Waitemata District Health Board

Best Care for Everyone

Dabigatran and Atrial Fibrillation

Dabigatran is indicated for the prevention of stroke and systemic embolism and reduction of vascular mortality for patients with non-valvular atrial fibrillation and one or more of the following risk factors:

- Previous stroke or transient ischaemic attack or systemic embolism
- Left ventricular ejection fraction <40%
- Symptomatic heart failure (≥ New York Heart Association Class II)
- Age ≥75 years or ≥65 years associated with diabetes, coronary artery disease or hypertension

Please note: **Dabigatran is renally excreted**
Dabigatran is only reversible in secondary care

The following is advised:

1. **Check baseline renal function by calculating creatinine clearance (CrCL)**
   (Use the Cockcroft & Gault equation; do not rely on eGFR as supplied by the laboratory)
   - If CrCL <30mL/min, dabigatran is contraindicated
   - If ≥80 years use **110mg twice daily** (check CrCL 3 monthly)
   - If 75-80 years with low thromboembolic risk and high bleeding risk use **110mg twice daily**
   - If CrCL 30-50mL/min use **110mg twice daily** dose (check CrCL 3-6 monthly)
   - For younger patients with CrCL >30mL/min, use **150mg twice daily**

   Reassess renal function if the patient has significant intercurrent illness and is likely to become dehydrated

2. **Assess eligibility**
   Check $CHAD_2DS_2$ VASc (risk of stroke) and HAS-BLED (risk of bleeding) scores (overleaf) before prescribing
   - If HAS-BLED ≤3, use **150mg twice daily** (unless criteria above recommend lower dose)
   - If HAS-BLED >3, use **110mg twice daily**

   To compare stroke risk with bleeding risk, see http://www.mdcalc.com/has-bled-score-for-major-bleeding-risk

3. **Dabigatran is not suitable for patients with a high bleeding risk. Take special care with concurrent use of aspirin, clopidogrel, dipyridamole, ticagrelor and NSAIDs due to increased risk of bleeding.**

4. **If the patient is bleeding:**
   Discontinue dabigatran, check CrCL, TT, aPTT and discuss with haematologist or cardiologist. The reversal agent, idarucizumab (Praxbind˚) may be required.

5. **If you are unsure about dabigatran, do not change from warfarin without seeking specialist advice**
   - Avoid changing patients from warfarin to dabigatran unless there is a clear advantage
   - Make sure the **INR < 2** before changing from warfarin to dabigatran
   - Problems occur when the dose is not adjusted for renal function
   - Make sure the patient is able to swallow the capsules whole and comply with twice daily dosing

Important: *This is a general guide provided to assist clinicians with the use of dabigatran. Users of this guide must always consider current best practice and use their clinical judgement with each patient.This guide is not a substitute for individual clinical decision making.*

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HAS-BLED bleeding risk score		
Letter	**Clinical characteristic**	**Points awarded**
H	Hypertension	1
A	Abnormal renal and liver function (1 point each)	1 or 2
S	Stroke	1
B	Bleeding	1
L	Labile INRs	1
E	Elderly (> 65 years)	1
D	Drugs (including concomitant aspirin, antiplatelet medicines, NSAIDs) and alcohol (1 point each)	1 or 2
		Maximum 9 points

Hypertension: systolic blood pressure > 160mmHg
Abnormal renal function: chronic dialysis or renal transplantation or serum creatinine ≥ 200µmol/L
Abnormal liver function: chronic hepatic disease (eg cirrhosis) or biochemical evidence of significant hepatic derangement (eg bilirubin > 2x upper limit of normal with AST/ALT/ALP > 3x upper limit normal)
Stroke: previous stroke
Bleeding: previous bleeding history and/or predisposition to bleeding, eg bleeding diathesis, anaemia
Labile INRs: unstable/high INRs or poor time in therapeutic range (eg < 60%)
Drugs or alcohol: concomitant antiplatelet agents, NSAIDs, or alcohol abuse

CHA_2DS_2-VASc stroke assessment tool	
Risk factor	**Score**
Congestive heart failure/LV dysfunction	1
Hypertension	1
Age ≥ 75	**2**
Diabetes mellitus	1
Stroke/TIA/thromboembolism	**2**
Vascular disease (Prior MI, peripheral artery disease, aortic plaque)	1
Age 65-74	1
Sex **c**ategory (ie female sex)	1
Maximum score	9

Annual risk of stroke from CHA_2DS_2-VASc score	
CHA_2DS_2-VASc score	**Annual risk of stroke[1]**
0	0%
1	1.5%
2	2.5%
3	5%
4	6%
5-6	7%

1. Kernan WN, Ovbiagele B, Black HR, et al. Guidelines for the prevention of stroke in patients with stroke and transient ischemic attack: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. Stroke 2014;45:2160–236.

For an online tool to calculate CHA_2DS_2-VASc, click here