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Evaluation of HAS-BLED and ORBIT Bleeding Risk Scores in Nonvalvular Atrial Fibrillation Patients Receiving Oral Anticoagulants



Evaluación de los esquemas de riesgo hemorrágico HAS-BLED y ORBIT en pacientes con fibrilación auricular no valvular tratados con anticoagulación oral

To the Editor,

We read with interest the letter by Riziq-Yousef Abumuaileq et al.¹ on bleeding risk scores in atrial fibrillation (AF). The authors analyzed the differences in prediction of major and intracranial bleeding between the ORBIT, HAS-BLED, and ATRIA risk scores. They concluded that the ORBIT score works as well as the HAS-BLED score, both in the general population and in patients with labile international normalized ratio (INR). After reading the letter, we make the following points.

The European guidelines for AF have recently been published.² These recommend the use of bleeding risk scores for patients receiving oral anticoagulation (class of recommendation IIa, level B), regardless of the ischemic stroke risk calculated with the CHA₂DS₂-VASc score. Although none of the bleeding risk scores were superior to the others, of note is the importance in clinical practice of controlling 4 modifiable risk factors: hypertension, INR lability, drugs that may induce bleeding, and excess alcohol intake. All these modifiable factors are included in the HAS-BLED score. The ORBIT score arose as a tool for evaluating bleeding risk in patients receiving any type of anticoagulant treatment.³ Assessment of INR lability is therefore not assessed given that this variable is complex and not useful in patients on direct anticoagulants, which are at least as effective as vitamin K antagonists (VKA) in preventing embolic events and in reducing intracranial bleeding. However, their use in Spain is limited (11.2% according to the PREFER-AF registry). The effectiveness of VKA therapy depends on the quality of anticoagulation estimated by time in therapeutic range (TTR), which should be as high as possible.² We therefore believe that, to make an appropriate comparison between risk scores, the quality of anticoagulation should be assessed with INR, because INR control is used in the HAS-BLED risk score. The lack of sufficient data on INR control before inclusion may have had an impact on the results of Riziq-Yousef Abumuaileq et al.¹

Our group has analyzed the differences between the HAS-BLED and ORBIT risk scores for predicting mortality and major bleeding in 2 populations: patients with chronic nonvalvular AF (NVAF) in the FANTASIA Spanish registry and patients with NVAF who underwent electrical cardioversion.⁴ In total, 406 patients with NVAF (median TTR, 60% [range, 50%–68%], 39.2% with TTR < 60%) and 1276 patients in the FANTASIA registry (mean TTR, 60.9% ± 24.4%, 54% with TTR < 65%) were analyzed. In patients who underwent electrical cardioversion, no significant differences

between the HAS-BLED and ORBIT risk scores were observed in prediction of major bleeding and mortality. Likewise, in patients in the FANTASIA registry, no significant differences were observed in prediction of bleeding and mortality. These findings are consistent with those published by Senoo and Lip⁵ in the AMADEUS study population.

We therefore believe that the ORBIT score does not represent an improvement over the HAS-BLED score for predicting bleeding and does not help in clinical management. Modifiable factors are therefore not included in this score. A high bleeding risk score is not a contraindication for anticoagulation, but it does serve as a warning to modify harmful factors in our patients receiving anticoagulation therapy with a dynamic score such as the HAS-BLED score.

In patients with NVAF, simplicity is essential to prevent events:

1. Calculate the ischemic stroke risk with the CHA₂DS₂-VASc score to exclude patients who do not benefit from anticoagulation.
2. Calculate the HAS-BLED bleeding risk score to identify modifiable bleeding risk factors.
3. Use the SAME-TT₂R₂ score to identify patients with poor INR control and to determine which patients are candidates for treatment with VKA (SAME-TT₂R₂ 0–1) or with direct anticoagulants (SAME-TT₂R₂ ≥ 2).

CONFLICTS OF INTEREST

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Evaluation of HAS-BLED and ORBIT Bleeding Risk Scores in Nonvalvular Atrial Fibrillation Patients Receiving Oral Anticoagulants. Response



Evaluación de los esquemas de riesgo hemorrágico HAS-BLED y ORBIT en pacientes con fibrilación auricular no valvular tratados con anticoagulación oral. Respuesta

To the Editor,

We were pleased to read the letter to the Editor written by Esteve-Pastor et al. and we thank them for their comments on our article.¹ After a careful reading and interpretation of the letter, we would like to clarify some points.

As we know, bleeding risk assessment is more complex than thromboembolic risk assessment and every effort to improve bleeding risk assessment is welcomed. In our study, we found that ORBIT performed as well as HAS-BLED.¹

It has been estimated that 90% of the deaths from vitamin K antagonist (VKA)-associated hemorrhage may occur within the first 30 days after the initiation of warfarin therapy (ie, in the period when we do not have enough data about international normalized ratio [INR] control).² This in turn gives rise to continuous confusion about the significance of the labile INR element in the HAS-BLED score as this element is usually absent when bleeding risk is estimated in VKA-naïve patients (ie, the usual scenario in real world practice).

In the analysis of FANTASIA,³ poor anticoagulation control (ie, labile INR) was defined as an estimated time in therapeutic range (TTR) < 65%, while in our study, we calculated labile INR as TTR < 60%. Therefore, any comparison between the 2 studies might be misleading.

HAS-BLED has several advantages (eg, it includes modifiable risk factors). However, HAS-BLED is composed of 9 elements, while ORBIT is composed of just 5, which could explain why a higher percentage of patients are classified as having a high bleeding risk in HAS-BLED (20%-40%) than in ORBIT (5%-12%).³ This could

result in an unnecessary delay in prescribing oral anticoagulants by junior physicians or inexperienced cardiologists who are not aware that high bleeding risk does not necessarily contraindicate anticoagulation. We believe that, as we will continue to use HAS-BLED, more efforts are needed to increase awareness among physicians of the proper use of this score, particularly regarding the high risk category.

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