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Atrial Fibrillation: AHA/ACCP/HRS Focused Update Guideline for the Management of Patients with Atrial Fibrillation (2023)

About the Guideline

- Subject-matter experts from the American Heart Association (AHA), the American College of Cardiology (ACC), and the Heart Rhythm Society (HRS) performed literature reviews; weighed the strength of evidence for or against particular tests, treatments, or procedures; and provided estimates of expected health outcomes related to atrial fibrillation (AF).
- This clinical practice guideline is intended to assist clinicians in clinical decision-making by providing generally acceptable approaches to the diagnosis, management, and prevention of AF. When utilized properly, this guideline can result in improved quality of care and patient outcomes as well as lower costs of care delivery by focusing resources on the most effective strategies for AF.

Key Clinical Considerations

Become familiar with the recommendations and best-practice statements provided in this guideline, especially if you work in an acute care setting.

Definition

Atrial fibrillation (AF) is a supraventricular arrhythmia with uncoordinated atrial activation resulting in ineffective atrial contraction. Hemodynamic compromise related to AF can be due to suboptimal ventricular rate control, loss of coordinated atrial contraction, variability in ventricular filling, and sympathetic activation.

Clinical Evaluation

- The following basic clinical evaluations are recommended for patients with newly diagnosed AF:
  - Transthoracic echocardiogram to assess cardiac structure
  - Laboratory testing, including complete blood count, metabolic panel, and thyroid function
  - Targeted testing as appropriate to assess other medical conditions that may be associated with AF.
- Assess for underlying heart disease (e.g., heart failure or hyperthyroidism) reversible conditions (e.g., alcoholism); also assess symptoms, precipitating factors, frequency, duration, and response to pharmacologic agents.
- Determine the cause and pattern of AF, define cardiac disease, and assess thromboembolic risk for all patients.
- Confirm the AF diagnosis by electrocardiogram (ECG), telemetry, Holter monitor, event recorders, implanted recorders/pacemakers/defibrillators, or electrophysiologic studies.

Anticoagulant Therapy

- Thromboembolism occurs with atrial fibrillation (AF), and atrial flutter and is associated with a greater risk of recurrent stroke and higher morbidity and mortality.
- Selecting the anticoagulant regimen for each patient is individualized and based on risk factors, drug interactions, clinical factors, tolerability, and cost. Choices may include the following:
  - Warfarin
  - Dabigatran

  - Rivaroxaban
  - Apixaban
  - Edoxaban
- Check the patient's international normalized ratio (INR) at least weekly during the initiation of warfarin therapy and monthly once the INR is within target range.
- Give a direct thrombin or factor Xa inhibitor (dabigatran, rivaroxaban, apixaban, or edoxaban) if the patient is unable to maintain a therapeutic INR with warfarin. Evaluate renal function and hepatic function before initiation of these medications, when clinically indicated, and at least annually.
- Aspirin with or without clopidogrel is not recommended to reduce the risk of stroke in patients with AF.
- Reevaluate the need for and choice of anticoagulant therapy at periodic intervals to reassess stroke and bleeding risks.
- Idarucizumab is recommended for the rapid reversal of dabigatran in patients who develop life-threatening bleeding while taking dabigatran.
- Use of activated prothrombin complex concentrate (PCC) is reasonable to reverse dabigatran in patients who develop life-threatening bleeding while taking dabigatran.
- Andexanet alfa (apixaban, rivaroxaban, edoxaban) or 4-factor prothrombin complex concentrate is recommended for the rapid reversal of life-threatening bleeding in patients taking factor Xa inhibitors.
- To rapidly achieve INR correction, a combination treatment of 4-factor prothrombin complex concentrate and intravenous vitamin K is recommended over fresh frozen plasma and intravenous vitamin K.
- For patients with AF and intracranial hemorrhage (ICH), consider the following recommendations regarding anticoagulation:
  - To reduce the risk of thromboembolic events, it is reasonable to resume anticoagulation within 1 to 2 weeks after ICH in patients at high risk for such events, e.g., those with rheumatic heart disease or a mechanical heart valve.
  - Consider delaying the resumption of anticoagulation (4 to 8 weeks) after assessing risks and benefits.
  - For patients with a high risk of recurrent ICH, consider anticoagulation-sparing measures.
- To reduce the risk of bleeding in patients with AF and an increased risk of stroke who are undergoing percutaneous coronary intervention (PCI), direct oral anticoagulants (DOACs) are preferred over vitamin K antagonists (VKAs).
- To reduce the risk of bleeding in patients with AF undergoing PCI, early discontinuation of aspirin and continuation of dual therapy (oral anticoagulant and $P2Y_{12}$ inhibitor) is recommended over triple therapy (aspirin, oral anticoagulant, and $P2Y_{12}$ inhibitor).
- To reduce the risk of major bleeding in patients with AF and chronic coronary disease (CCD) without a history of stent thrombosis, monotherapy with oral anticoagulation is recommended over the combination therapy of oral anticoagulant and aspirin or $P2Y_{12}$ inhibitor.
- To reduce the risk of bleeding for patients with AF and stable peripheral artery disease (PAD), oral anticoagulation monotherapy is suggested over dual therapy.
- To reduce the risk of stroke in patients with AF who are at an increased risk of stroke and who have chronic kidney disease (CKD) stage 3, treatment with warfarin, or direct thrombin or factor Xa inhibitors is recommended.

