity risk.