Clinical Review & Education Review Atrial Fibrillation

Figure 2. Treatment Care Pathway

Stage 1: At risk for atrial fibrillation (AF)

ndividuals with modifiable and nonmodifiable risk factors, such as obesity or family history of AF

Primary prevention

Recommended: Lifestyle and risk factor modification (LRFM)

Comprehensive guideline-directed LRFM targeting obesity, physical inactivity, alcohol use, smoking, diabetes, and hypertension

Stage 2: Pre-AF

Individuals with presence of atrial pathology, including left atrial enlargement, frequent atrial ectopy, or nonsustained atrial tachycardia but without diagnosed AF

Primary prevention

Recommended: LRFM

Stroke prevention for patients with atrial high-rate episodes (AHRE), asymptomatic atrial tachyarrhythmias with atrial rates >190 beats/min

Is reasonable: Oral anticoagulants (OAC) for AHRE ≥24 h in duration if CHA2DS2-VASc ≥2 or equivalent thromboembolic risk of ≥2% per y

May be considered: OAC for AHRE 5 min to 24 h in duration if CHA₂DS₂-VASc ≥3 or equivalent risk, but bleeding risk should be considered

Stage 3: AF <u>Clinically diagnosed AF</u>

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If new-onset AF, perform initial clinical evaluation

Echocardiogram

Complete blood cell count, basic metabolic panel, thyroid function

No benefit: Routine testing for myocardial ischemia or pulmonary embolism unless signs or symptoms of specific condition

Secondary prevention

Recommended: LRFM

Stroke prevention

Recommended:

Regularly assess thromboembolic risk using a validated clinical risk score, such as CHA_2DS_2 -VASc Evaluate factors to mitigate bleeding

OAC for thromboembolic risk of ≥2%/y (eg, CHA₂DS₂-VASc ≥2 in men and ≥3 in women)

Use DOACs over warfarin in absence of moderate to severe rheumatic mitral stenosis or mechanical heart valve

Is reasonable:

OAC for intermediate thromboembolic risk (eg, CHA₂DS₂-VASc 1 in men and 2 in women)
Left atrial appendage occlusion if moderate to high risk of stroke (eg, CHA₂DS₂-VASc ≥2) and irreversible contraindication to long-term OAC

No benefit or harmful: Aspirin as monotherapy if no other risk factor for stroke or if OAC is indicated

Treatment choice

Rhythm control

Patients who are more likely to benefit include those who are younger, with shorter AF history, moderate symptom burden, poor efficacy of rate control, more left ventricular dysfunction, and more atrioventricular regurgitation.

Recommended: Early aggressive treatment of new heart failure with reduced ejection fraction (HFrEF) and AF (ie, arrhythmia-induced cardiomyopathy)

Can be useful:

To improve symptoms

To reduce hospitalizations, stroke, and death from AF (<1 y)

To improve symptoms, mortality, heart failure (HF) hospitalizations, and ischemia if AF and HF coexist

To reduce likelihood of AF progression

Catheter ablation

For those with more HF, whose AAD therapy failed, or who prefer invasive strategy

Is useful

To improve symptoms if AADs are ineffective, contraindicated, not tolerated, or not preferred

As first-line therapy in select patients to improve symptoms and reduce progression of AF

To improve symptoms, quality of life, ventricular function, and cardiovascular outcomes in AF and HFrEF

Antiarrhythmic drugs (AADs)

For those with less HF or who prefer less invasive strategy

Patients with normal ejection fraction (EF), no prior myocardial infarction, and no structural heart disease

Is reasonable

Dofetilide, dronedarone, propafenone, or flecainide Amiodarone

May be considered: Sotalol

Patients with prior myocardial infarction or structural disease, including HFrEF (EF ≤40%)

Is reasonable: Amiodarone, dofetilide, or dronedaroneb

May be considered: Sotalol

Harmful: Flecainide, propafenone, or dronedarone^c

Rate control

Patients who are more likely to benefit include those who are older, have longer AF history, low symptom burden, poor efficacy of rhythm control, less left ventricular dysfunction, and less atrioventricular regurgitation.

Recommended: β-blockers or nondihydropyridine calcium channel blockers (eg, diltiazem or verapamil); choice of agent depends on substrate and comorbid conditions

Can be useful:

Digoxin in combination with other nodal agents, or as monotherapy, if other medications are not tolerated or contraindicated

AV node ablation with pacemaker to improve symptoms and quality of life if AF is refractory to rate-control agents or rhythm control is not possible

May be harmful:

Nondihydropyridine calcium channel blockers if left ventricular EF < 40%

Treatment care pathway adapted from 2023 ACC/AHA/ACCP/HRS guideline.⁴ Color codes represent class of recommendation. Green indicates class 1 benefit>>risk; yellow, class 2a benefit>>risk; orange, class 2b benefit≥risk; and red, class 3, no benefit or harm. This figure has not been validated for clinical use.

^aDiabetes management did not receive a class 1 recommendation for secondary

prevention in the US AF guideline, ⁴ but did in the European AF guideline. ⁵¹ Without recent decompensated HF or severe left ventricular dysfunction.

^cWith New York Heart Association class III or IV HF or HF decompensation in past 4 weeks.

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