PERI-PROCEDURAL USE OF NOVEL ANTICOAGULATION AGENTS DURING CARDIAC DEVICE IMPLANTATION

Poster Contributions
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Introduction: The safety of novel anticoagulant agents (NOACs; dabigatran and rivaroxaban) in the peri-procedural setting during cardiac device implantation is not clear.

Methods: Patients who underwent device implantation on NOACs were matched by age, gender and type of procedure with patients who underwent the procedure on continuous warfarin. All bleeding and thrombo-embolic complications occurring within the first 90 days of the procedure were collected.

Results: A total of 72 patients were included in the study with 36 on NOACs (19 on rivaroxaban and 18 on dabigatran) and 36 on warfarin. Mean age of the population was 70±11 years with 60% males and 87% Caucasians. There were no differences in the baseline characteristics between both groups. 83% of patients underwent a new device implantation procedure and the rest underwent device upgrade or generator change. 13% (n=5) of patients were on triple therapy with aspirin and clopidogrel in the NOAC group when compared to 2% (n=1) in warfarin group. Mean INR in warfarin group was 2 ±0.6. In 3 patients, NOACs were held for 24 to 48 hours prior to the procedure, while they were held on the morning of the day of the procedure in the rest of the patients. NOACs were resumed after 24 hours in all patients except in one patient (started after 48 hours). A hematoma post-procedure was noted in 19% (n=7) of patients in the NOAC group (4 on rivaroxaban and 3 on dabigatran) and 22% (n=8) of patients in warfarin group (p=0.99) in the first week. Of these, a large hematoma was present in one patient on rivaroxaban and two patients on warfarin. None of the patients on NOACs required evacuation. Two patients on warfarin developed infection of the hematoma that prompted extraction of the device. One additional patient on warfarin developed a hemorrhagic pericardial effusion following implantation that required pericardiocentesis. No stroke or bleeding related complications were noted at three months.

Conclusion: Use of the NOACs (dabigatran and rivaroxaban) is safe in the peri-procedural setting during implantation of cardiac devices with no difference in bleeding complications between rivaroxaban and dabigatran.