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Use of Antithrombotic Therapy According to CHA_2DS_2-VASc Score in Patients With Atrial Fibrillation in Primary Care

Uso del tratamiento antitrombótico según la escala CHA_2DS_2-VASc en los pacientes con fibrilación auricular en atención primaria

To the Editor,

Traditionally, the $CHADS_2$ score has been employed for thromboembolic risk stratification in patients with nonvalvular atrial fibrillation (AF).[1] However, with this scoring system, the basis for decisions on antithrombotic therapy was poorly defined in a large proportion of patients with intermediate thromboembolic risk, since antiplatelet and anticoagulation therapy are considered equally valid options.[1] However, it is evident that the implications of the 2 treatments differ and that, within the group of intermediate risk patients, not all of them have the same degree of risk. In this context, the CHA_2DS_2-VASc score, which is a more complete scale since it includes other factors that modulate thromboembolic risk, enables better identification of those patients with AF who will most benefit from anticoagulation therapy[2] than the $CHADS_2$ score. In fact, the guidelines of the European Society of Cardiology recommend its use in clinical practice.[2] A number of studies have shown that the use of the CHA_2DS_2-VASc score enables more accurate reclassification of these patients.[3] However, in routine clinical practice, the criteria for anticoagulation in accordance with this score are less well known.

The objective of this study was to determine whether there are differences in the use of antithrombotic therapy depending on the application of the CHA_2DS_2-VASc or $CHADS_2$ risk scores. For this purpose, we analyzed the data of the Val-FAAP study, classifying the patients according to the CHA_2DS_2-VASc score. The Val-FAAP study was a multicenter, cross-sectional trial carried out in the primary care setting, in which each investigator was required to enroll a total of 4 consecutive patients who met the following inclusion criteria: age 18 years or over, patients of both sexes, and patients with a previous electrocardiographic diagnosis of AF.[4]

The Val-FAAP study included a total of 3287 subjects with AF (mean age, 71.9 [10.1] years; 52.3% men; 92.6% with a history of hypertension; 21.3% with heart failure; and 20.9% with ischemic heart disease). Of the overall group of patients, 4.5% had a $CHADS_2$ score of 0; 28.1%, a score of 1; and 67.4%, a score of 2 or higher. When the CHA_2DS_2-VASc score was used, these rates were 1.9%, 12.4%, and 85.7%, respectively. The Table indicates the percentages of patients according to the antithrombotic therapy they received and the thromboembolic risk stratification score.

The main results of our study show patient distribution according to the CHA_2DS_2-VASc score compared with that corresponding to the $CHADS_2$ score. In principle, this enables the identification of the patients who will benefit most from long-term anticoagulation therapy for the prevention of thromboembolic complications; according to the CHA_2DS_2-VASc score, the vast majority of patients with AF are at high thromboembolic risk. These data are in line with those reported in different populations, in which thromboembolic risk stratification has been shown to be more accurate with the CHA_2DS_2-VASc score than with the $CHADS_2$ score, mainly in patients with intermediate thromboembolic risk.[3]

Unfortunately, antithrombotic therapy is improperly applied.[5,6] For example, more than 40% of patients with a $CHADS_2$/CHA_2DS_2-VASc score of 0 receive oral anticoagulation therapy and more than 30% of those with a $CHADS_2$/CHA_2DS_2-VASc score of 2 or higher do not. This has several implications. On the one hand, the relative lack of definition of the $CHADS_2$ score with respect to the embolic risk of patients with scores of 0 or 1 is not the reason for the deviation of the indication for anticoagulation from the standard guidelines, since reclassification using the CHA_2DS_2-VASc score, which is more accurate in this risk range, continues to show that the anticoagulation regimen is inadequate. On the other hand, while it is true that the risk of bleeding in patients with a $CHADS_2$/CHA_2DS_2-VASc score of 2 or higher has not been analyzed, it would be difficult to explain such a high rate of underuse of anticoagulation therapy by an excessive risk of

Table
Distribution of Patients (%) According to the Antithrombotic Therapy Received and Thromboembolic Risk Stratification Score

	$CHADS_2$ = 0	CHA_2DS_2-VASc = 0	*P*	$CHADS_2$ = 1	CHA_2DS_2-VASc = 1	*P*	$CHADS_2$ ≥2	CHA_2DS_2-VASc ≥2	*P*
No therapy	19.2	26.2	NS	16.0	18.8	NS	12.7	13.3	NS
Antiplatelet	31.9	27.9	NS	23.2	25.9	NS	19.3	20.2	NS
Anticoagulation	46.8	44.3	NS	51.6	47.0	NS	57.0	56.2	NS
Both	2.1	1.6	NS	9.2	8.3	NS	11.0	10.3	NS

NS, not significant.

hemorrhage. Although the underuse of anticoagulation therapy in patients with AF had previously been demonstrated,[5] the data from this study indicate, first, that in Spain, there is a great deal of room for improvement in antithrombotic therapy to prevent stroke risk in patients with AF and, second, that this shortfall is independent of the risk score employed.

