6083

Amiodarone in contemporary clinical practice: the rates of and reasons for permanent drug discontinuation

M. Mihajlovic[1], A. Mihajlovic[2], M. Marinkovic[1], V. Kovacevic[1], L. Vajagic[1], A. Kocijancic[1], N. Mujovic[3], T. Potpara[3]

[1]Clinical center of Serbia, Belgrade, Serbia; [2]University Hospital Medical Center Bezanijska Kosa, Belgrade, Serbia; [3]University Belgrade Medical School, Belgrade, Serbia

Background and purpose: Amiodarone is the most effective antiarrhythmic drug, but its long-term use is limited by organ toxicity. We studied the rates of and factors associated with permanent amiodarone discontinuation in clinical practice.

Methods: An ongoing prospective single-centre registry-based observational study included consecutive amiodarone-naïve patients treated for cardiac arrhythmias in a university hospital between January 2015 and December 2017. Amiodarone was administered in loading doses of 400–800 mg daily for 1–2 weeks, followed by 200–400mg daily for 4–8 weeks and 200mg daily or 1000mg weekly thereafter.

Results: Of 1032 patients (mean age 61.5±11.4 years), 30.0% were females, and amiodarone was used for atrial fibrillation (AF, n=657, 63.7%), atrial flutter (n=187, 18.1%), other supraventricular arrhythmias (n=118, 11.4%), premature ventricular beats (n=239, 23.2%) or ventricular tachycardias (n=236, 22.9%). The most prevalent comorbidities were hypertension (n=761, 73.7%), coronary artery disease (n=283, 27.4%), heart failure (n=197, 19.2%), chronic kidney disease (n=266, 25.8%) and diabetes mellitus (n=196, 19.0%).

Amiodarone was permanently discontinued due to its side effects in 103 patients (10.0%), physician's fear of complications in 73 (7.1%), patient preference in 4 (0.4%) or for miscellaneous reasons in 6 (0.6%). In another 161 patients (15.6%), the discontinuation was due to catheter ablation of index arrhythmia (n=90) or progression to permanent AF (n=71). On multivariable Cox-regression analysis, physician decision was significantly associated with amiodarone discontinuation (HR 4.2; 95% CI 3.3–5.5, $p<0.001$) along with the drug side effects (HR 3.0; 95% CI 2.4–3.8, $p<0.001$).

Overall, amiodarone was permanently discontinued 347 patients (33.6%), after mean 21.4±25.2 months of treatment (median 13.0, IQR 203). The mean time to discontinuation was significantly shorter in patients with drug discontinued due to physician's decision (16.5±15.9 vs 22.7±26.9, p=0.013) and slightly longer in those with amiodarone side effects (24.9±25.8 vs 19.9±24.8 months, p=0.093) than in others. Side effects resulting in permanent amiodarone discontinuation were: hyperthyreosis (66, 6.4%), hypothyreosis (19, 1.8%), liver injury (5, 0.5%), bradycardia/AV block (9, 0.9%), QT prolongation (2, 0.2%) and corneal deposits (4, 0.4%). Pulmonary toxicity was not observed among study patients.

Conclusion: Our study showed that permanent amiodarone discontinuation in contemporary practice was due to its side effects in 10% of amiodarone-treated patients, occurring after a mean 2-year treatment course. The most prevalent side effect was thyroid dysfunction, whilst the prevalence of proarrhythmic effect was low. Notably, physician's fear of complications (which may not always be justified), was an independent driver of permanent amiodarone discontinuation. More data are needed to inform optimal amiodarone use in daily practice.