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Incidence of direct oral anticoagulant use in patients with nonvalvular atrial fibrillation and characteristics of users in 6 European countries (2008–2015): A cross-national drug utilization study

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Abstract

Aims: To estimate the incidence of direct oral anticoagulant drug (DOAC) use in patients with nonvalvular atrial fibrillation and to describe user and treatment characteristics in 8 European healthcare databases representing 6 European countries.

Methods: Longitudinal drug utilization study from January 2008 to December 2015. A common protocol approach was applied. Annual period incidences and direct standardisation by age and sex were performed. Dose adjustment related to change in age and by renal function as well as concomitant use of potentially interacting drugs were assessed.

Results: A total of 186 405 new DOAC users (age ≥18 years) were identified. Standardized incidences varied from 1.93-2.60 and 0.11-8.71 users/10 000 (2011-2015) for dabigatran and rivaroxaban, respectively, and from 0.01-8.12 users/10 000 (2012-2015) for apixaban. In 2015, the DOAC incidence ranged from 9 to 28/10 000 inhabitants in SIDIAP (Spain) and DNR (Denmark) respectively. There were differences in population coverage among the databases. Only 1 database includes the total reference population (DNR) while others are considered a population representative sample (CPRD, BIFAP, SIDIAP, EGB, Mondriaan). They also varied in the type of drug data source (administrative, clinical). Dose adjustment ranged from 4.6% in BIFAP (Spain) to 15.6% in EGB (France). Concomitant use of interacting drugs varied between 16.4% (SIDIAP) and 70.5% (EGB). Cardiovascular comorbidities ranged from 25.4% in Mondriaan (The Netherlands) to 82.9% in AOK Nordwest (Germany).

Conclusion: Overall, apixaban and rivaroxaban increased its use during the study period while dabigatran decreased. There was variability in patient characteristics such as comorbidities, potentially interacting drugs and dose adjustment. (EMA/2015/27/PH).

Keywords: anticoagulants; arrhythmia; cardiovascular; drug utilization; pharmacoepidemiology.

References

Publication types

MeSH terms

Substances

Related information

LinkOut - more resources

Conflict of interest statement

N.M.: Bordeaux PharmacoEpi has done 2 postauthorisation studies of comparative effectiveness and safety of DOAC compared to VKA, requested by the French regulatory authorities and financed by the respective marketing authorisation holders. These studies do not concern drug utilisation and do not represent a conflict of interest.
O.K. has provided an educational lecture (nonproduct related) for Roche in May 2017.
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