Introduction: Indigenous peoples globally experience mental disorders at higher rates compared to the general population. Recently, alterations in neural stress processing have been studied as potential biological mechanisms underlying this health gradient. Here, we report on an integrative study of neuroendocrine regulation and stress processing and their psychosocial determinants.

Methods: We recruited 26 individuals of Indigenous Australian ancestry and 26 non-Indigenous individuals matched for aged and gender from a university setting. We assessed cortisol awakening response (CAR) by collecting saliva samples across three weekdays. In a separate experiment, we tested neuroendocrine and autonomous reactivity to a psychosocial stress paradigm (Trier Social Stress Test, TSST) using salivary cortisol and heart rate variability (HRV). Chronic stress (K6, PSS), childhood adversity (MAES), racism (MIRE), and general psychopathology (HSCL) were assessed to test the relationship between these variables and neuroendocrine measures.

Results: Relative to non-Indigenous participants, Indigenous participants had a flatter CAR. Interestingly, while in non-Indigenous participants chronic stress predicted a high CAR, the opposite relationship was found in Indigenous participants. We observed significantly lower time-domain measures of HRV in Indigenous participants. Frequency domain indices of HRV showed poorer recovery from stress in Indigenous participants, which was predicted by childhood adversity and internalized racism. Adverse childhood events were associated with blunted cortisol response to the TSST in Indigenous participants.


CORRESPONDING AUTHOR: M Berger, Laboratory of Psychiatric Neuroscience, Australian Institute of Tropical Health and Medicine, Townsville, Australia

P325
COGNITIVE FUNCTIONING IN CORONARY ARTERY DISEASE PATIENTS: ASSOCIATIONS WITH THYROID HORMONES AND N-TERMINAL PRO-B-TYPE NATRIURETIC PEPTIDE
J. Burkauskas1, J. Brozaietiene1, V. Liaugaudaite1, N. Mickvienė1, R. Bunėvicius1
1Behavioral Medicine Institute, Lithuanian University of Health Sciences, PALANGA, Lithuania

Introduction: We have recently showed that altered thyroid function and increased rates of N-terminal pro-B-Type natriuretic peptide (NT-pro-BNP) are highly prevalent in coronary artery disease (CAD) patients with heart failure, and are associated with unfavorable prognosis. The aim of the current study was to determine whether cognitive functioning of CAD patients is related with thyroid hormones (FT3, TT3) and NT-pro-BNP.

Methods: In total, 278 patients were enrolled in the study: 206 (74.1%) men; mean age of 58 years (SD=9). Patients were evaluated for demographic, clinical risk factors FT3, TT3, NT-pro-BNP levels. Mini-Mental State Examination was administered to evaluate patients' general mental status. Digit Span Test and Digit Symbol Test were used to assess auditory attention, mental flexibility, psychomotor performance and incidental learning. Trail Making Test A (TMT-A) was used to measure perceptual speed. Depressive symptoms were assessed with Hospital Anxiety and Depression scale. Data on NT-pro-BNP levels were not normally distributed and were natural-log transformed (ln).

Results: Univariate linear regression analysis revealed that FT3, TT3 and (ln)NT-pro-BNP were associated with almost all cognitive functioning measures of CAD patients. After adjusting for possible confounders, higher FT3 concentrations were independently associated with less time which individuals took to complete the Digit Symbol Test (β=-.175, p<.022) and less time to complete TMT-A (β=-.173, p<.033). Following the same adjustment (ln)NT-pro-BNP was also associated with TMT-A (β=-.142, p<.019).

Conclusion: Higher FT3 concentrations are associated with better psychomotor performance in CAD patients while NT-pro-BNP might worsen perceptual speed, independently from clinical risk factors and depressive symptoms.

CORRESPONDING AUTHOR: J. Burkauskas, Lithuanian University of Health Sciences, Palanga, Lithuania. julius.burkauskas@lsmuni.lt