A3.4: The Associations Between Cognitive Heart Failure Symptom Beliefs and Chronic and Acute Stress Response In Older Adults

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Presentation Preference: Session Presentation

Abstract Categories:
Research Interest Groups (RIGs): Biobehavioral

Abstract:
Introduction: Heart failure (HF) is the most common diagnosis listed for older hospitalized patients. Half of the individuals living with HF die within five years of diagnosis. Daily HF symptoms (HFs) cause acute and chronic stress associated with negative health outcomes. Purpose: To report associations between self-rated cognitive representations of HFs and activated biological pathways of chronic (cortisol) and acute stress (epinephrine) in older adults with HFs.

Method(s): A descriptive pilot study, testing the Common Sense Model, used a convenience sample of 60 adults age 55 years and older. The Brief Illness Perception Questionnaire (IPQ-B) measured self-rated cognitive HF beliefs. Epinephrine was indirectly measured by salivary alpha-amylase (sAA, nl 3.1-423.2 U/ml) and cortisol via salivary cortisol (sC, nl= 2-7.6 mcg/dl). Stress induction consisted of participants’ description of their HFs for five-minutes. Saliva specimens were obtained 6-10 hours after awakening, and again 20 and 40 minutes following HFs descriptions.

Results: 60 older (71.99 years, SD 9.4) adults with HFs, were primarily Caucasian (85%), married (56.7%), male (46), and had been diagnosed with HF for 8.8 years (SD 8.8). Mean sC at baseline (mcg/dl) was 1.1 (SD .77, range 1.93-35.53); follow-up 1.03 (SD 1, range 1.1-57.8). Sample mean baseline sAA in U/ml = 54.7 (SD 37.8, range 1.0-157.0), follow-up 75.5 (SD 47.3, range 1.6-187.1). There was a decrease in sC (t=2.27, p< .05), and an increased sAA (t= -4.31, p< .001) post-stress induction. Change in sC was significantly associated (p< .05) with IPQ-B subscales of identity (r= .39), treatment (r=.29) and symptoms (r= .32). Change in sAA activity was significantly associated (p< .05) with the IPQ-B concern subscale (r= .29).
Discussion & Conclusions: Evidence indicates recall of HFs activates the limbic system, but not the HPA axis. A drop in sC was associated with the ability to correctly assign symptoms to HF, a positive belief in treatment effectiveness, and a lower self-rated symptom severity. Elevated sAA was associated with increased concern about HF. Further study of the pathways of chronic and acute stress is needed to determine how these mechanisms influence proinflammatory states found in HF.

Abstract History:
This abstract has not been presented or accepted for presentation in whole or in part at the SNRS or other scientific meeting.

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