Socioeconomic Status and Trends in Hospitalization and All-Cause In-hospital Mortality Amongst Patients Admitted with Atrial Fibrillation in the United States

Chaitanya Rojulpote1, Shivaraaj Patil2, Abdul Sheik1, Anshul Patel1, Kristina Tanovic1, Erin McFadden1, Nevena Barjkatarovic1, Ivan Cvorovic1
1Department of Medicine, The Wright Center for Graduate Medical Education, Scranton, PA, USA; 2Department of Medicine, Einstein Health Network, Philadelphia, PA, USA

Introduction

• Atrial fibrillation (AF) is the most common arrhythmia encountered in a clinical setting.
• Scant data exists on the relationship of socioeconomic status (SES), AF related hospitalizations and all-cause in-hospital mortality amongst patients admitted with AF.

Methods

• National Inpatient Sample database was queried from 2003 to 2014 using ICD 9 diagnosis codes to identify patients who were hospitalized with a primary diagnosis of AF.
• SES was determined by median household income (MHI) and divided into quartiles (0-25th, 26-50th, 51-75th, and 76-100th).
• Trends were analyzed using Cochran Armitage test.

Results

• 3,618,133 patients with AF from 2003 to 2014 (median age: 72 [IQR 61 – 81], female 52.6%).
• Significant differences were found between SES and AF hospitalizations (Figure 1).
• In-hospital mortality and SES were also noted to be closely interlinked  (Figure 2).

Conclusion

• Over a 12-year period, patients with lower MHI had increasing rates of AF hospitalizations.
• A decline in hospitalizations were noted in patients with higher MHI.
• An overall decrease in all-cause in-hospital mortality was noted in all four MHI groups.
• But, patient with lower MHI were found to have higher mortality amongst all patients admitted with AF.

Figure 1: Differences were found between MHI (0-25th vs 26-50th vs 51-75th vs 76-100th) and the prevalence of AF (25.36% vs 26.86% vs 24.67% vs 23.11%, p<0.001).

Figure 2: Significant differences were found between MHI (0-25th vs 26-50th vs 51-75th vs 76-100th) and all-cause in-hospital mortality (1.3% vs 1.1% vs 1.0% vs 0.9%, p<0.001).