- To reduce the risk of stroke in patients with AF, an increased risk of stroke, and CKD stage 4, treatment with warfarin or DOACs is suggested.
- To reduce the risk of stroke in patients with an increased risk of stroke and existing end-stage CKD or who are on dialysis, consider prescribing warfarin or apixaban.
- To prevent cardiovascular events in patients with a history of AF and rheumatic mitral stenosis or moderate or severe mitral stenosis, long-term anticoagulation with warfarin is recommended over DOACs.
- DOACs are recommended over VKAs for patients with AF and valve disease (other than moderate to great mitral stenosis, or a mechanical valve).
- Anticoagulant therapy is recommended for patients with atrial flutter (AFL)
- Anticoagulation should be continued for at least 4 weeks post procedure in patients with AFL who have undergone successful cardioversion or ablation.
- Patients with typical AFL and a history of AF should receive ongoing oral anticoagulation post successful ablation.
- For patients with typical AFL and no history of AF, who are at high risk for thromboemboli, should receive close monitoring and follow-up if anticoagulants have not been prescribed.
- For patients with typical AFL who are at high risk for AF and thromboemboli, long-term anticoagulation is suggested.

Interruption and Bridging Anticoagulation

- Bridging therapy with unfractionated heparin (UFH) or low-molecular-weight heparin (LMWH) should be considered for patients with AF and a mechanical heart valve undergoing procedures that require the interruption of warfarin.
- Temporarily stopping oral anticoagulation without bridging is recommended for patients with AF without mechanical heart valves, recent stroke, or TIA who require the interruption of warfarin or DOAC for procedures.
- Continued anticoagulation is recommended over interruption of warfarin and bridging therapy with heparin for patients with an increased risk of thromboembolism who are undergoing implantation of a pacemaker or defibrillator.
- For patients with an increased risk of stroke and who are on DOAC therapy undergoing implantation of a pacemaker or defibrillator, no recommendation is made regarding interruption or continuation of therapy.
- For patients receiving DOAC therapy who are undergoing a procedure or surgery that cannot be performed while they are anticoagulated, the timing of DOAC interruption should take into consideration the specific DOAC being taken, renal function, and bleeding risk of the procedure/surgery.
- Once hemostasis has been achieved and further bleeding is not anticipated, resumption of DOAC is generally acceptable on the second or third day post-procedure.
- With the exception of patients with a recent stroke or TIA or those who have a mechanical valve, bridging anticoagulation with low-molecular-weight heparin is not recommended for patients usually on warfarin anticoagulation.

