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## Amiodarone treatment duration and reasons for permanent drug discontinuation in patients with atrial fibrillation

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Background and purpose: Amiodarone is commonly use in patients with atrial fibrillation (AF), but the organ toxicity side effects limit its long-term use. We investigated the rates of and reasons for permanent amiodarone discontinuation among patients with AF in contemporary clinical practice. Methods: A single-centre, ongoing, registry-based observational longitudinal study included consecutive AF patients prescribed with amiodarone in our hospital from January 2015 to December 2017. All patients underwent a loading protocol of 400–600 mg of amiodarone daily for 1–2 weeks, followed by 200–400mg daily for 4–8 weeks and 200mg daily or 1000mg weekly thereafter.

**Results:** Of 657 AF patients taking amiodarone (Mean age 62.2±11.0, female n=215 (32.6%), hypertension n=504 (76.7%), diabetes mellitus n=107 (16.3%), coronary arterial disease n=139 (19.8%), History of Myocardial infarction 86 (13.1%), Stroke/TIA 60 (9.1%), chronic kidney disease 157 (23.9%)), the drug was permanently discontinued in total of 248 patients (37.7%). The reasons for amiodarone discontinuation are shown in Figure. On multivariable Cox-regression analysis, physician's decision (HR 5.6; 95% CI 3.9–7.9, p<0.001) and amiodarone side effects (HR 3.9;

95% CI 2.9–5.1, p <0.001) were significantly associated with permanent amiodarone discontinuation.

The overall time to discontinuation was  $23.2\pm24.1$  months. Compared with others, time to discontinuation was shorter in patients post AF ablation  $(17.3\pm21.3 \text{ vs } 24.5\pm24.5, \text{ p=0.05})$ , longer in those with AF progression  $(29.2\pm31.0 \text{ vs } 20.9\pm20.3, \text{p=0.014})$  and similar in patients with amiodarone side effects  $(23.7\pm17.7 \text{ vs } 23.0\pm26.8, \text{p=0.813})$ . Pulmonary toxicity and proarrhythmia were not observed among study patients (Figure).

Conclusion: Our study showed that permanent discontinuation of amiodarone in contemporary clinical practice was due to the drug side effects in 12% of amiodarone-treated AF patients, occurring after a mean 2-year treatment course. The most prevalent side effect was thyroid dysfunction, whereas the prevalence of proarrhythmic effect was low. Notably, physician's fear of complications (which may not always be justified), also was an independent driver of permanent amiodarone discontinuation. More data are needed to inform optimal amiodarone use in AF patients in daily practice.

## REASONS FOR AMIODARONE DISCONTINUATION

