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AGING OF THE HEART IS ASSOCIATED WITH INSULIN RESISTANCE BY TELOMERE ATTRITION

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Background: Aging is associated with left ventricular (LV) Concentric Remodelling (CR). In patients with LV CR has been related to increased cardiovascular morbidity and mortality. Therefore, studies of mechanisms age-related LV remodelling to be of importance. An association between Insulin Resistance (IR) and LV CR has been found. Possible mechanisms underlying IR-induced age-related LV remodelling could be associated with decreased telomeres length. Leukocyte Telomere Length (LTL) has been regarded as a marker of replicative aging. Our hypothesis is that IR led to attrition telomeres and senescent phenotypes in the heart.

Methods and results: We investigated 151 non-obese participants aged 60 to 85 years without history of CVD, hypertension, diabetes and regular drug medication. All the participants underwent standardized echocardiography using available system (iE33; Philips), had an oral glucose tolerance test. HOMA-IR was calculated as fasting insulin (mU/ml) x fasting glucose (mmol/l) (mmol/l)/22.5. IR was diagnosed in the case of HOMA-IR elevation >2.5 based on reference. LTL was measured by real-time quantitative polymerase chain reaction. HOMA-IR was significantly related to age ($r=0.24$, $p<0.01$) to compare to subjects without shorter telomeres. Individuals with IR did not significantly differ from those with normal HOMA-IR in the proportion of smokers, or levels of blood pressure and BMI.

Conclusions: Our data demonstrated that aging is associated with a decrease LTL and LV diastolic dysfunction. Telomere attrition plays an important role in cardiac aging and may be associated with the development of age-associated diastolic dysfunction, a significant contributing factor in heart failure in humans.

PROSPECTUS FOR AN INTERPRETATIVE PHENOMENOLOGICAL ANALYSIS OF THE LIVED EXPERIENCE OF OFFSPRING CAREGIVERS OF INDIVIDUALS WITH DEMENTIA

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Prospectus for an Interpretative Phenomenological Analysis of the Lived Experience of Offspring Caregivers of Individuals with Dementia: Caregivers of the elderly provide an important service to the care recipients and to society while often experiencing stress, burden and psychological morbidity related to caregiving, especially when the care recipient has dementia. There is an extensive body of literature related to caregiving, but a relative paucity related to effective interventions to address the stress, burden and psychological morbidity. Mental health counseling offers potential as an important element of caregiver interventions. Research has provided evidence of positive effects from some interventions, largely psychoeducation. An evidence-based mental health practice has been developed specifically for spouse caregivers. One high quality study extended that particular intervention to offspring caregivers, though not specifically to dementia caregiving. More understanding is necessary regarding the struggles and mental health needs of offspring dementia caregivers. This qualitative study will use Interpretative Phenomenological Analysis to explore the lived experience of offspring dementia caregivers in order to inform counselors who work with these individuals and those who develop interventions for them.