**TEMPORAL TRENDS IN PREVALENCE OF COMORBIDITIES IN ATRIAL FIBRILLATION PATIENTS ADMITTED WITH FIRST ISCHEMIC STROKE**

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*Background*: Atrial fibrillation (AF) increases risk of ischemic stroke (IS) five fold. We examined temporal trends in comorbidities among AF patients admitted with first IS.

*Methods*: Nationwide inpatient sample (NIS) database was retrospectively analyzed from 2003 to 2011.

*Results*: 713,409 adult AF patients were admitted with a first IS from 2003- 2011. Mean age of such patients was 80±10 yrs. 41% were men and 82% were white. Number of admissions per year increased from 64,127 in 2003 to 92,399 in 2011 (ptrend<0.001) (Figure 1). Mean CHADS2 and CHADSVASc scores of these patients also increased over time (1.9±0.9 vs 2.1±0.9 and 3.6±1.2 vs 3.8±1.3 respectively in 2003 and 2011; p<0.001 for both). Prevalence of heart failure, hypertension, diabetes mellitus and peripheral vascular disease increased while proportion of females and patients aged ≥65 or ≥75 yrs decreased (ptrend<0.001 for all) (Figure 1). CHADSVASc and CHADS2 scores of <2 were present in 4.7% and 24.9% such patients. 80.7% patients with CHADS2 score <2 had a CHADSVASC score ≥2, however proportion of such patients decreased over study period (81% vs. 78.4% in 2003 and 2011 respectively, p<0.001). Higher CHADSVASC score was independently associated with higher inpatient mortality (7% vs 13.8 for scores of 0 and 7, OR 1.6 (1.4-1.8); ptrend<0.001) and increased risk for discharge to a facility other than home (28% for score of 0 vs 59.5% for score of 7, OR 1.6 (1.4-1.7); ptrend<0.001). *Conclusion:* Admission rates for first IS in AF patients have increased significantly over recent years. This has been associated with increasing comorbidities despite decreasing proportions of older patients.

