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ORIGINAL ARTICLE

Factors associated with poor anticoagulation control with vitamin K antagonists among outpatients attended in Internal Medicine and Neurology. The ALADIN study☆

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KEYWORDS
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Abstract
Objective: To identify factors associated with poor anticoagulation control with vitamin K antagonists (VKA) among outpatients with nonvalvular atrial fibrillation (NVAF) attended in Neurology and Internal Medicine in Spain.
Methods: Cross-sectional and multicenter study, from the ALADIN database, of outpatients with NVAF treated with VKA and attended in Internal Medicine and Neurology in Spain. Rates of anticoagulation control were determined with the direct and Rosendaal methods, considering data from the 6 months before the inclusion.
Results: Out of 1337 patients included in the ALADIN study, 750 were taking VKA, and complete information about INR values in the last 6 months was available in 383 patients. Mean scores of Charlson Index, $CHADS_2$, CHA_2DS_2-VASc and HAS-BLED were 1.94 ± 1.54; 3.10 ± 1.26; 4.63 ± 1.54, and 2.20 ± 0.90, respectively. 46.2% and 47.0% of patients had an adequate anticoagulation control according to the direct and Rosendaal methods, respectively.

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◊ The names of the ALADIN study researchers are listed in the Appendix.

Inadequate anticoagulation control according to the direct method was associated with diabetes (OR: 2.511; 95% CI: 1.144–5.659), prior labile INR (OR: 35.371; 95% CI: 15.058–83.083) and the determination of >6 INR controls in the last 6 months (OR: 4.747; 95% CI: 2.094–10.759), and according to the Rosendaal method, with prior labile INR ($p < .001$) and HAS-BLED score (OR: 3.991; 95% CI: 2.520–6.319).
Conclusions: Despite the high thromboembolic risk, only a little more than a half of patients were well controlled. Factors associated with poor anticoagulation control were diabetes, labile INR, >6 INR controls and HAS-BLED.

PALABRAS CLAVE
Acenocumarol;
Antagonistas de la vitamina K;
Anticoagulación;
Fibrilación auricular;
Medicina Interna;
Neurología;
Warfarina

Factores asociados al mal control de la anticoagulación con antivitamina K en pacientes con fibrilación auricular no valvular atendidos en consultas de Medicina Interna y Neurología. Estudio ALADIN

Resumen
Objetivo: Identificar los factores asociados con el mal control de la anticoagulación con antagonistas de la vitamina K (AVK) en pacientes con fibrilación auricular no valvular (FANV) atendidos en consultas de Neurología y Medicina Interna de España.
Métodos: Estudio transversal, multicéntrico, anidado en el estudio ALADIN, de sujetos con FANV, tratados con AVK, atendidos en consultas de Medicina Interna o Neurología de España. El grado de control de la anticoagulación se estudió mediante el método directo y el de Rosendaal, considerando los 6 meses previos a la inclusión.
Resultados: De los 1.337 pacientes incluidos en ALADIN, 750 estaban tratados con AVK, con información completa sobre el INR de los últimos 6 meses en 383 pacientes. Las puntuaciones medias del índice de Charlson, $CHADS_2$, CHA_2DS_2-VAS_c y HAS-BLED fueron $1,94 \pm 1,54$; $3,10 \pm 1,26$; $4,63 \pm 1,54$ y $2,20 \pm 0,90$, respectivamente. El 46,2% y el 47,0% de los pacientes presentaban un control adecuado de la anticoagulación por los métodos directo y Rosendaal, respectivamente. El control inadecuado de la anticoagulación se asoció por el método directo con diabetes (OR: 2,511; IC 95%: 1,144-5,659), antecedentes de INR inestable (OR: 35,371; IC 95%: 15,058-83,083) y la realización de >6 controles en los últimos 6 meses (OR: 4,747; IC 95%: 2,094-10,759), y por el método de Rosendaal, con los antecedentes de INR inestable ($p < 0,001$) y con HAS-BLED (OR: 3,991; IC 95%: 2,520-6,319).
Conclusiones: Pese al alto riesgo tromboembólico, sólo estaban bien controlados algo más de la mitad. Los factores asociados al mal control de la anticoagulación fueron la diabetes, INR inestable, >6 controles de INR y el HAS-BLED.

Background

Atrial fibrillation (AF) is the most common type of arrhythmia in clinical practice in Spain. It has been estimated that 6% of patients treated in primary care have this condition,[1] with a rate of 4.4% in Spain.[2] The prevalence of AF increases with age (exceeding 17% for individuals older than 80 years) and is accompanied by other comorbidities.[1,2] This patient profile is the most often encountered in neurology and internal medicine consultations.[3–5]

Compared with those without AF, patients with AF have twice the mortality risk, as well as 5 times the risk of stroke, which results in greater mortality, more sequela and a higher risk of recurrence.[5] Preventing thromboembolic complications should therefore be a priority in managing patients with AF.[1–6]

Vitamin K antagonists (VKAs) have been employed for decades in patients with AF due to the drugs' demonstrated effective reduction of the risk of presenting thromboembolic complications, with a relatively low risk of hemorrhage.[7] However, VKAs have significant limitations, such as a narrow therapeutic window,[8,9] a highly relevant issue because poor anticoagulation control is associated with a greater risk of presenting thromboembolic and/or hemorrhagic events.[8,10]

Although direct oral anticoagulants that can overcome most of the limitations of VKAs have been marketed in recent years, VKAs are still currently widely used.[11] Despite the considerable number of patients with AF treated in