Review of: "Neurotherapeutic Comparison of Aripiprazole and Ethanolic Extract of Fragaria Ananassa on Cerebrum and Amygdala of Methamphetamine Intoxicated Male Wistar Rats"

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Potential competing interests: No potential competing interests to declare.

This manuscript reports on a study investigating the neurotherapeutic effects of ethanolic strawberry extract compared to the atypical antipsychotic drug aripiprazole in treating methamphetamine-induced toxicity in the cerebrum and amygdala of male Wistar rats. Rats were divided into 8 groups, administered methamphetamine and/or strawberry extract, aripiprazole, or combinations. Oxidative stress markers, neurobehavioral tests, and histology were examined.

Overall Critique

The topic is interesting and has potential clinical relevance. The study design and methods are clearly described, including details on animal groupings, dosages, sample sizes, and outcome measures. Key results on body weight changes, oxidative markers, and behavioral tests are presented in tables.

However, there are also several weaknesses:

- The introduction lacks focus, covering general background on methamphetamine, aripiprazole, and strawberries without clearly framing the purpose and hypotheses of the study. No information is provided on the neurotoxicity mechanisms of methamphetamine that the treatments are targeting.

- Very limited results are presented, despite a range of assays described in the methods. No histological or biochemical data are shown, and statistical significance is missing in parts. The lack of full reporting of analyzed data limits robust evaluation and interpretation.

- The discussion is overly brief with minimal interpretation of the results or comparison to previous literature. The relevance to humans and specific neurotherapeutic effects on the cerebrum and amygdala are not discussed. Limitations of the study design are also not addressed.

- There are occasional grammatical errors and lack of clarity in some sentences that need to be edited.

- Additional issues like ethical approvals, compliance with animal research guidelines, funding sources, and author contributions should be stated.

Recommendations

While the study concept has merit, the manuscript in its current form provides inadequate reporting and discussion of the research to support the conclusions. Significant expansion of the background context, results, discussion, and addressing of limitations is needed to clarify the specific neurotherapeutic effects found and the implications. Careful editing for language usage and compliance with standard research reporting guidelines are also advised.