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Oral Anticoagulation and Cardiovascular
Outcomes in Patients with Atrial
Fibrillation and End-Stage Renal Disease

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Abstract

Background:

Atrial fibrillation (AF) is common in patients with end-stage renal disease (ESRD). The impact of oral anticoagulation (OAC) in ESRD patients is uncertain.

Objectives:

The purpose of this study was to describe patterns of OAC use in ESRD patients with AF and their associations with cardiovascular outcomes.

Methods:

Using Medicare fee-for-service 5% claims data from 2007 to 2013, we analyzed treatment and outcomes in a cohort of patients with ESRD and AF. Prescription drug benefit information was used to determine the timing of OAC therapy. Cox proportional hazards modeling was used to compare outcomes including death, all-cause stroke, ischemic stroke, hemorrhagic stroke, and bleeding hospitalizations in ESRD patients treated with or without OAC.

Results:

The cohort included 8,410 patients with AF and ESRD. A total of 3,043 (36.2%) patients were treated with OAC at some time during the study period. Propensity scores used to match 1,519 patients with AF and ESRD on OAC with 3,018 ESRD patients without OAC. Treatment with OAC was not associated with hospitalization for stroke (hazard ratio [HR]: 1.00; 95% confidence interval [CI]: 0.23 to 1.35; $p = 0.97$) or death (HR: 1.02; 95% CI: 0.94 to 1.10; $p = 0.62$). OAC was associated with an increased risk of hospitalization for bleeding (HR: 1.26; 95% CI: 1.09 to 1.46; $p = 0.0017$) and intracranial hemorrhage (HR: 1.30; 95% CI: 1.07 to 1.59; $p = 0.0094$).

Conclusions:

OAC utilization was low in patients with AF and ESRD. We found no association between OAC use and reduced risk of stroke or death. OAC use was associated with increased risks of hospitalization for bleeding or intracranial hemorrhage. Alternative stroke prevention strategies are needed in patients with ESRD and AF.

Keywords:

Anticoagulation; atrial fibrillation; bleeding; end-stage renal disease; stroke.

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