Evaluation of antiplatelet agent (AP) prescribing in patients on direct oral anticoagulant (DOAC)

AS Larock[1], A Spinewine[1,2], P Laloux[3], P Eucher[4], C Hanet[5]
[1]CHU UCL Namur, Namur Thrombosis and Hemostasis Center, Department of Pharmacy, Université catholique de Louvain Yvoir, Belgium;
[2]Louvain Drug Research Institute, Clinical Pharmacy Research Group, Université catholique de Louvain, Brussels, Belgium;
[3]CHU UCL Namur, Department of Neurology, Université catholique de Louvain Yvoir, Belgium;
[4]CHU UCL Namur, Department of Cardiac, Vascular and Thoracic surgery, Université catholique de Louvain Yvoir, Belgium;
[5]CHU UCL Namur, Department of cardiology, Université catholique de Louvain Yvoir, Belgium

Objectives

Among patients requiring an oral anticoagulant (OAC), a large proportion also takes an antiplatelet (AP) therapy. Several studies highlighted the increased bleeding risk associated with a combined OAC and AP therapy, without a reduction in risk of recurrence of coronary artery events or thromboembolism. The continuation of an AP therapy in patients on OAC for venous thromboembolism or atrial fibrillation remains a recurrent matter of debate and is still little studied in patients on direct OAC (DOAC).
Our objective was to evaluate to what extent combined DOAC-AP therapy met recommendations from current guidelines.

Methods

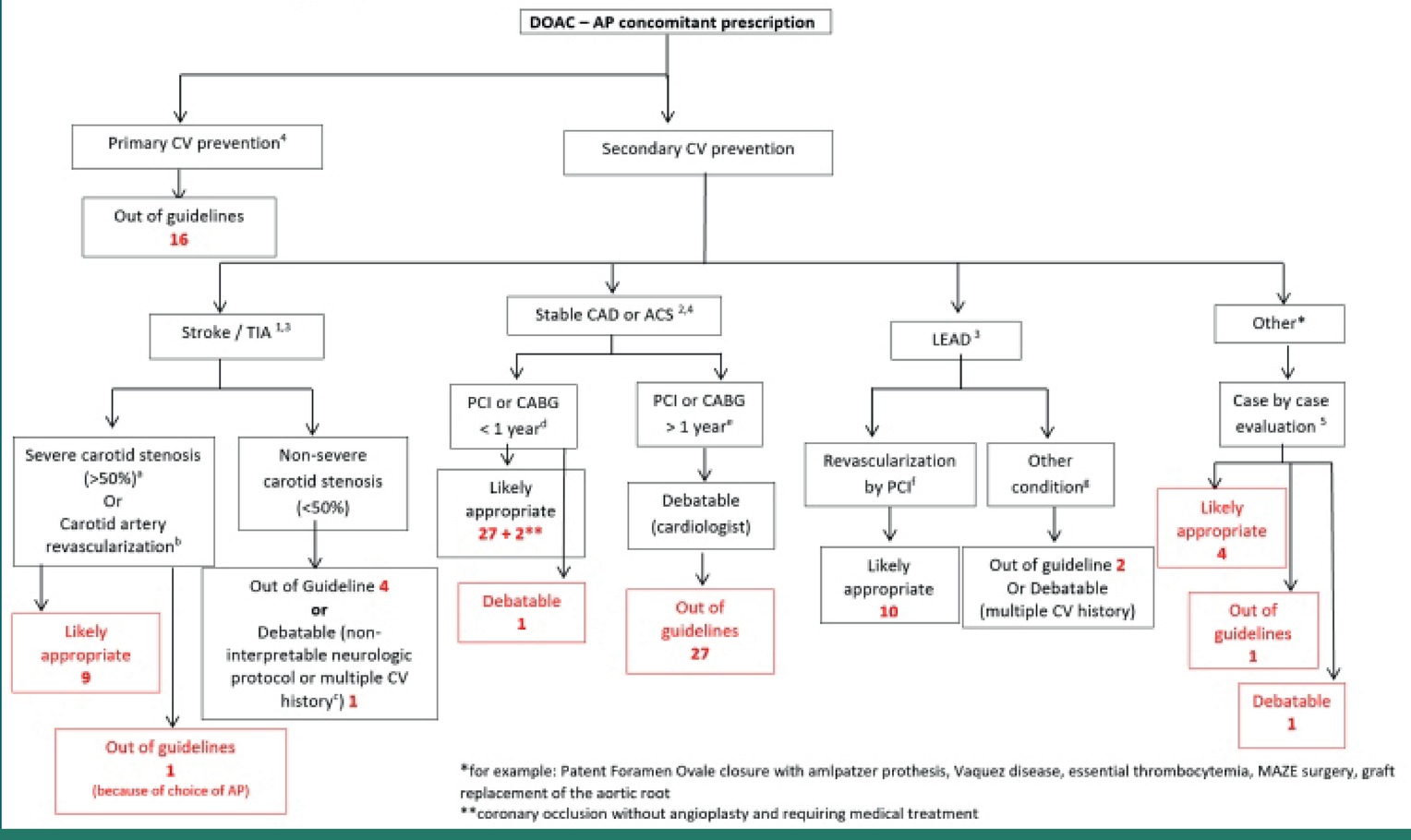
We performed an observational retrospective cohort study in a 450-bed teaching hospital. Among DOAC patients prospectively reviewed by a clinical pharmacist dedicated to anticoagulation between January and December 2016, we selected patients with a concomitant DOAC and AP prescription (either single or dual) during their hospitalization. Medical history, clinical and medication data were retrieved from the electronic medical record. Based on current guidelines, a decision tool was developed to evaluate the appropriateness of combined DOAC-AP therapy according to 3 classifications: “likely appropriate” (i.e. in line with current guidelines), “out of guidelines” and “debatable” (see figure 1). Evaluations were first performed by the clinical pharmacist. Complex cases were then discussed with an expert group including a cardiologist, a neurologist and a cardiovascular surgeon.