Nonpharmacologic Stroke Prevention

- Blood can collect and clots can form in the left atrial appendage (LAA), a small pouch inside the left atrium.
- The LAA can be plugged or occluded using percutaneous implantable devices (e.g., WATCHMAN device, Amplatzer cardiac plug), or tied off using LARIAT (an epicardial snare).

- Surgical LAA exclusion (along with continued anticoagulation) is indicated to reduce the risk of stroke and systemic embolism for patients with AF undergoing cardiac surgery who have a CHA_2DS_2-VASc score of 2 or greater.

Rate Control

- Rate control in AF decreases morbidity and prevents tachycardia-induced cardiomyopathy.
- The choice of agent is dependent on the patient's symptoms, hemodynamic status, heart failure, and precipitating factors for AF.
- Use a beta blocker or a nondihydropyridine calcium channel blocker for paroxysmal, persistent, or permanent AF to keep the resting heart rate less than 80 beats/minute (for symptomatic AF) or less than 110 beats/minute (for asymptomatic AF).
- For patients with AF with a rapid ventricular response who are hemodynamically stable, beta blockers or nondihydropyridine calcium channel blockers are recommended for acute rate control.
    - If ineffective, consider digoxin alone or with either beta blockers or nondihydropyridine calcium channel blockers.
- For patients with AF with a rapid ventricular response, the addition of intravenous magnesium is suggested.
- Use an intravenous (IV) beta blocker, calcium channel blocker, or amiodarone to slow the heart rate in acute, rapid AF.
- Perform electrical cardioversion for hemodynamically unstable AF, decompensated heart failure, or ongoing myocardial ischemia.
- Perform ablation of the AV node as well as implantation of a permanent pacemaker if drug therapy is inadequate.
- For patients with AF with a rapid ventricular response who are critically ill or have decompensated heart failure (HF), intravenous amiodarone may be considered.
- Intravenous nondihyrdropyridine calcium channel blockers are not recommended for patients with AF with a rapid ventricular response who have known moderate or severe left ventricular systolic dysfunction (with or without decompensated HF).
- Calcium channel blockers should not be used in decompensated heart failure.
- Digoxin is not a first-line therapy and is not optimal for rate control as its onset is greater than one hour and its effectiveness peaks at 6 hours. However, it is commonly used alone or with a beta blocker or calcium channel blocker. Dose adjustment is necessary in renal dysfunction, the elderly, and in combination with antiarrhythmics.
    - Serum digoxin levels should be measured; the suggested target level is 1.2 ng/mL.
- Dronedaron is not recommended for long-term rate control in patients with permanent AF who have an increased risk for cardiovascular events.

Rhythm Control

- Paroxysmal AF progresses to permanent AF resulting in irreversible electrical and structural remodeling of the heart.
- Use a rhythm-control strategy, including cardioversion, antiarrhythmic drugs, or catheter ablation attempts to restore or maintain sinus rhythm, prevent progression to permanent AF, reduce hospitalizations, stroke, mortality, dementia, and worsening cardiac structural abnormalities.
- Long-term maintenance of sinus rhythm includes the following:

  - Dofetilide or amiodarone is suggested therapy for patients with AF and HF/EF of 40% or less.
  - For patients without a history of myocardial infarction (MI) or known or suspected significant structural heart disease, or without ventricular scarring or fibrosis, flecainide or propafenone is suggested.
  - Dronedarone is suggested for patients without recent decompensated HF or severe LV dysfunction.
  - Dofetilide is suggested for patients without QT prolongation or electrolyte imbalances. Monitoring of QT interval, electrolytes, and kidney function is recommended.
  - Low-dose amiodarone is suggested for patients with normal LV function in whom other measures are contraindicated or ineffective.
  - Sotalol may be considered for patients without QT prolongation, electrolyte imbalances, or bradycardia. Monitoring of kidney function, QT interval, and electrolytes is recommended.
  - Flecainide and propafenone are not recommended for patients with a history of MI and/or significant structural heart disease.
  - Dronedarone is not recommended for patients with certain classes of HF who have had recent decompensated HF.
- For the initiation of dofetilide, sotalol, or pill-in-the-pocket dosing therapy, hospitalization is recommended for a minimum of 3 days for cardiac monitoring and monitoring of creatinine clearance.

