Introduction: Atrial fibrillation (AF) occurrence in patients with ICDs is not clear.

Methods: Four hundred and eighty two patients implanted with ICD or cardiac resynchronization therapy defibrillator with home monitoring were studied retrospectively. The primary endpoint was AF detected by the device, secondary endpoint was cardiac death.

Result: During a mean follow-up period of 42.8 ± 15.6 months, 186 patients (38.6%) experienced VA, 16 (8.6%) of which detected AF by ICD/CRTD. 20 patients (16.8%) died in VA patients due to cardiac diseases. In Kaplan-Meier survival analysis, VA was associated with increased incidence of AF (P<0.001). In multivariate COX regression models, VA was an independent risk factor for AF (HR 8.264, 95%CI: 2.404-28.410, P = 0.001). AF increased the possibility of cardiac death (25% VS 9.41%) (HR 4.080, 95%CI: 1.308-12.729, P = 0.015).

Conclusion: In this primary prophylactic ICD population, patients experienced VAs had a high prevalence of AF up to 8.6%, which increased the risk of cardiac death remarkably. Thus, it's important to screen and treat AF in those patients.