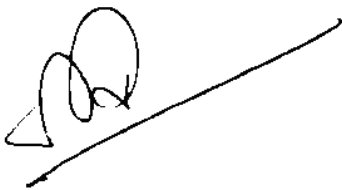


Summary of Research Work of the Applicant

Dr. Haripriya PS's research "Memantine for the Prevention of Radiation-Induced Cognitive Dysfunction in Brain Metastases Patients: A Randomized Placebo-Controlled Trial" focuses on evaluating the neuroprotective effects of memantine in patients with brain metastases undergoing radiation therapy. This randomized, placebo-controlled trial demonstrates the significant impact of memantine on preserving cognitive function and improving the quality of life (QoL) in this patient population.

The study revealed marked differences in Addenbrooke's Cognitive Examination (ACE) scores between the memantine and placebo groups at both 4 and 6 months post-radiation therapy. For the overall cohort, the changes in ACE scores were -5 (-15 to 4) vs. 0 (0 to 9) ($p < 0.001$) at 4 months, and -7 (-13.5 to -2) vs. 4 (0 to 10) ($p < 0.001$) at 6 months. In the subset of patients undergoing stereotactic radiosurgery (SRS), who are expected to live longer, the changes in ACE scores at 4 and 6 months were -3 (-9.5 to 0) vs. 0.5 (0 to 10) ($p < 0.001$), and -6.5 (-14.7 to -1.5) vs. 3 (0 to 7.5) ($p < 0.001$), respectively, for the placebo and memantine groups.

These findings indicate that memantine provides statistically significant cognitive preservation compared to placebo. Moreover, the use of memantine resulted in improved QoL for patients receiving SRS. This study contributes to advancing current knowledge by providing robust evidence for the use of memantine as a neuroprotective agent in patients with brain metastases, potentially influencing clinical practice guidelines. Dr. Haripriya's work represents a critical advancement in the management of cognitive decline, thereby enhancing the quality of life for individuals affected by brain metastases.



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