

ORAL ANTICOAGULATION TREATMENT IN NONVALVULAR ATRIAL FIBRILLATION

Combining the evidence from the Canadian Cardiovascular Society (CCS), American College of Cardiology/American Heart Association/Heart Rhythm Society (ACC/AHA/HRS), and European Society of Cardiology (ESC) guidelines

Table 1.

HAS-BLED Bleeding Risk Stratification Tool

Use this tool to identify conditions that can increase a patient's risk for bleeding. Treat all possible conditions to decrease the risk for bleeding. This tool should not negate the need for OAC.

Letter	Clinical Characteristic	Score
H	Hypertension (systolic \geq 160mmHg) – on treatment	1
A	Abnormal renal function (Dialysis, transplant, Cr $>$ 200 μ mol/L)	1
A	Abnormal liver function (Cirrhosis or bilirubin $>$ 2X Normal or AST/ALT/AP $>$ 3X Normal)	1
S	Stroke in past	1
B	Prior major bleeding or predisposition to bleeding	1
L	Labile INRs (Unstable/high INRs, time in therapeutic range $<$ 60%)	1
E	Elderly – age \geq 65 years	1
D	Drugs: Medication usage predisposing to bleeding (antiplatelet agents, NSAIDs)	1
D	Drugs: Concomitant alcohol intake (\geq 8 drinks/week)	1

Table 2.

CHA2DS2-VASc Stroke Risk Stratification Tool

Letter	Condition/Risk Factor	Score
C	Congestive heart failure	1
H	Hypertension - $>$ 140/90	1
A	Age \geq 75 years or older	2
D	Diabetes mellitus – fasting glucose \geq 7mmol/L or treatment w/ oral hypoglycemic agents and/or insulin	1
S	Previous stroke, transient ischemic attack, or thrombo-embolism	2
V	Vascular disease – previous myocardial infarction, peripheral artery disease, or aortic plaque	1
A	Age 65-74	1
Sc	Sex (Female)	1

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Table 3.

Stroke or Other Thrombo-embolism Events per Patient Year Based on CHA2DS2-VASc Risk Stratification Tool

CHA2 DS-VASc Score	N	No. of TE Events per Year	TE Rate During 1 year (95% CI)	TE Rate During 1 Year, Adjusted for Warfarin Use*
0	1	0/2	0.00	0.0
1	422	3/653	0.46 (0.10, 1.34)	1.3
2	1230	15/1913	0.78 (0.44, 1.29)	2.2
3	1730	31/2673	1.16 (0.79, 1.64)	3.2
4	1718	38/2665	1.43 (1.01, 1.95)	4.0
5	1159	42/1732	2.42 (1.75, 3.26)	6.7
6	679	36/1016	3.54 (2.49, 4.87)	9.8
7	294	15/436	3.44 (1.94, 5.62)	9.6
8	82	3/125	2.41 (0.53, 6.88)	6.7
9	14	1/18	5.47 (0.91, 27.0)	15.2
Total	7329	184/11233	<i>P value for trend</i>	<i>P<0.0001</i>

*Theoretical TE rates without therapy; assuming that warfarin provides a 64% reduction in TE risk, based on Hart et al.

CI, confidence interval; TE, thromboembolism

ORAL ANTICOAGULATION TREATMENT IN NONVALVULAR ATRIAL FIBRILLATION & CONCOMITANT CKD

The Canadian Cardiovascular Society (CCS), American College of Cardiology/American Heart Association/Heart Rhythm Society (ACC/AHA/HRS), and European Society of Cardiology (ESC) guideline recommendations

Table 4.

ESC, ACC/AHA/HRS, and CCS recommendations for OAC treatment in AF with concomitant CKD

Guideline	Renal Function			
	CrCl>50ml/min	CrCl 30-49ml/min	CrCl 15-29ml/min	ESRD or Dialysis - Dependent
ESC	OAC can be safely used w/ moderate or moderate-to-severe CKD Monitor renal function regularly and adjust DOAC dose as needed			
ACC/AHA/HRS	-Warfarin (dose-adjusted) -Dabigatran 150mg BID -Rivaroxaban 20mg OD -Apixaban 5 or 2.5mg BID	-Warfarin (dose-adjusted) -Dabigatran 150mg BID -Rivaroxaban 15mg OD -Apixaban 5 or 2.5 mg BID	-Warfarin (dose-adjusted) -Dabigatran 75mg BID -Rivaroxaban 15mg OD	-Warfarin (dose-adjusted)
CCS	-Warfarin (dose-adjusted) -Dabigatran 150mg BID -Rivaroxaban 20mg OD -Apixaban 5mg BID	-Warfarin (dose-adjusted) -Dabigatran consider 110mg BID -Rivaroxaban 15mg OD -Apixaban consider 2.5mg BID	-Dose-adjusted warfarin has been used, but data regarding safety and efficacy are conflicting	-Dose-adjusted warfarin has been used, but conflicting data regarding safety and efficacy – possibly causes harm

Note. OAC, oral anticoagulant; DOAC, direct oral anticoagulant; CKD, chronic kidney disease; w/, with; ESRD, end stage renal disease; CrCl, creatinine clearance; OD, once daily; BID, twice daily