

## Outcomes of Patients Presenting with Primary or Secondary Atrial Fibrillation with Rapid Ventricular Rate to the Emergency Department

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### Abstract

**Introduction:** Atrial fibrillation (AF) with rapid ventricular rate (RVR) is a common diagnosis in the Emergency Department (ED) requiring evaluation and treatment. We present the characteristics and outcomes of patients presenting with primary or secondary AF in a tertiary hospital ED. **Materials and Methods:** This retrospective cohort study included consecutive patients  $\geq 21$  years old, with a primary or secondary diagnosis of AF with RVR in the ED over a 1-year period from 1 January 2016 to 31 December 2016. Primary AF is defined as AF with no precipitating cause and secondary AF as AF secondary to a precipitating cause. **Results:** A total of 464 patients presented to the ED from 1 January to 31 December 2016 with primary and secondary diagnosis of AF with RVR; 44.8% had primary diagnosis of AF whereas 55.2% had secondary AF. Overall admission rate from ED was high at 91.8% (primary 84.6% vs secondary 97.7%). Patients with primary AF were younger (68 vs 74 years,  $P < 0.001$ ), had lower rates of cardiovascular risk factors, and shorter length of stay (median 4 vs 5 days). Within 30 days of discharge, they had lower ED reattendance (16.3% vs 25.8%,  $P < 0.001$ ) and lower readmission (16.3% vs 25.8%,  $P < 0.001$ ). There was no mortality in the primary AF group (0% vs 9.8%,  $P < 0.001$ ). **Conclusion:** Currently, majority of patients with AF with RVR are admitted from the ED. Our study suggests patients with uncomplicated primary AF have lower adverse outcomes and some could potentially be treated as outpatients.

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**Key words:** Characteristics, Outpatients

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