

Cardiac Autonomic Neuropathy in Women During Menopausal Transition Period and its Association with Psychological Stress Levels: An Observational Study

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ABSTRACT

Context: Perimenopause is a transitional stage which occurs before menopause in which women experience myriad symptoms like hot flushes, anxiety & depression with increasing, psychological stress levels leading to autonomic dysfunction.

Purpose: Evaluate cardiac autonomic neuropathy (CAN) in women during menopausal transition period and its association with psychological stress levels.

Methodology: Study includes three groups of women, group I: premenopausal in the age group of 25-40 years, group II: perimenopausal women without symptoms and group III: perimenopausal women with symptoms in the age group of 40-50 years of 30 in each (total n=90). CAN was evaluated in terms of presence of resting tachycardia, loss of sinus arrhythmia (DBD) and heart rate response to Valsalva maneuver (VR) by electrocardiogram (ECG). If any two of them found positive, then presence of CAN was confirmed. Psychological stress levels were evaluated using standard women's health questionnaire. Correlation between Psychological stress levels with incidence of CAN was assessed.

Results: There exists a statistically significant positive correlation between DBD and VR with anxiety depressed mood, well being, vasomotor symptoms, somatic symptoms, and memory. (p=0.000**)

Conclusion: This study indicates that CAN have a strong association with psychological stress levels in perimenopausal women.

Keywords: Perimenopausal, Autonomic functions, Valsalva ratio, Sinus arrhythmia

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