Direct-Current Cardioversion

- If hemodynamic instability is attributable to AF, electrical cardioversion should be performed immediately to restore sinus rhythm.
- Electrical cardioversion can be performed as an initial rhythm-control measure or after unsuccessful pharmacologic cardioversion for patients who are hemodynamically stable.
- To reduce the risk of inducing ventricular fibrillation (VF), confirm that the energy delivery is synchronized to the QRS.
- If cardioversion is unsuccessful in restoring sinus rhythm, reposition the electrodes, apply pressure over the electrodes, or administer an antiarrhythmic drug prior to a repeated cardioversion attempt.
- Cardiovert if rapid AF does not respond promptly to drug therapy and contributes to hemodynamic instability (ongoing myocardial ischemia, hypotension, or heart failure). Initiate anticoagulant therapy as soon as possible and continue for 4 weeks after the cardioversion.
- Before elective cardioversion for patients with AF for 48 hours or less, 3 weeks of therapeutics or imaging is recommended to evaluate and exclude intracardiac thrombus.
- Therapeutic anticoagulation should be initiated and maintained before cardioversion, and it should continue for at least 4 weeks without interruption.
- If an LAA thrombus is detected on imaging prior to cardioversion, therapeutic anticoagulation should be initiated and maintained for at least 3 to 6 weeks, followed by repeat imaging prior to cardioversion.
- Evaluation with imaging to assess the adequacy of left atrial appendage occlusion (LAAO) and to exclude device-related thrombosis is suggested before cardioversion in patients with a history of LAAO who are not on anticoagulation.
- Peri-cardioversion anticoagulation may be considered and continued in patients with a history of LAAO with a residual leak.

- For AF or atrial flutter of more than 48 hours or of unknown duration that requires immediate intervention, anticoagulation should be initiated as soon as possible and should continue for at least 4 weeks post-cardioversion.
- The decision about long-term anticoagulation therapy should be based on thromboembolic and bleeding risk profiles.
- For AF of less than 48 hours duration with a CHA_2DS_2-VASc score of 2 or greater in men or 3 or greater in women, heparin, a factor Xa inhibitor, or a direct thrombin inhibitor should be started as soon as possible before cardioversion, followed by long-term anticoagulant therapy.
    - CHA_2DS_2-VASc is a stroke risk assessment tool used for patients with AF.
- For AF of 48 hours or longer, or if duration is unknown and if the patient has not been anticoagulated during the preceding 3 weeks, start anticoagulation prior to transesophageal echocardiography (TEE); TEE is used to check for left atrium (LA) thrombus; proceed with cardioversion only if no LA thrombus is detected; then continue anticoagulation therapy for at least 4 weeks.
- For AF of less than 48 hours duration with a CHA_2DS_2-VASc score of 0 in men or 1 in women, administration of heparin, a factor Xa inhibitor, or a direct thrombin inhibitor, versus no anticoagulant therapy, may be considered before cardioversion, without the need for post-cardioversion oral anticoagulation.

Pharmacologic Cardioversion

- Unless contraindicated, dofetilide, dronedarone, flecainide, propafenone, sotalol, IV ibutilide, and amiodarone can be used to convert AF to sinus rhythm.
- For patients without depressed left ventricular function, ibutilide is suggested for pharmacologic cardioversion.
- Intravenous amiodarone is suggested for pharmacologic cardioversion.
- Intravenous procainamide may be considered when other agents are not preferred or are contraindicated.
- Dofetilide should be initiated only in the hospital because of the risk of QT prolongation and torsades de pointes.

