Elevated Psychiatric Comorbidities in Patients with Low-risk Chest Pain Presenting in The Emergency Department

Linh Dang¹, Kurt Kroenke², Timothy Stump³, Patrick Monahan³, Jill Nault Connors⁴, Yelena Cherynak⁵, Paul Musey⁶

¹Indiana University School of Medicine; ²Indiana University School of Medicine, Department of Medicine and Regenstrief Institute; ³Fairbanks School of Public Health, Department of Biostatistics; ⁴Indiana University School of Medicine, Department of Surgery; ⁵Indiana University School of Medicine, Department of Psychiatry; ⁶Indiana University School of Medicine, Department of Emergency Medicine

Background/Objective: Low-risk chest pain (LRCP), i.e. chest pain that does not pose an imminent risk or have a cardiovascular cause, constitutes the majority (80%) of cases of chest pain presenting to the emergency department (ED). Past research shows that in patients with LRCP without a history of cardiovascular disease, many will meet criteria for panic or generalized anxiety disorder. The purpose of this project is to examine the psychiatric comorbidities of patients with LRCP including differences by severity of anxiety.

Methods: Baseline data collected in the Patient-Centered Treatment of Anxiety after Low-Risk Chest Pain in the Emergency Room (PACER) study were analyzed to determine: the rates of depression, somatization, posttraumatic stress disorder (PTSD), disability, and low self-efficacy in relation to increasing levels of anxiety (low anxiety but positive for panic disorder vs moderate vs severe anxiety). Also, anxiety severity groups are compared for demographic and other patient characteristics to identify potential predictors of anxiety severity.

Results: In 265 patients with LRCP who screened positive for panic disorder and/or generalized anxiety disorder, the proportion with low, moderate and severe anxiety symptoms was 9%, 44% and 47%, respectively. Overall, 57% (n=150) also screened positive for depression, 54% (n=144) for somatization syndrome, and 56% (n=149) for PTSD. Rates of depression, somatization, PTSD, and disability increased as the level of anxiety increased. Compared to patients with low to moderate anxiety, patients with severe anxiety were more likely to have depression (odds ratio = 3.0), somatization (OR = 2.7), PTSD (OR = 2.6), disability (OR = 2.4), and low self-efficacy (OR = 3.5).

Conclusion and Potential Implications: Patients with LRCP and anxiety are likely to have other psychiatric comorbidities. Additionally, as rates of comorbidities increase with the anxiety severity, detection and management of anxiety is essential to provide optimal care for low-risk chest pain.