Results

Among 336 patients screened, 106 (31%) received combined DOAC-AP therapy during their hospitalization. Fifty-two prescriptions (49%) were considered as “likely appropriate”, 51 (48%) were rated as “out of guidelines” (including 27 patients with stable coronary artery disease), and no consensus was achieved for 3 (3%; judged as “debatable”).

	Class of recommendation	Level of evidence	Origin
a	IIa	C	ESC
b	I	A	ESC
c	IIb	C-LD	AHA
d	I	C	ESC
e	IIa	B	ESC
f	IIa/b	C	ESC
g	IIa	B	ESC

Figure 1: The appropriateness prescription decision' tool and results of evaluation (n=106). Patients were stratified according to the indication of AP therapy. For patients with multiple indications, the most recent was chosen.



ACS: acute coronary syndrome; CABG: coronary artery bypass grafting; CAD: coronary artery disease; CV: cardiovascular; LEAD: lower extremity artery disease; PCI: percutaneous coronary intervention; TIA: transient ischemic attack.

Conclusion

Half of patients on DOAC receive a potentially unsuitable AP therapy, showing the potential of prescription optimization. Additional data from clinical trials is also urgently needed, to improve the level of evidence and reinforce the strength of recommendations in clinical guidelines.

Bibliography:
1. Powers WJ, Rabinstein AA, Ackerson T et al. 2018 Guidelines for the Early Management of Patients With Acute Ischemic Stroke: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association. Stroke 2018;49:e46-e110.
2. Valgimigli M, Bueno H, Byrne RA et al. 2017 ESC focused update on dual antiplatelet therapy in coronary artery disease developed in collaboration with EACTS. Eur Heart J 2018;39:213-260.
3. Aboyans V, Ricco JB, Bartelink ML EL et al. 2017 ESC Guidelines on the Diagnosis and Treatment of Peripheral Arterial Diseases, in collaboration with the European Society for Vascular Surgery (ESVS). Eur Heart Journal 2018 ;39 :763–821