# Real world experience from 1000 patients. Preprocedural DOAC interruption impacts detectable DOAC serum levels but not adverse events after catheter ablation of atrial fibrillation

A. Konstantinou, S. Bordignon, T. Tohoku, S. Chen, F. Bologna, N. Tsianakas, L. Urbanek, L. Trolesse, E. Lindhoff-Last, B. Schmidt, K.R.J. Chun

*Cardiology Centre Bethanien (CCB), Cardiology, Frankfurt am Main, Germany*
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**Introduction:** Direct oral anticoagulation (DOAC) therapy represents the standard of care in patients with atrial fibrillation (AF) and increased stroke risk. In a real world setting withholding DOAC medication before elective AF ablation is considered to reduce procedural bleeding risks. The aim of this study was to determine the individual DOAC level prior to the ablation procedure, to identify predisposing factors affecting traceable DOAC levels and to screen for associated severe adverse events.
**Methods:** Between September 2016 and March 2019 blood samples were obtained from patients on DOAC before an elective AF ablation. Per institutional standard all patients have been instructed to pause DOAC medication prior ablation for one or two doses depending on the patient profile and type of medication. The time interval between ablation and last DOAC intake was calculated in hours. Patient characteristics, procedural data and in-hospital complications were noted from all patients.
**Results:** A total of 1000 patients (60% male, age: 68y, GFR 83.25: BMI: 28, CHADSVASC score 3) undergoing AF ablation were included. Two groups were defined. Group A (n=416, 41.6%): patients treated with "single pill" DOAC (Rivaroxaban (n=288, 28.8%) and Edoxaban (n=128, 12.8%)). Group B (n=584, 58.4%): patients treated with twice a day DOAC (Apixaban (n=505, 50.5%) and Dabigatran (n=79, 7.9%)). The only difference in patient characteristics was an increased prior bleeding history in group B. The DOAC pause was significantly longer in group A (mean 40h) compared to group B (mean 32h), p=0.026. In a total of 217 patients (21.7%) DOAC levels where traceable prior to AF ablation. Traceable DOAC levels were significantly more common in group B (n=144/584, 24.7%) compared to group A (n=73/416, 17.5%). Adverse events occurred in 5.7% of patients (0.4% stroke, 0.3% tamponade, 2.5% hematoma, 1.9% AV-fistel, 0.7% pseudoaneurysma). T-Test analysis showed no significant difference in the occurrence of adverse events between both groups.
**Conclusion:** Despite of interrupting DOACs before an elective AF ablation therapeutic substance levels can be detected in >20% of patients. The rate of adverse events was not different between "single pill" vs. twice a day DOAC intake.