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Kaitlin Berry

Thomas Jefferson University, kaitlin.berry@jefferson.edu

Cindy Cheng, MD, PhD

Thomas Jefferson University, Cynthia.Cheng@jefferson.edu

Karl Doghramji, MD

Thomas Jefferson University, karl.doghramji@jefferson.edu

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MCI: CPAP Treatment of OSA

Kaitlin Berry BS, Cynthia Cheng, MD, PhD*, Karl Doghramji MD

Introduction: An estimated 30 percent of adults (20% of men and 10% of women) in the US have sleep apnea. Approximately 60% of patients with Mild Cognitive Impairment (MCI) are also diagnosed with Obstructive Sleep Apnea (OSA). The suggested mechanism of this is damage to the brain due to hypoxia during sleep. Few studies have investigated the effect of Continuous Positive Airway Pressure (CPAP) treatment for OSA, on mild cognitive impairment.

Methods: Patients are screened for eligibility based on specific inclusion and exclusion criteria. Potentially eligible patients who screen positive for MCI using the Telephone Interview for Cognitive Status (TICS) survey are enrolled. CPAP adherent (n=200), CPAP non-adherent (n=160), and no apnea control (n=100) groups are followed for 1 year total with study visits at zero and six months that include cognitive testing and brain MRI.

Results: At Jefferson, 272 charts have been reviewed, with 2 patients enrolled in the study. Across all study sites, approximately 5000 charts have been reviewed, and 157 patients enrolled. We hypothesize that adherence with CPAP treatment of OSA will delay the progression of cognitive impairment.

Discussion: MCI is a precursor to Alzheimers, for which there is currently no effective treatment. If CPAP proves to be effective in delaying the progression of cognitive impairment in patients with OSA and MCI, CPAP may have a clinically significant impact on patient morbidity, mortality, and quality of life.