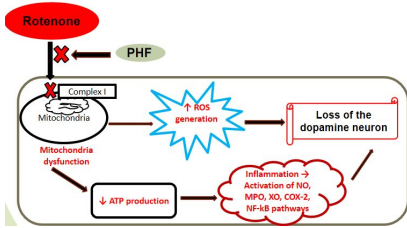


INTRODUCTION

- Parkinson's disease (PD) is the most prevalent neurodegenerative movement disorder, characterized by a gradual loss of dopaminergic neurons in the substantia nigra.



Justification

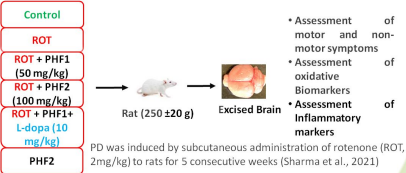
- Current therapies, like levodopa, are palliative and associated with numerous side effects over time, necessitating a search for alternative therapeutic agents with multi-target mechanisms that offer a viable option to modify these intricate pathways.

METHODOLOGY

Sample Collection

Sample Extraction

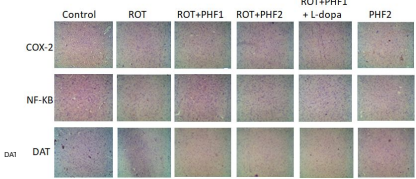
Experimental Design



RESULTS



Figure 1: Effect of PHF treatment on rotenone-induced motor and non-motor dysfunction. a). Hole board test b).Grip test. Data are expressed as the mean ± SD (n = 6). ****p < 0.0001 vs corn oil, ***p < 0.0001 vs ROT only



(a)

RESULTS

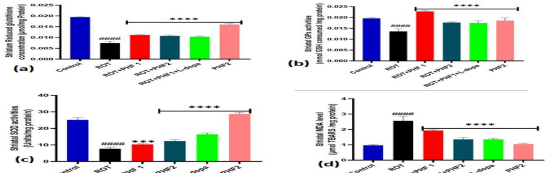


Figure 2: Effect of PHF treatment on rotenone-induced striatal redox stress. Data are expressed as the mean ± SD (n = 6). ****p < 0.0001, ***p < 0.0001, **p < 0.01 vs ROT only

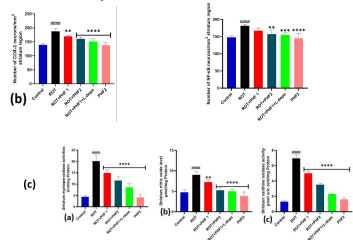


Figure 3: Effect of PHF treatment on rotenone-induced striatal neuroinflammation. a). Photomicrographs of COX-2, NF-KB, and DAT expression in the striatum. b). Number of COX-2, NF-KB and DAT neurons per mm² of the striatum. Data are expressed as the mean ± SD (n = 6) ****p < 0.0001, ***p < 0.0001, **p < 0.01 vs ROT only.

Conclusion

The study thus proved that co-treatment of PHF and levodopa significantly protected the brain from neuronal damage due to oxidative stress and attenuated the motor defects, indicating the possible therapeutic potential of PHF as a neuroprotective in PD.

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