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### “As Needed” Short- Term Novel Oral Anticoagulants for Infrequent Atrial Fibrillation Episodes Guided by Diligent Pulse Monitoring

Introduction: In patients (pts) with atrial fibrillation (AF) and CHA<sub>2</sub>DS<sub>2</sub>-VASc score  $\geq 1$ , oral anticoagulation therapy (OAT) is recommended, however chronic OAT is associated with a well-defined bleeding risk and pts are often reluctant to take long term daily OAT particularly in the setting of good AF control. We describe the outcome in pts in whom we used novel oral anticoagulants (NOAC: rivoraxiban, apixiban, dabigatran) on an “as needed basis” guided by diligent pulse monitoring to detect recurrent AF.

Methods: Since 2011, we selected 100 highly motivated pts with CHA<sub>2</sub>DS<sub>2</sub>-VASc score  $\geq 1$  capable of checking their pulse manually and/or with a smartphone enabled device (Alivecor) twice daily and with symptoms. All pts had no AF recurrences by at least three weeks of continuous ECG monitoring and skill and compliance with pulse assessment confirmed. All were provided with a NOAC with instructions to start if suspected or confirmed AF episode ongoing for  $> 1$ -2 hours. Duration of NOAC use after restart was based on duration of episode and/or continued paroxysms and discussion with provider (typically a minimum of one week for episode  $<$ one day), and pts with frequent AF recurrences were transitioned to continuous daily OAT.

Results: Of the 100 pts (81% male, age  $64 \pm 8$  years old), 84% had AF ablation and the remainder were being treated with drug therapy for AF. All pts utilized pulse assessment and 9 (9%) utilized Alivecor or other smartphone application in addition to pulse taking to confirm the absence of AF. Three patients (3%) had implanted devices capable of quantifying AF episodes as quality control check. The median CHA<sub>2</sub>DS<sub>2</sub>-VASc was 2 (range 1-5). The mean left atrial size was  $4.1 \pm 0.6$  cm. During an average follow-up of  $18 \pm 14$  months (total 150 pt – years), 26 pts (26%) started NOAC at least once for detected AF episode. Six pts (6%) transitioned back to chronic OAT for recurrent AF episodes. There were no thromboembolic events (stroke/TIA) and only 1 mild bleeding event (epistaxis) requiring medical attention.

Conclusion: The use of NOACs on an “as needed basis” when AF is detected with diligent pulse monitoring maybe an effective and safe way to lower patients’ overall risk of stroke without increased bleeding in motivated patients with infrequent AF after ablation or drug therapy.