

Predictive value of the SAME-TTR2R2 to predict quality of oral anticoagulation in atrial fibrillation: a prospective validation in the multicentre spanish observational registry FANTASIIA

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The efficacy and safety of vitamin K antagonist (VKA) therapy are closely associated to the quality of oral anticoagulation (OAC) management, as reflected by the average percentage of the time in therapeutic range (TTR). A high TTR translates into a lower risk of stroke and bleeding. Thus, guidelines recommend an average individual TTR >65–70%. The SAME-TT2R2 is a clinical risk score developed to predict the quality of OAC with VKA, patients with SAME-TT2R2 score ≥ 2 being at high risk of having poor quality on OAC whilst on VKAs. We explore the predictive role of the SAME-TT2R2 score for assessing poor anticoagulant control in a prospective cohort of patients on VKA treatment.

Methods: We studied VKA treated non-valvular AF patients who were prospectively recruited in the multicentre Spanish observational registry FANTASIIA. Estimated TTR was calculated from both direct and Rosendaal methods during a 6 month period. The SAME-TT2R2 score was calculated and TTR values compared for those patients with a SAME-TT2R2 score 0–1 and ≥ 2 .

Results: We studied 948 patients (mean age 73.8 ± 9.4 years, 57.5% male). Mean TTR was 63.8 ± 23.8 for the direct method and 60.3 ± 24.5 for the Rosendaal method. Prevalence of poor anticoagulation control (TTR < 65%) was 54%. As expected a progressive reduction of TTR was found as SAME-TT2R2 score values increased (Table). Those patients with SAME-TT2R2 score 0–1 had better mean TTR as calculated by the Rosendaal method (62.5 ± 24.7 vs 58.0 ± 24.1 ; $p < 0.01$).

Mean TTR for each SAME-TT2R2 value			
SAME-TT2R2 score	N	TTR direct	TTR Rosendaal
0	159	65.4 ± 22.5	63.2 ± 24.6
1	387	64.6 ± 23.7	61.5 ± 24.7
2	289	63.0 ± 25.1	58.3 ± 24.8
3	84	61.9 ± 23.7	58.4 ± 23.2
4	25	57.3 ± 18.1	52.1 ± 19.3
5	4	54.7 ± 21.0	61.1 ± 20.4

Conclusions: In a multicenter prospective registry, a high SAME-TT2R2 score (≥ 2 points) is associated with poor quality anticoagulation in patients on VKA. Our registry demonstrates the potential role of this simple clinical risk score to predict the poor quality OAC with VKA in clinical practice, and helps decision making for additional strategies including use of the Non-VKA Oral Anticoagulants.