National Journal of Physiology, Pharmacy and Pharmacology

RESEARCH ARTICLE

Correlation of body fat percentage with the occurrence of subclinical cardiac autonomic neuropathy in hypothyroidism

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Received: April 05, 2020; **Accepted:** April 28, 2020

ABSTRACT

Background: The incidence of cardiac-related mortality is increasing in hypothyroid. **Aims and Objective:** The objectives of the study were to assess the incidence of cardiac autonomic neuropathy (CAN) in hypothyroid and its correlation with body fat levels. **Materials and Methods:** Thirty diagnosed hypothyroid in the age group of 25–50 of both genders were involved (n = 30). Age- and sex-matched euthyroid were controls (n = 30). CAN was evaluated in terms of the presence of resting tachycardia, loss of sinus arrhythmia by calculating deep breath difference, and heart rate response to Valsalva maneuver by calculating Valsalva ratio recorded by electrocardiogram in the lead II. Body fat was measured using skin calipers at four sites using Durnin and Womersley equation. The correlation was assessed using Pearson's matrix. **Results:** The study shows in hypothyroid among 30 (n = 30), 27% (n = 8) were having borderline CAN. Among euthyroid 13% (n = 4) and 10% (n = 3) were having borderline and definitive CAN. The study shows a negative correlation exists between body fat percentage and deep breathing difference and Valsalva ratio. (r = –0.20 P = 0.289, r = –0.19 P = 0.30). **Conclusion:** The incidence of subclinical CAN is more in hypothyroid than euthyroid which shows a negative correlation with body fat level.

KEY WORDS: Cardiac Autonomic Neuropathy; Deep Breathing Difference; Hypothyroidism; Resting Tachycardia; Valsalva Ratio

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Website: www.njppp.com	Quick Response code
DOI: 0.5455/njppp.2020.10.04102202028042020	