Comment on "The Canadian Cardiovascular Society 2018 guideline update for atrial fibrillation – A different perspective"

We read with interest the commentary of Stiell et al.[1] regarding the 2018 Canadian Cardiovascular Society (CCS) Atrial Fibrillation (AF) guidelines.[2] While we recognise that these guidelines present challenges to emergency physicians, they are supported by the evidence.[3]

Stiell et al. appear most concerned regarding the recommendation for four weeks of oral anticoagulation therapy following cardioversion of atrial fibrillation, even for episodes <48 hours in duration and in patients without thromboembolic risk factors. The implicit assumption of the contrary viewpoint is that there is evidence to support cardioversion in such patients without peri-cardioversion oral anticoagulation therapy. However, historical evidence supporting the "48-hour rule" does not exist as acknowledged by the authors of the original 1995 CHEST guideline who wrote "there are, unfortunately, no reliable data to support [this] assumption."[4] Recent evidence indicates that the thromboembolic risk after cardioversion of acute atrial fibrillation is substantial, even in patients previously considered at low risk. The FinCV study reported 30-day thromboembolic risks after cardioversion of acute atrial fibrillation without subsequent oral anticoagulation therapy in 2,678 patients with CHA_2DS_2-VASc = 0–1 of 0.9%, 0.4%, and 0.2% for cardioversions performed 24–48 hours, 12–24 hours, and <12 hours after atrial fibrillation onset, respectively.[5] Each of these risks exceeds the 0.12% 30-day (of 1.5% annual) thromboembolic event cut-off used by the CCS to justify oral anticoagulation therapy.

The FinCV study also demonstrated that the thromboembolic risk of cardioversion of acute atrial fibrillation in patients with CHA_2DS_2-VASc = 0–1 can be reduced substantially with peri-procedural oral anticoagulation therapy, from 0.4% overall to 0.0%.[6] As noted by Stiell et al., this reduction was not statistically significant. However, this is due to a lack of power for subgroup analysis. For example, the reduction in thromboembolism was also not statistically significant in the patient subgroups with CHA_2DS_2-VASc = 2 or CHA_2DS_2-VASc >5, despite oral anticoagulation therapy being clearly indicated in such patients.

Stiell et al. express concern that "the risk in broad application of oral anticoagulation post-cardioversion is bleeding." Although this concern is reasonable, contemporary evidence indicates that the 30-day risk of major bleeding after cardioversion is approximately 0.1% and is not significantly altered by oral anticoagulation therapy in those without a strong contraindication to anticoagulation.[7]

The CCS AF guidelines are primarily provided as recommendations for practitioners not familiar with these data at the level required to advise nuanced, patient-specific, clinical-decision making. Stiell et al. wrote that anticoagulation for four weeks after cardioversion of acute atrial fibrillation "might be considered," suggesting that the default should be to not provide oral anticoagulation therapy. For the reasons outlined above, the CCS AF guidelines will continue to suggest that "in the absence of a strong contraindication, all patients who undergo cardioversion of AF/AFL receive at least four weeks of therapeutic anticoagulation after cardioversion." That is, the default should be to provide oral anticoagulation therapy.

Jason G. Andrade, MD

From Heart Rhythm Services, Department of Medicine, University of British Columbia

Montreal Heart Institute, Department of Medicine, Université de Montréal

Correspondence to: Dr. Jason Andrade, 2775 Laurel St, Vancouver, BC V5Z 1M9; Email: Jason.andrade@vch.ca

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Laurent Macle, MD

Montreal Heart Institute, Department of Medicine, Université de Montréal

Atul Verma, MD

Southlake Regional Health Centre, Newmarket

L. Brent Mitchell, MD

University of Calgary, Calgary, AB

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