B2.3: Post Myocardial Infarction Physiologic Factors Predict Cardiac-Related Hospital Readmissions

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Abstract:
Introduction: Although fatigue, depression, and physiological markers such as ejection fraction (EF), b-natriuretic peptide (BNP), and interleukin-6 (IL-6) have predicted poor health outcomes, no studies were found that associated these variables with cardiac-related hospital readmissions post myocardial infarction (MI). Therefore, the purpose of this study was to answer the following research questions: (a) What is the association of fatigue, depression, EF, BNP, and IL-6 on cardiac-related hospital readmissions post MI in adults ages 65 and older?; and (b) What combination of variables (fatigue, depression, EF, BNP, and IL-6) best predict cardiac-related hospital readmissions post MI in adults ages 65 and older?;

Method(s): A longitudinal design was used, and the sample included 98 survivors of an MI (75 + 6.3 years, 50% female) who completed the Revised Piper Fatigue Scale, Geriatric Depression
Scale (15-item), and had BNP and IL-6 measured at 6-8 months post MI. Ejection fractions were obtained from the medical record. Participants were followed for an average of 23.9 months (+/- 13.3) for cardiac-related hospitalizations.

**Results:** The majority (76%) reported fatigue and were married (51%). Only 29% had an EF <40, and 13% reported mild to moderate depression. The primary outcome, cardiac-related hospital readmissions, was analyzed using Cox regression analysis. Age, sex, nor race influenced readmissions. While those in the highest IL-6 quartile had a 2.6-fold (p=.02) increase in risk of a cardiac-related readmissions compared to the lowest quartile when examining IL-6 as the only predictor variable, IL-6 was not significant in the multivariate model. Lower EF (<40 vs. 40-60), higher BNP levels (>280 vs. <50), and being married (versus widowed, divorced or single) were simultaneously associated with a 2.9 (p=.005), 3.7 (p=.017), and 2.4 (p=.011) -fold respective increase in risk of a cardiac-related hospital readmission.

**Discussion & Conclusions:** Neither fatigue nor depression predicted cardiac-related hospital readmissions. The findings indicate that physiological factors strongly predict cardiac-related readmission risk more than psychosocial factors measured 6 to 8 months post MI.

**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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