Ratio of TEE usage in the era of NOACS: TALENT multicenter European Registry

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Introduction: Anticoagulant (AC) treatment timing for elective cardioversion (CV) is recommended by the guidelines. Transesophageal echocardiography (TEE) is not an obligatory measure before CV if the patient is pretreated by AC for at least 3 weeks before CV, though there are some centers which perform the TEE in the AC-pretreated cases also. In 5–15 of patients with AF, TEE before planned cardioversion revealed an LA or LAA thrombus. If there is longer than 48 hrs of Afib without any AC treatment it is reasonable to perform TEE to avoid thrombembolism according to the guidelines. TEE guidance is an alternative to 3 weeks of anticoagulation before cardioversion

Aim of our registry was to set up a cardioversion prospective+retrospective registry, particularly focusing on AC and TEE strategies in the participating European countries.

Methods: Patient records were collected between Sept 2014 to Oct 2015 in 7 European hospitals (Hungary and Italy 2 sites each, France, Spain and Lithuania). All the data of patients were collected consecutively who undewent CVs due to AF. Since it was unclear in the participating centers what is the ratio of TEE usage in AC-pretreated patients awaiting for CV, even whether NOAC treatment has any influence on the usage of TEE, our registry has recorded the duration of OAC usage before and after CV, which has been measured on a five category scale before CV (0, <3 weeks, ≥3 weeks, overlap with heparin, same day only).

Results: A total of 1101 patients (retrospective/prospective: 679/422, mean age: 67.3 years ± 11.2) were registered. 97% of the cardioversions

were electrical ones. TEE-guided CV was performed in 584 cases, vs nonTEE guided in 517 cases. The TEE-guided group was treated by apixaban in 3.5%, by dabigatran and rivaroxanban in 11% each, and by VKA in 75% of the cases (p<0.001). Ratio of OAC usage before cardioversion more than 3 weeks was found to be significant concerning of pretreatment in each AC groups in comparison to the other time-plans: apixaban 91%, dabigatran and rivaroxaban 81% each, warfarin in 79% of the cases (p=0.008). Over time non-TEE usage has increased in the apixaban (p<0.001) and rivaroxaban treated groups (p=0.015), but no change was observed in the dabigatran group, and decrease of VKA usage was found in the non-TEE group (p0.033).

Conclusion: In conclusion, TEE usage is not obligatory in routine elective cardioversion. Our results show that the usage of NOACs decrease the high number of TEEs performed though it is not recommended to be used routinely.