Catheter Ablation

- Can be performed for symptomatic paroxysmal or long-standing (longer than 12 months) AF that is refractory or intolerant to at least one class I or class III antiarrhythmic drug for a rhythm-control strategy.
- Can be used in select patients with symptomatic AF and heart failure with reduced left ventricular ejection fraction (HFrEF) to lower their mortality risk and reduce hospitalizations.
- Can be used as an initial rhythm-control strategy before trials of antiarrhythmic drugs.
- Should not be performed if the patient cannot receive anticoagulation during and/or after ablation.
- For patients receiving warfarin who are undergoing ablation, the ablation should be performed on uninterrupted therapeutic (INR 2.0 to 3.0) anticoagulation.
- For patients receiving DOAC who are undergoing ablation, the ablation should be performed with either minimally interrupted or continuous anticoagulation.
- Pulmonary vein isolation (PVI) is recommended as the primary lesion set for patients undergoing ablation.

- Patients with AF and persistent rapid ventricular response who are undergoing atrioventricular node ablation (AVNA) should have the initial lower rate of the pacemaker programmed at 80 to 90 beats per minute (bpm) to reduce the risk of sudden death.
- AVNA may be useful in patients with AF and uncontrolled rapid ventricular response that is refractory to medications.
- For patients with AF planning to undergo an AVNA, implantation of a pacemaker is recommended.
- A recurrence of AF within 3 months after ablation is common and should be treated with repeat ablation or medications.
- Short-term antiarrhythmic medication therapy may be useful after ablation.
- A recurrence of AF 3 months after an ablation may indicate a recovery of pulmonary vein conduction, which may respond to an initiation of antiarrhythmic medication or another ablation.
- Oral anticoagulation should be continued for at least 3 months post ablation. The risk of stroke should dictate longer-term anticoagulation therapy.
- Complications after ablation include tamponade, stroke, transient ischemic attack (TIA), atrial-esophageal fistula, or death.

Pacemakers and Implantable Cardioverter-Defibrillators

- Permanent pacing is not indicated for AF prevention in the absence of other indications for pacemaker implantation (such as symptomatic bradycardia).
- Anti-tachycardia atrial pacing and minimizing ventricular pacing may be useful in reducing symptomatic atrial tachyarrhythmias in patients with a pacemaker.
- Conduction system pacing may be useful in reducing the progression of AF in patients who require significant ventricular pacing.
- Atrial defibrillators to automatically cardiovert AF do not have any clinical utility.

Surgical Maze Procedures

- Surgical ablation for AF can be done for selected patients undergoing cardiac surgery for other indications.
- A stand-alone AF surgical ablation can be done for selected patients with highly symptomatic AF that is not well managed with other strategies.

AF in Athletes

- Assess for structural heart disease by transthoracic echocardiogram.
- Catheter ablation with PVI is suggested for rhythm control in athletes who develop AF.
- Evaluate ventricular rate during an AF episode through ambulatory ECG monitoring and/or exercise testing to a level of exertion similar to that of the intended sport.
- Consider radiofrequency ablation or a “pill-in-the-pocket” approach (self-administration of an antiarrhythmic drug) for selected patients.
- For patients without AF related to excessive exercise training, moderate-to-vigorous exercise training is recommended to reduce symptoms, increase functional capacity, and improve quality of life.

AF in the Elderly

- AF prevalence increases with age.

- The risk of stroke is increased in the elderly.
- Because the elderly with AF often have minimal or no symptoms, decreased drug clearance, and sensitivity to the pro-arrhythmic effects of antiarrhythmic drugs, a rate-control (versus rhythm-control) strategy with beta blockers or calcium channel blockers is preferred. The elderly are also more susceptible to bradyarrhythmias and orthostatic hypotension. Digoxin may also be used for rate control in sedentary elderly patients.

