P-58   Predictive value of atrial fibrillation recurrence post catheter ablation (CA). A proposed new clinical prediction tool: the LAMP score

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Background: Catheter ablation (CA) for AF has a high complication rate (5.2%) and approximately 40% of patients have recurrent AF after an initial CA treatment session. To date, no clinical tool has been developed to help predict recurrence.

We performed a retrospective derivation study of 192 patients with AF and collected patient demographic and echo data.

Measurements: Recurrence was defined as documented AF by ECG or Holter monitor after a blanking period of three months. We used a coefficient-based multivariable logistic regression scoring method with internal validation to formulate a prediction score.

Results: Of 138 patients included in the analysis, 35.5% had AF recurrence and were divided into derivation and validation sets. The following characteristics were found to be significant using the derivation process: Left atrial diameter > 43.3mm, use of Anti-arrhythmic drugs before CA, moderate to severe Mitral regurgitation and Persistent AF. Combining the initial letters of each characteristic, we named our prediction rule as the LAMP score. To derive this risk score, integer-based scores were assigned and summed. In the validation data sets, recurrence rate in patients from the first to third risk-score quartile were 13.3%, 40.0% and 71.4%, respectively. Further, the likelihood ratio (LR) in the high-risk category was 20.9.

Limitations: Further investigation is necessary to validate our rule in other populations. This rule has limited ability to screen for recurrence in the low-risk group, with a LR of only 1.08.

Conclusions: We developed a prediction rule for the identification of AF recurrence based on patient history and echocardiogram alone. This LAMP score may be used for prediction of AF recurrence after an initial CA treatment session.