Blockade Benefits in Clinical Evolution and Ventricular Remodeling After Transcatheter Aortic Valve Implantation) should clarify the pharmacological guidance in these patients.

Disclosure

None of the authors has any relevant disclosures.

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Authors' Reply to "Underlying Differences in the Treatment of Left Ventricular Thrombus With Non-Vitamin K Antagonist Oral Anticoagulants"

We appreciate Leow et al comments[1] regarding our recent publication in the *AJC*, which evaluated the efficacy of direct acting oral anticoagulants (DOAC) in treatment of left ventricular (LV) thrombus.[2]

Leow notes that LV thrombus is now more common in patients with chronic heart failure than in the acute myocardial infarction (AMI) setting. As shown in the accompanying Table 1, this was true for our study as well; ischemic cardiomyopathy (n = 31), and nonischemic cardiomyopathy (n = 15), were much more common diagnoses than AMI (n = 6). Widespread use of urgent percutaneous coronary intervention and advances in medical therapy in the setting of AMI may explain this shift. As Leow also notes, our rate of "triple therapy" (dual antiplatelet therapy with concomitant oral anticoagulation) was quite low at 19.2%. Triple therapy is now rarely indicated given recent clinical trial results,[3–6] and this change in practice should result in lower bleeding risk for patients with coronary disease who also require an anticoagulant.

Leow also hypothesizes that patients in our study "may possess favorable clinical profiles which allowed for the use of NOAC, or did not have concomitant co-morbidities which require warfarin. Thus the cases studied may only represent a select population of LV thrombus patients". As shown in the Table 1, 35 of the 52 (67%) patients had a documented reason for off-label

Table 1
Patient characteristics

Age	On antiplatelet agents at time of DOAC	NICM/ICM/AMI	Reason for DOAC instead of VKA	Additional indication for anticoagulation?
34	Aspirin	NICM	Patient on palliative care - to simplify regimen	o
34	o	NICM	Not documented	o
37	o	NICM	Medication non-compliance	Pulmonary embolism
42	Aspirin	NICM	Not documented	o
44	o	ICM	Patient preference	Atrial fibrillation
46	Aspirin	AMI	Medication non-compliance	o
46	o	NICM	Physician concern for high-risk of GI bleeding with warfarin (recent excision of large colon polyp)	o
50	Aspirin	NICM	Medication non-compliance	o
50	o	NICM	Rivaroxaban easier to manage around time of cath initially; otherwise not documented	o
50	Aspirin	ICM	Had previously tolerated apixaban for RA mass	o
51	Aspirin	NICM	Medication non-compliance	o
52	Clopidogrel	AMI	Not documented	o
56	Aspirin	ICM	Not documented	o

(*continued*)

Table 1 (***Continued***)

Age	On antiplatelet agents at time of DOAC	NICM/ICM/AMI	Reason for DOAC instead of VKA	Additional indication for anticoagulation?
56	Aspirin	NICM	Prior failure of warfarin for DVT	Atrial fibrillation, DVT
57	Aspirin	ICM	Physician concern for patient's ability to comply with warfarin	o
57	Aspirin	NICM	Medication non-compliance	o
57	Aspirin	NICM	Had just been started on rivaroxaban for pulmonary embolism, immediately prior to LV thrombus diagnosis	Pulmonary embolism
58	Aspirin	ICM	Had previously tolerated rivaroxaban well for atrial fibrillation	Atrial fibrillation
58	Aspirin	ICM	Noncompliance with warfarin	o
58	Aspirin	ICM	Difficulty achieving a therapeutic INR with warfarin	Atrial fibrillation
58	Aspirin	ICM	Patient preference	o
60	o	NICM	Not documented	Atrial fibrillation
60	Aspirin/Clopidogrel	ICM	Difficulty achieving a therapeutic INR with warfarin	o
61	Aspirin	ICM	History of non-compliance / excessive bruising with warfarin	Pulmonary embolism
62	Aspirin/Clopidogrel	AMI	Had previously tolerated rivaroxaban well for atrial fibrillation (previous ablation)	o
65	Aspirin/Prasugrel	ICM	Not documented	o
66	Aspirin	ICM	Not documented	o
66	Clopidogrel	ICM	Not documented	o
67	Aspirin	NICM	Difficulty achieving a therapeutic INR with warfarin	o
67	Aspirin	ICM	Not documented	o
68	o	ICM	Difficulty achieving a therapeutic INR with warfarin	DVT/PE/Factor V Leiden
69	Aspirin/Clopidogrel	AMI	Not documented	o
70	Aspirin/Clopidogrel	ICM	Not documented	o
70	Aspirin/Clopidogrel	ICM	Not documented	o
74	o	ICM	Patient preference	o
74	Aspirin/Clopidogrel	AMI	Not documented	o
75	Aspirin/Clopidogrel	AMI	Not documented	o
76	Aspirin	ICM	Not documented	o
76	Aspirin/Ticagrelor	ICM	Not documented	o
76	Aspirin	ICM	Physician concern for patient's ability to comply with warfarin	o
77	Aspirin/Clopidogrel	ICM	Had just been started on rivaroxaban for atrial fibrillation, immediately prior to LV thrombus diagnosis	Atrial fibrillation
78	Aspirin	ICM	History of GI bleed on warfarin	Atrial fibrillation
79	Aspirin	ICM	Difficulty achieving a therapeutic INR with warfarin	o
80	o	NICM	History of bleeding on warfarin	Atrial fibrillation
80	Clopidogrel	ICM	Patient preference	o
80	Aspirin	ICM	Physician concern for patient's ability to comply with warfarin	o
81	Aspirin	ICM	Difficulty achieving a therapeutic INR with warfarin	o
82	Aspirin	ICM	Had just been started on rivaroxaban for atrial fibrillation, immediately prior to LV thrombus diagnosis	Atrial fibrillation
84	o	ICM	Physician concern for patient's ability to comply with warfarin	o
85	Aspirin	NICM	Not documented	o
85	Aspirin	ICM	Had just been started on rivaroxaban for atrial fibrillation, immediately prior to LV thrombus diagnosis	Atrial fibrillation
87	o	ICM	Medication non-compliance	o

DOAC prescription including known or suspected medication noncompliance (n= 13), and prior difficulties with vitamin K antagonists including bleeding, difficulty maintaining a therapeutic level of anticoagulation, or therapeutic failure (n = 11). We would argue that our DOAC-treated cohort is, if anything, more prone to treatment failure compared to the general population of patients with LV thrombus, providing additional reassurance for the efficacy of DOACs for treatment of LV thrombus.

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