AF in Hypertrophic Cardiomyopathy

- Anticoagulation is indicated in all cases.
- Amiodarone and/or disopyramide combined with a beta blocker or a nondihydropyridine calcium channel blocker can be used to prevent AF recurrence.
- Sotalol, dofetilide, and dronedarone can be used for a rhythm-control strategy.
- Use AF catheter ablation for a rhythm-control strategy when antiarrhythmic drugs fail or are not tolerated.

Surgical Ablation

- Surgical ablation performed during cardiac surgery may reduce the risk of recurrent AF for patients with AF.
- Anticoagulation therapy is suggested for at least 3 months post-surgical ablation.
- To reduce the risk of recurrent atrial arrhythmia, a hybrid epicardial and endocardial ablation is suggested for patients with symptomatic, persistent AF that is refractory to pharmacologic therapy.

AF Complicating Acute Coronary Syndrome (ACS)

- Anticoagulation is recommended for patients with an increased risk of thromboembolism unless the bleeding risk exceeds the expected benefit.
- Urgent direct-current cardioversion is recommended for patients with new onset AF and hemodynamic compromise, ongoing ischemia, or inadequate rate control.
- Hemodynamically stable patients should be treated with IV beta blockers to slow a rapid ventricular response in AF unless bronchospasm, heart failure, and/or hemodynamic instability occur.
- If triple therapy (oral anticoagulant, aspirin, and a $P2Y_{12}$ inhibitor) is utilized for patients who have undergone percutaneous intervention with stenting for ACS, clopidogrel is preferred over prasugrel.
- Double therapy is a reasonable choice over triple therapy to reduce the risk of bleeding in patients who are at an increased risk of stroke and who have undergone percutaneous coronary intervention (PCI) with stenting.
    - Double therapy options include the following:
        - $P2Y_{12}$ inhibitor (clopidogrel or ticagrelor) and a dose-adjusted vitamin K antagonist, **or**
        - Clopidogrel and low-dose rivaroxaban (15 mg daily), **or**
        - Clopidogrel and dabigatran (150 mg twice daily).
        - If patients have been prescribed triple therapy, a transition to double therapy should be considered at 4 to 6 weeks.
        - Amiodarone or digoxin administration may be considered to slow a rapid ventricular response in patients with severe left ventricular (LV) dysfunction and heart failure or hemodynamic instability.

  - Nondihydropyridine calcium antagonists may be considered to slow a rapid ventricular response, but only in the absence of hemodynamic instability or significant heart failure.

AF and Hyperthyroidism

- Beta blockers should be administered for rate control, unless contraindicated.
- If beta blockers cannot be administered, nondihydropyridine calcium channel blockers are recommended.
- For patients with an increased risk of stroke, anticoagulation is recommended until sinus rhythm can be maintained and thyroid function has returned to normal.

AF and Acute Noncardiac Illness

- Manage the underlying condition, such as hypertension, postoperative state, pulmonary embolism, or virus.
- Rate control may be necessary with cardioversion, antiarrhythmic drugs, or AV nodal blockers.
- Anticoagulation should be addressed individually based on risk.

AF and Chronic Obstructive Pulmonary Disease (COPD)

- Nondihydropyridine calcium channel blockers are recommended for rate control in AF with COPD.
- Cardioselective beta blockers are suggested.
- Cardioversion is recommended for hemodynamically unstable patients.

AF and Wolff-Parkinson-White Syndrome (WPW)

- Cardioversion is recommended for patients with WPW, AF with rapid ventricular response, and hemodynamic compromise.
- Procainamide or ibutilide IV may slow the ventricular rate in patients without hemodynamic compromise.
- Medications that block AV node conduction, such as verapamil, diltiazem, amiodarone, digoxin, adenosine, or beta blockers are contraindicated for patients with preexcitation AF.
- Ablation of the accessory pathway may be done in patients with preexcitation AF.

