

Atrial Fibrillation in the ICU



Atrial fibrillation (AF) is a common cardiac arrhythmia. Research has consistently shown that AF heightens the risk of adverse outcomes in hospitalised and outpatient populations. Data suggests that newly developed AF (NAF) is common among critically ill patients, negatively impacting both short- and long-term outcomes, including prolonged hospitalisation and a greater risk of stroke and death.

Treatment options are available to manage AF. This includes the use of antiarrhythmic agents and anticoagulant (AC) therapy. Previous research shows significant variability in clinical practices, with limited evidence, mostly from noncritically ill patient populations.

A study was conducted to assess the incidence of AF, including NAF, explore associated risk factors, analyse management strategies, and investigate the outcomes in adult ICU patients. The primary hypothesis of the study was that AF is a frequently encountered condition with specific risk factors associated with adverse outcomes and substantial practice variations in clinical management.

A total of 1,423 ICU patients were included in the study, and 1,415 were analysed. Two hundred twenty-one patients experienced 539 episodes of AF. 59% of these episodes were diagnosed with continuous electrocardiogram monitoring. The incidence of AF was 15.6%, and of these cases, 13.3% were NAF.

Several factors were found to be associated with the occurrence of AF, including a history of arterial hypertension, paroxysmal AF, sepsis, or a high disease severity at ICU admission. The main interventions used to manage AF included fluid bolus (19% of patients), magnesium (16%), potassium (15%), amiodarone (51%), beta-1 selective blockers (34%), calcium channel blockers (4%) (2–6), digoxin (16%) and direct current cardioversion (4%).

Patients with AF had more ischaemic, thromboembolic events (13.6% vs 7.9%) and severe bleeding events (5.9% vs 2.1%) compared to those without AF. Additionally, the mortality rate was substantially higher among patients with AF (41.2% vs 25.2%) than those without AF. The cause-specific 90-day mortality associated with AF was 1.38.

These findings show that among ICU patients, AF occurred in approximately one out of every six cases and was associated with different conditions. AF was associated with worse patient outcomes but was not statistically associated with 90-day mortality in the adjusted analyses. Study researchers also observed disparities in the diagnostic and treatment approaches used for managing AF in these patients.

Source: [Critical Care Medicine](#)

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