Abstract: P1886
Validation of the MB-LATER score prediction ability for recurrent atrial fibrillation after electrical cardioversion

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Introduction: The MB-LATER score (Male, Bundle brunch block, Left atrium ≥47 mm, Type of AF [paroxysmal, persistent or long-standing persistent], and ER-AF=early recurrent AF during first three months) was originally developed for prediction of late AF recurrences post AF catheter ablation (CA-AF). Subsequently, the score has been internationally validated in multiple AF cohorts, showing a good prediction ability for recurrent AF post AF-CA. We assessed prediction ability of the MB-LATER score for recurrent AF after successful electrical cardioversion (ECV) of AF.

Methods: The retrospective study included a Serbian and Icelandic centre, enrolling patients post successful ECV of AF in the period between January 2014 and February 2016. Of 580 patients, 136 (23.4%) were excluded because incomplete data needed for the MB-LATER score calculation. AF episodes lasting ≤7 days before ECV were classified as paroxysmal AF, and the ER-AF component of the MB-LATER score was excluded from the analysis because of different clinical implications in the setting of ECV. The study outcome was defined as the time to first recurrence of AF post successful ECV. Patients post successful ECV were seen at 1 and 6 months post ECV and every 12 months thereafter.

Results: Among 444 patients (median age 68 years [IQR 60.0–74.6], 289 males [65.2%], 200 [45.0%] with non-paroxysmal AF. AF re-occurred in 283 patients (63.7%) after a median of 233.5 [IQR 44–366]) days post successful ECV. Patients with recurrent AF had significantly higher median MB-LATER score than those without (1 [IQR 1–2] vs. 2 [IQR 1–2], p<0.001). On univariate analysis, the MB-LATER score was significantly associated with time to AF recurrence post ECV (Hazard Ratio 1.20; 95% CI 1.07–1.35, p=0.003), showing modest but statistically significant prediction ability for recurrent AF post successful ECV (c-statistic 0.61; 95% CI 0.56–0.66, p<0.001). The Kaplan-Meyer survival free from AF post successful ECV was significantly better for patients with a MB-LATER score of <2 than for those with a score of ≥2 (log-rank p=0.005) (Fig 1.).

Conclusion: In our analysis of an international cohort of AF patients post successful ECV, the MB-LATER score showed a modest but statistically significant prediction ability for recurrent AF post ECV. Reliable prediction of recurrent AF post ECV could inform patient selection and treatment decision-making. Further prospective validation of the MB-LATER score prediction ability for recurrent AF post ECV is underway.
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Figure 1

Predictive ability of MB-LATER score for recurrent AF after ECV

Cum Survival

TIME to AF recurrence

MB-LATER score <2

MB-LATER score ≥2

log-rank p=0.005

Figure 1