Heart Failure and AF

- Arrhythmia-induced cardiomyopathy should be suspected and early and aggressive rhythm control therapy is recommended for patients with a new diagnosis of AF and HFrEF.
- For patients receiving guideline-directed management and therapy (GDMT), catheter ablation may be beneficial to improve quality of life, heart function, symptoms, and outcomes.
- Beta blockers to control resting heart rate are recommended in patients with preserved ejection fraction.
- Nondihydropyridine calcium channel blockers are not recommended for patients with a known LVEF less than 40%.
- Digoxin may be used alone or in combination with other medications to control heart rate.
- Oral amiodarone may be used for acute rate control when beta blockers, calcium channel blockers, or digoxin (alone or in combination) have failed.

- AVNA and biventricular pacing may be useful when rhythm control has failed for patients with refractory rapid ventricular response.
- AVNA may benefit patients with an implanted biventricular pacemaker who have been unsuccessful with pharmacologic therapy.
- Consider long-term surveillance for patients with AF-induced cardiomyopathy who have recovered LV function.

Familial AF

- Consider referring patients under the age of 45 with an onset of AF without risk factors to a tertiary care center for genetic counseling.
- Electrophysiological study is recommended for patients under the age of 30 with an onset of unexplained AF.

Pregnancy and AF

- Direct current cardioversion (DCCV) may be performed safely on pregnant patients with AF.
- Medications determined for safe use in pregnancy may be considered for pharmacologic cardioversion, rate control, and/or antiarrhythmic therapy.
- Careful consideration is recommended when considering anticoagulation in pregnant patients.

Cardio-Oncology and AF

- Multidisciplinary coordination is recommended to optimize and manage patients with cancer and AF. Goals should include the reduction of bleeding, thromboembolism, drug-drug interactions, and adverse effects.
- The use of DOACs may be considered over VKAs for the reduction of stroke risk.

Liver Disease and AF

- For patients with mild or moderate liver disease who are at increased risk of systemic thromboembolism but who do not have any coagulopathies, oral anticoagulant therapy may be considered.
    - For those patients who are candidates for anticoagulation, DOACs are suggested.
    - Rivaroxaban is contraindicated for this subset of patients.

Adult Congenital Heart Disease (ACHD) and AF

- Evaluation and treatment of precipitating factors is recommended.
- Procedures should be performed in specialized centers with providers with expertise in ACHD.
- An initial plan of rhythm control is recommended for patients with symptomatic or significant paroxysmal or persistent AF.
- Ablation may be considered over long-term antiarrhythmics for patients with simple congenital heart disease.
- A targeted ablative plan should be considered for patients undergoing PVI.
- Anticoagulation therapy may be reasonable for patients with significant heart disease and risk factors.

Obesity and AF

- DOACs are suggested for stroke risk reduction for patients with AF and obesity.
- Warfarin may be considered over DOACs for stroke risk reduction in patients who have undergone bariatric surgery.

AF and Postoperative Cardiac and Thoracic Surgery

- Treat postoperative AF with beta blockers or nondihydropyridine calcium channel blockers.
- Postoperative prophylactic treatment with amiodarone or beta blockers reduces the risk of AF.
- Ibutilide or cardioversion may be used postoperatively to restore sinus rhythm.
- Administer antithrombotic medication for patients developing postoperative AF.
- Posterior left pericardiotomy may be considered to reduce the risk of postoperative AF in patients undergoing cardiothoracic surgery.
- If postoperative AF develops, consider anticoagulation therapy once it is deemed safe to administer it.

Device Detection of AF and Atrial Flutter

- Patients who have implantable electronic devices, such as pacemakers or implantable cardiac defibrillators, and who experience atrial high-rate episodes should be further evaluated to document any clinically relevant AF and to help guide future treatment decisions.
- It is reasonable to consider implantation of a cardiac monitor (loop recorder) in patients with a stroke or TIA of unknown cause and in whom an external ambulatory monitor is inconclusive.

Reference

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