

Incidence and predictors of clinically significant renal function decline among non-valvular atrial fibrillation patients on oral anticoagulant therapy: A retrospective, multicenter study

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ABSTRACT

Introduction: Literature has reported worsening renal function among non-valvular atrial fibrillation (NVAF) patients, while certain oral anticoagulants (OAC) may exert favourable renal outcomes in this population. This study aimed to identify the incidence and predictors of clinically significant renal function decline among NVAF patients on OAC therapy. **Methods:** This multicenter retrospective study analyzed data on NVAF patients newly initiated on OAC from 2013 to 2022 in eight tertiary hospitals in Malaysia. Convenience sampling was used in this study. Clinically significant (>30%) estimated glomerular filtration rate (eGFR) decline after OAC initiation was the primary outcome measure. Logistic regression analyses assessed independent predictors of clinically significant eGFR decline. **Results:** We analyzed 619 patients with a mean age of 70.3±10.3 years and predominantly male (n=347, 56.1%). Most (n=441, 71.2%) patients have underlying chronic kidney disease during warfarin initiation. Clinically significant eGFR decline occurred in 91 (14.7%) patients. Overall, treatment duration (in years) (aOR 1.292, p=0.001), underlying diabetes (aOR 2.740, p<0.001), use of angiotensin-converting enzyme (ACE) inhibitors (aOR 0.557, p=0.019), use of digoxin (in heart failure) (aOR 0.311, p=0.042), and use of statins (aOR 0.573, p=0.040) were the predictors of clinically significant eGFR decline in NVAF patients. **Conclusion:** Clinically significant eGFR decline is common among Malaysian NVAF patients on OAC. Above-identified predictors of renal function decline allow clinicians to manage NVAF patients better.