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ABSTRACT N. PO29

QUALITY OF ANTICOAGULATION AS A PREDICTOR OF EARLY LEFT VENTRICULAR THROMBOSIS RESOLUTION: A RETROSPECTIVE COHORT STUDY.

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Introduction

International guidelines on management of left ventricular thrombosis (LVT) recommend oral anticoagulant therapy with vitamin K antagonists (VKAs) for at least 3 to 6 months. VKAs seemed to afford for a high rate of thrombus resolution, a low rate of stroke and of bleeding events. Maintaining a good quality of VKAs therapy is, therefore, mandatory to achieve these outcomes. The most used tool in clinical practice to evaluate the quality of anticoagulation is the time in therapeutic range (TTR). The International Normalized Ratio (INR) variability is rarely used and its ability to predict patients' outcomes is poorly defined. The objective of this study was to evaluate the association between the quality of anticoagulant therapy and early LVT resolution.

Methods

This study is reported in accordance with the Strengthening the Reporting of Observational Studies in Epidemiology statement. Patients referred to 3 Italian Anticoagulation Clinics between 2011 and 2023 after a diagnosis of LVT were retrospectively enrolled. Continuous variables were expressed as mean and standard deviation or median and interquartile range. Categorical variables were expressed as counts and percentages. Patients were sorted in two groups based on the presence of early LVT resolution. A ROC curve analysis was performed to evaluate the best cut point of TTR and of INR variability (formulas A and B) for the prediction of early LVT resolution. RStudio was used for the analysis.

Results

The study included 54 patients, the median age was 68, with 87% of male. Most patients had arterial hypertension, dyslipidaemia, coronary artery disease, mitral insufficiency. There were not significant differences in cardiovascular risk factors and comorbidities nor in echocardiographic characteristics. Median TTR values were higher in patients who achieved (57% [IQR, 48% to 74%]) than in patients who failed to achieve an early LVT resolution (46% [IQR, 40%-60%]). Median INR variability with both formula A and B were similar in patients who achieved (0.32 and 0.04, respectively) or who failed to achieve an early LVT resolution (0.36 and 0.03, respectively).

The best TTR value to predict early LVT resolution was 56% with an area under the curve (AUC) of 0.657, a sensitivity of 57% and a specificity of 71%. The best INR variability value with formula A to predict early LVT resolution was 1.65 with an AUC of 0.478, a sensitivity of 0%, and a specificity of 96%; for formula B it was 0.40 with an AUC of 0.599, a sensitivity of 4% and a specificity of 100%. The pairwise comparison of ROC curves among TTR, INR variability as measured by formula A and formula B did not find significant differences. Patients with TTR values ≥56% had a higher cumulative incidence of LVT resolution than patients with TTR values <56%.

Discussion

The results of this study suggest that the quality of VKAs may be associated with early LVT resolution. TTR have a greater accuracy for this outcome compared to INR variability. Even if proved in other clinical conditions needing VKAs therapy, scanty information on the quality of anticoagulation in the setting of LVT has been available. Our study allows a better understanding of the relevance of the quality of anticoagulation on early LVT resolution. The major limitation is the low number of patients not being representative of LVT population.

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