

Letters to the Editor

SAMe-TT₂R₂ Score: Useful in All Patients With Nonvalvular Atrial Fibrillation?**Puntuación SAMe-TT₂R₂: ¿es útil en todos los pacientes con fibrilación auricular no valvular?****To the Editor,**

The prevention of thromboembolic complications is essential in any patient with atrial fibrillation (AF). Currently, vitamin K antagonists (VKA) are the oral anticoagulation agents most widely employed in our patient population.¹ Although effective, due to their narrow therapeutic window, the variability in patient response, and the high number of interactions, they require periodical monitoring of their anticoagulant activity and frequent dose adjustments.^{2,3} Recent studies have shown that anticoagulation control is inadequate in approximately 40% of the patients with nonvalvular AF treated with VKA in Spain, which puts them at greater risk for thromboembolic and/or bleeding complications.⁴ Thus, *a priori* identification of those patients at greater risk of poor control of the International Normalized Ratio (INR) would provide valuable information.

In this respect, some authors have reported the possible utility of the SAMe-TT₂R₂ score⁵ (female sex; age < 60 years; medical history [≥ 3 comorbidities: hypertension, diabetes mellitus, ischemic heart disease, peripheral arterial disease, heart failure, stroke, and/or lung, liver or kidney disease]; treatment [interacting drugs, such as amiodarone]; current tobacco use; and non-Caucasian race). In fact, a number of studies have validated this score, although in some cases, the ability to identify patients with poorer control was only moderate.⁶

We found the article by Andreu-Cayuelas et al⁷ to be very interesting. In their retrospective study involving 108 patients with nonvalvular AF who, having been hospitalized for heart failure, received VKA therapy after discharge, the authors observed that INR control was poor, and that the SAMe-TT₂R₂ score was not useful in discerning patients with good or poor anticoagulation with the treatment. These results were to be expected because, after any acute event, it is more difficult to achieve adequate INR control, mainly during the first few months, especially when adjustments in the medication are constantly being made after hospital discharge, as occurred in this case. In this setting, it would be difficult for any score to be of help in predicting which patients would prove to have poorer INR control.

However, the findings of this study highlight a relevant fact: that the SAMe-TT₂R₂ score is not useful in certain patients or situations, possibly because important factors that could affect the control of anticoagulation with VKA have not been included. The PAULA study is a multicenter trial conducted in the Spanish primary care setting for the purpose of determining the degree of anticoagulation control with VKA in 1524 patients with nonvalvular AF.⁴ Although this study found the SAMe-TT₂R₂ score to have a certain ability to predict poor anticoagulation control with these agents, this capacity was modest. However, the discriminatory value improved upon inclusion of certain factors such as high bleeding risk, multiple drug therapy, and dietary pattern.⁸

In short, although the SAMe-TT₂R₂ score is capable, to some degree, of predicting good or poor anticoagulation control with VKA, it is insufficient. Thus, it is necessary to design new, more comprehensive scores that are more efficient in identifying those patients who will show poorer control with these agents

Carlos Escobar,^{a,*} Vivencio Barrios,^b José María Lobos,^c and Luis Prieto^d

^aServicio de Cardiología, Hospital Universitario La Paz, Madrid, Spain

^bServicio de Cardiología, Hospital Universitario Ramón y Cajal, Madrid, Spain

^cCentro de Salud Jazmín, Atención Primaria Área 4, Madrid, Spain

^dBioestadística Médica, Universidad Católica San Antonio de Murcia, Murcia, Spain

* Corresponding author:

E-mail address: escobar_cervantes_carlos@hotmail.com

(C. Escobar).

Available online 18 June 2016

REFERENCES

1. Lip GY, Rushton-Smith SK, Goldhaber SZ, Fitzmaurice DA, Mantovani LG, Goto S, et al. Does sex affect anticoagulant use for stroke prevention in nonvalvular atrial fibrillation? The prospective global anticoagulant registry in the FIELD-Atrial Fibrillation. *Circ Cardiovasc Qual Outcomes*. 2015;8(2 Suppl 1): S12–20.
2. Hart RG, Pearce LA, Aguilar MI. Meta-analysis: antithrombotic therapy to prevent stroke in patients who have nonvalvular atrial fibrillation. *Ann Intern Med*. 2007;146:857–67.
3. Barrios V, Escobar C. De los ensayos clínicos a la práctica clínica. Evidencias con rivaroxaban en el tratamiento anticoagulante del paciente con fibrilación auricular no valvular. *Semergen*. 2016. Available at: <http://dx.doi.org/10.1016/j.semerg.2016.01.016>. Mar 4 [Epub ahead of print].
4. Barrios V, Escobar C, Prieto L, Osorio G, Polo J, Lobos JM, et al. Control de la anticoagulación en pacientes con fibrilación auricular no valvular asistidos en atención primaria en España. Estudio PAULA. *Rev Esp Cardiol*. 2015;68: 769–76.
5. Apostolakis S, Sullivan RM, Olshansky B, Lip GY. Factors affecting quality of anticoagulation control amongst atrial fibrillation patients on warfarin: the SAMe-TT₂R₂ score. *Chest*. 2013;144:1555–63.
6. Ruiz-Ortiz M, Bertomeu V, Cequier Á, Marín F, Anguita M. Validation of the SAMe-TT₂R₂ score in a nationwide population of nonvalvular atrial fibrillation patients on vitamin K antagonists. *Thromb Haemost*. 2015;114:695–701.
7. Andreu-Cayuelas JM, Puche CM, Caro-Martínez C, Flores-Blanco PJ, Valdés M, Manzano-Fernández S. La puntuación SAMe-TT₂R₂ no predice el tiempo en rango terapéutico tras un ingreso por insuficiencia cardíaca aguda en pacientes con fibrilación auricular. *Rev Esp Cardiol*. 2016;69:453–4.
8. Lobos-Bejarano JM, Barrios-Alonso V, Polo-García J, Escobar-Cervantes C, Vargas-Ortega D, Marín-Montañés N, et al. Evaluation of SAMe-TT₂R₂ score and other clinical factors influencing the quality of anticoagulation therapy in non-valvular atrial fibrillation: a nationwide study in Spain. *Curr Med Res Opin*. 2016. Available at: <http://dx.doi.org/10.1185/03007995.2016.1164676> [Epub ahead of print].

SEE RELATED ARTICLES:

<http://dx.doi.org/10.1016/j.rec.2016.01.009>

<http://dx.doi.org/10.1016/j.rec.2016.04.026>

<http://dx.doi.org/10.1016/j.rec.2016.04.018>