Using real world data on adherence to DOACs to analyze hospital admissions due to stroke and TIA among Medicare patients with atrial fibrillation

Kinyee Fong PharmD Candidate[a], Jimmy Nguyen PharmD Candidate[a], Kelsea Ziegler PharmD, BCACP[b]
[a]University of California, San Francisco (UCSF); [b]Kaweah Delta Health Care District (KDHCD)

Introduction

- Being one of the most common arrhythmias, atrial fibrillation (AFib) has a prevalence of 5.3% in the U.S.[1] It has significant health and financial implications for patients and society.[2]
- Direct-acting oral anticoagulants (DOACs) and warfarin are used to treat AFib. DOACs are recommended over warfarin as first line treatment for preventing thromboembolic events in patients with AFib.[3] Given their importance in preventing stroke, adherence to DOACs is an important component of a patient's treatment.
- There is a dearth of data exploring the impact of adherence to DOACs on hospital admissions for stroke and transient ischemic attack (TIA) in a Medicare population. On the other hand, the evidence for adherence to DOACs in commercially insured patients has been well established in the literature.[4-6]
- Kaweah Delta Health Care District (KDHCD) is located in the heart of Tulare county, which has a higher stroke mortality rate than the state of California.[7] There is also a higher patient to primary care provider ratio (2,390:1) in this county compared to California (1,388:1), which may limit access to care.[8,9]
- Ambulatory care pharmacists and technicians at KDHCD partner with a medical group, and an insurer (Humana), in a capitated, shared-risk model. This team cares for 10,676 Medicare lives in Tulare and Kings counties. In this model, the team has access to pharmacy claims data.
- Adherence is measured by proportion of days covered (PDC) which is defined as the ratio of number of days in the period covered to total number of days in the period.

Objective

- To assess the difference in the number of stroke and TIA, or death from either cause between two different groups of Medicare patients with atrial fibrillation, those adherent to DOACs (PDC ≥80%) and those non-adherent to DOACs (PDC <80%)

Methodology

- This is a retrospective cohort study. Patients will be identified using pharmacy claims for DOACs (apixaban, rivaroxaban, dabigatran) and assigned to non-adherent or adherent based on claims
- Data collected will include hospital admissions due to TIA, stroke, or death from either cause during a 1 year period following initial DOAC fill date
- Data will be analyzed using an unpaired t-test
- Inclusion criteria:
  - Males and females ≥18 years old with a diagnosis of atrial fibrillation or atrial flutter
  - Stable (≥3 months of therapy) on formulary DOAC
  - Resident of Tulare or Kings counties
- Exclusion criteria:
  - Pharmacy claims for warfarin
  - Patient death during 1 year follow-up due to causes unrelated to TIA or stroke

Results

- A total of 200 patients will be assessed for the primary outcome

Conclusions

- Research-in-progress

Future Implications

- This study could provide key insights into the effect of strict adherence to DOACs on patient outcomes
- Future patients with atrial fibrillation on DOACs could benefit through education on the importance of adherence based on study outcomes
- Based on the results, ambulatory care pharmacists may create outpatient DOAC monitoring programs

Limitations

- The retrospective study design is prone to confounding variables and biases
- Small sample size (n=200)
- Without follow-up, cannot determine reasons for non-adherence
- PDC is a surrogate marker for true adherence
- Patients may be using patient assistance programs or samples

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