All in all, in Spain, therapy for the prevention of thromboembolic complications is not properly applied, and its prescription appears to be independent of the risk stratification score employed. These data lend further support for the need to raise awareness among primary care physicians in Spain of the importance of familiarity with and more extensive use of risk stratification scores and of the correct application of thromboembolic therapy.

Vivencio Barrios,[a,*] Carlos Escobar,[b] Alberto Calderón,[c] Gustavo C. Rodríguez Roca,[d] José Luis Llisterri,[e] and José Polo García[f]

[a]*Servicio de Cardiología, Hospital Universitario Ramón y Cajal, Madrid, Spain*
[b]*Servicio de Cardiología, Hospital Universitario La Paz, Madrid, Spain*
[c]*Centro de Salud Rosa de Luxemburgo, San Sebastián de los Reyes, Madrid, Spain*
[d]*Centro de Salud, La Puebla de Montalbán, Toledo, Spain*
[e]*Centro de Salud Ingeniero Joaquín Benlloch, Valencia, Spain*
[f]*Centro de Atención Primaria El Casar, Cáceres, Spain*

[*] Corresponding author:
E-mail address: vbarriosa@meditex.es (V. Barrios).

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Glycemic Control Using Individualized Targets Among Diabetic Patients in Spain: A Population-Based Study

Control de la glucemia de pacientes diabéticos en España mediante objetivos individualizados: un estudio de base poblacional

To the Editor,

Diabetes remains a leading cause of cardiovascular disease and other disabling and life-threatening complications. Effective management strategies are therefore of obvious importance. Recent clinical trials in older patients have failed to show a benefit from intensive glucose-lowering therapy on cardiovascular disease outcomes.[1,2] The American Diabetes Association and the European Association for the Study of Diabetes have emphasized the need for individualized glycemic targets according to age, coexisting conditions, and time since diagnosis.[3] The recommendations range from a stringent glycosylated hemoglobin (HbA_{1c}) target (<6%-6.5%) in selected patients (without overt cardiovascular disease, shorter duration of diabetes, and long life expectancy) to less stringent HbA_{1c} goals (<7.5%-8%) in patients with a history of severe hypoglycemia, limited life-expectancy, and severe complications.[3]

This article is the first to report the achievement of individualized glycemic targets among diabetic patients in Spain. Additionally, we compare our results with recently reported results in the United States diabetic population.[4]

Spanish data were taken from the ENRICA study, whose methods have been reported elsewhere.[5,6] In brief, this was a cross-sectional study conducted from 2008 through 2010 in 12 948 individuals representative of the population in Spain aged ≥18 years. To determine the achievement of glycemic targets, we limited the analyses to the 661 patients who were aware of their condition. Diabetes was defined as a 12-h fasting serum glucose ≥126 mg/dL or HbA_{1c}≥6.5%, or treatment with oral antidiabetic drugs or insulin.[5] We could not distinguish between type-1 and type-2 diabetes, but it is likely that, as in many other developed countries, most patients had type-2 diabetes. Diagnosed diabetic patients in the United States were 1444 adults, who reported having received a diagnosis of diabetes from a health professional, from the NHANES study conducted between 2007 and 2010.[4] In both studies, similar data collection methods and similar sampling techniques were used to ensure the representativeness of the population samples. Diabetes complications were defined as self-reported diagnosed cardiovascular disease, or retinopathy, or measured albumin:creatinine ratio ≥30 mg/dL. Spanish data did not include retinopathy, because this information was not available in the ENRICA study. All of the United States data were taken from Ali et al[4], as they appear in the publication. The chi-square test was used to compare the percentage of the individualized glycemic-target between the 2 population samples. Statistical significance was set at 2-sided $P<.05$. The analyses were performed with EPIDAT v.3.1 statistical software.

Spanish diabetic patients were more frequently men (58.3%) with a low educational level (57.7% had not attended high school); almost half of them had been diagnosed with diabetes less than 5 years previously, and only a few (20%) received insulin therapy; while these patient had a low frequency of kidney damage (23.6%) and a reasonably good glycemic control (70.9%), only one-fifth and